

# Compilation of National Progress Reports on the implementation of the Hyogo Framework for Action (2009-2011)

## Priority 3:

*Use knowledge, innovation and education to build a culture of safety and resilience at all levels.*

## Know the Risks and Take Action

---

Reporting period: 2009-2011  
Country information as of 18 Aug 2011

---

This report compiles inputs by Hyogo Framework for Action (HFA) priority for action 3 from 86 countries' final national HFA progress reports in order to better facilitate analysis and provide examples by priority and region. Inputs are provided in their original reporting language.

Note that these extracts are provided for convenience only and that national HFA progress reports should be considered in their entirety. To view them, visit:

<http://www.preventionweb.net/english/hyogo/progress/reports/>

---

An HFA Monitor update published by PreventionWeb

# Africa

---

## Algeria (in French)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### Description:

Au plan législatif, les dispositions relatives aux systèmes d'informations sur les risques sont prévues par la loi 03-10 sur la protection de l'environnement ainsi que la loi 04-20 sur la prévention des risques majeurs. Les informations sont disponibles pour beaucoup d'aléas existants au niveau des acteurs concernés mais ne sont pas systématiquement diffusées à travers des réseaux, et des systèmes d'échanges d'informations.

Dans le cadre de la stratégie des Nations Unies pour la réduction des risques de catastrophes, l'Algérie a bénéficié d'un logiciel dénommé «DesInventar» relatif à une base de données des catastrophes naturelles.

L'alimentation (opération en cours) et la diffusion à travers des réseaux locaux de cette base de données vont permettre à tous les acteurs de consulter des informations pertinentes sur les aléas afin de prendre des actions nécessaires pour réduire les risques et mieux se préparer à d'éventuelles catastrophes.

#### Context & Constraints:

L'accès aux sources d'informations au niveau des acteurs intéressés et concernés et le partage de ces informations demeurent problématiques et insuffisamment réglementés. Les défis essentiels à relever consistent ici à développer le maximum de banques de données concernant les différents aléas et à organiser la diffusion de leur contenu à travers des réseaux et systèmes adaptés, conformément à la législation en vigueur.

Informé et sensibiliser le maximum de personnes vis-à-vis des aléas, demeure encore l'objectif primordial à atteindre.

Pour cela des efforts doivent être consentis et renforcés à tous les niveaux, notamment au niveau des établissements scolaires, et des lieux de rassemblement des populations (Mosquées, souks, grandes surfaces, et autres espaces publics).

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### Is DRR included in the national educational curriculum?

Yes

#### Means of Verification:

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

#### Description:

Au plan de la formation, et s'agissant du risque sismique, outre les modules de graduation ou des formations de post graduation dans les sciences de la terre qui sont enseignés dans huit universités du pays, il y a lieu de signaler l'introduction de modules d'enseignement de « Dynamique des structures » et de « Calcul parasismique des structures » depuis 1984 dans les Instituts de Génie Civil des différentes universités algériennes.

Sur le plan météorologique, l'Institut Hydrométéorologique de Recherche et de Formation (IHFR –Oran) assure annuellement des formations sur les sciences de l'atmosphère et la modélisation des systèmes de prévision du temps et du climat.

Des conférences sont animées périodiquement par les cadres de l'administration des forêts pour la protection du patrimoine forestier et pour sa reconstitution.

Il a été également procédé à la mise en œuvre de programmes d'enseignement portant sur l'«environnement et les risques naturels au niveau des cycles primaires, moyens et secondaires, en application du protocole d'accord signé en 2002 entre les Ministères de l'Éducation et de l'Environnement. Ces programmes ont été généralisés, en 2010 conformément à une instruction interministérielle (Éducation – Environnement) et appuyés par des documents méthodologiques distribués aux 24 000 établissements existants sur tout le territoire national après avoir été testés dans plusieurs wilayas.

Par ailleurs, dans le cadre d'une convention signée entre le MICL et le MEN, des opérations de sensibilisation et de conscientisation aux risques de catastrophes ont été programmées dans neuf wilayas pilotes.

En collaboration avec le Croissant-Rouge Algérien, le Ministère de l'Éducation Nationale envisage l'élaboration, l'impression et la diffusion aux élèves d'un guide pédagogique adapté aux apprenants visant à leur inculquer les dispositions à prendre en cas de catastrophes : à l'intérieur des établissements scolaires, dans la rue et à la maison.

#### Context & Constraints:

Le défi essentiel réside dans la mise en œuvre des dispositions et des prescriptions de la loi 04-20 concernant les aspects « formation ».

L'organisation et les systèmes prévus par la loi pour les domaines de l'éducation et de la formation incluant les concepts et pratiques de la réduction du risque et de la reconstruction restent, en fait, entièrement à concrétiser.

### Priority 3: Core indicator 3

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

L'évaluation environnementale est prévue par les dispositions de la loi 03-10 sur la protection de l'environnement dans le cadre du développement durable.

Concernant les analyses de coûts, il n'y a pas d'instruments dédiés à ces activités (pas de réglementation, ni de procédures..). Cependant, les assureurs nationaux, en coopération avec les réassureurs développent des initiatives en vue de préparer un système de tarification et d'estimation des dommages.

En ce qui concerne les établissements classés, l'étude d'impact sur l'environnement prévoit l'évaluation des incidences financières allouées aux plans de gestion de l'environnement et l'étude de danger prévoit l'analyse des impacts économiques et financiers en cas d'accident.

Par ailleurs, dans le cadre de l'application de la loi de programmation de la recherche scientifique et de développement technologique 2008-2012, l'un des 34 programmes nationaux de recherche (PNR) concerne les risques majeurs. Dans ce cadre, des sujets d'investigation sur les risques multiples et les analyses de coût seront très probablement abordés.

**Context & Constraints:**

La principale contrainte réside dans la faiblesse des échanges d'information et des données entre les acteurs nationaux concernés et l'insuffisance du partage des connaissances, notamment avec le secteur industriel.

La délégation nationale aux risques majeurs permettra certainement de surmonter ces défis.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Des progrès significatifs pour la sensibilisation et l'éducation du public sont constatés depuis quelques années. La majorité des secteurs concernés par la prévention des catastrophes disposent de programmes y afférents. Leur efficacité reste variable selon les secteurs et les domaines ciblés. Plusieurs secteurs (Education, Energie, Agriculture, Environnement, et Assurances) mènent des actions concrètes auprès des populations et notamment scolaires.

Des activités de sensibilisation et d'information sont également organisées par la Protection Civile et le mouvement associatif, en particulier par le Croissant Rouge Algérien.

La consistance des actions citées précédemment peut être illustrée par les activités et exemples suivants :

- Au niveau de la Protection Civile la sensibilisation des populations exposées aux risques, est organisée à travers : l'animation de conférences de presse et de tables rondes à la radio et à la télévision, les recommandations via la presse écrite, aux citoyens notamment sur le comportement à adopter et des caravanes d'information et de sensibilisation sur les risques encourus.

- Au niveau de l'Office National de la Météorologie, un programme Information, Education, Communication est mis en œuvre pour appliquer les dispositions contenues dans la loi 04-20 qui consacre le droit de l'ensemble des citoyens à être Informés sur les risques naturels. Une station pédagogique, pour les besoins de la vulgarisation et sensibilisation du public a été mise en place au niveau de l'ONM à Alger.

- Des campagnes de sensibilisation du public et de proximité pour les populations riveraines sont organisées annuellement par l'administration des forêts lors de la célébration des journées nationale et internationale de l'arbre, au cours desquelles le public est informé sur le rôle important de la forêt tant sur le plan économique, social qu'écologique.

**Context & Constraints:**

Un système d'évaluation est nécessaire pour pouvoir apprécier la pertinence des programmes Dans ce cadre, l'absence d'une structure de coordination chargée du suivi et du contrôle des programmes d'actions sectoriels, ne permet pas d'évaluer l'efficacité et l'impact des activités sur les populations et les groupes cibles et l'efficacité des actions.

Le défi essentiel réside dans la mise en œuvre des dispositions de la loi 04-20 concernant l'aspect « information ». L'organisation et les systèmes et réseaux y afférents restent, en fait, entièrement à construire.

Les actions vont recevoir une nouvelle impulsion avec la redynamisation de la «Commission Nationale de Communication liée aux risques majeurs » (créée par le décret 04-181 du 24 juin 2004), et la parution des textes d'application de la loi 04-20 en matière d'information, d'éducation et de communication.

Le défi principal réside dans la généralisation et la pérennité des actions d'éducation et de sensibilisation du public.

---

## Botswana (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

NDMO is in the process to develop a comprehensive web portal to provide information on disaster risks and risk reduction measures in the country.

**Context & Constraints:**

Not enough resources and capacity.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* Yes: University curriculum

\* No: Professional DRR education programmes

**Description:**

Department of Sociology in University of Botswana conducts a course on disaster management.

**Context & Constraints:**

Lack of sufficient capacity and resources at NDMO

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

The NDMO is preparing a national strategy to implement DRR.

**Context & Constraints:**

Lack of capacity and resources

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

NDMO has organised nation wide campaigns on multiple hazards and vulnerability among the community members. The NDMO has also trained District level officials in Disaster Risk Reduction and Emergency Management planning.

**Context & Constraints:**

Lack of tools to determine the effectiveness of such awareness campaigns .

**Burundi** (in French)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Des travaux de recherche sont effectués par des instituts spécialisés: Université du Burundi, Institut des Sciences Agronomiques du Burundi (ISABU), L'Institut Géographique du Burundi (IGEBU), ISTEERU tandis qu'un Système d'Information et de Communication a été élaboré. Ce système propose la mise en place d'un Centre National d'Information et de Communication.

**Context & Constraints:**

- Site web pour l'information et la communication en RRC n'est pas encore créé bien que l'équipe d'animateurs du site ait été formée;
- Le Centre National d'Information et de Communication pour la centralisation des informations disponibles dans divers instituts de recherche n'est pas encore créé.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* Yes: University curriculum

\* No: Professional DRR education programmes

**Description:**

- L'UNICEF dispose d'un Fonds commun pour l'éducation avec un volet pour l'éducation aux urgences;
- Mise en place d'un programme post-universitaire en RRC ouvert à l'Université du BURUNDI

**Context & Constraints:**

- Manque de budget de l'Etat alloué aux urgences dans le domaine de l'Education
- Faible sensibilisation du décideur du domaine de l'Education pour l'intégration de la RRC dans le curricula scolaire.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*



**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Des instruments d'évaluation des risques ont été élaborés mais reste-t-il à les appliquer. Des méthodes de recherche sont encore à développer.

**Context & Constraints:**

Manque du personnel qualifié et nécessité de renforcement des capacités en terme de formation.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

- Des ateliers de sensibilisation sur la RRC sont régulièrement organisés du niveau national à celui des communautés passant par le niveau de la Province;
- Des exercices de simulation sont organisés à l'intention des membres de certaines Plates Formes Provinciales;

**Context & Constraints:**

- Les structures de la RRC ne sont pas établies dans toutes les Communes, entités proches des communautés.
- Manque de budget pour intensifier les exercices de simulation pour la sensibilisation des leaders communautaires élus;

---

## Cape Verde (in Spanish)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

> P gina Web do Servi o Nacional de Protec o Civil (2004) <http://www.snpc.cv>

\* Yes: Established mechanisms for accessing DRR information

#### Description:

As autoridades ligadas   P. Civil em Cabo Verde, v m dispensando uma aten o muito especial   sensibiliza o e consciencializa o do p blico em mat ria de riscos a que a popula o est  sujeita, para que os cidad os estejam devidamente informados de como proceder em caso de acidentes graves, cat strofes e calamidades, ou ent o na imin ncia de uma situa o de emerg ncia.

  com base nesta preocupa o, e procurando responder ao estipulado na lei, conforme a al nea c) do art. 5 . da Lei de Bases de Protec o Civil, que diz que um dos dom nios de Protec o Civil "   a informa o e forma o das popula es, visando a sua sensibiliza o em mat ria de auto-protec o e colabora o com as autoridades", que O Servi o Nacional de P. Civil de Cabo Verde vem desenvolvendo com alguns  rg os de Comunica o Social ac es educativas, a fim de manter os cidad os informados e sensibilizados em rela o aos riscos que os podem afectar.

Contactos com a r dio de Cabo Verde e um Protocolo de coopera o assinado com a R dio Educativa, pertencente ao Minist rio da Educa o e Ensino Superior, com o objectivo de dar continuidade   difus o dos dois programas radiof nicos, denominados, respectivamente, " Protec o Civil, Mais Vale Prevenir" e Protec o Civil, uma Quest o de Cidadania, que s o emitidos quinzenalmente.

Os conte dos dos referidos programas radiof nicos trazem quinzenalmente ao dom nio p blico mat rias e informa es importantes de como se deve fazer para evitar acidentes graves e os procedimentos a serem adoptados pelos indiv duos na imin ncia de uma cat strofe. O objectivo   dotar os cidad os de conhecimentos, normas e regras especiais de comportamento para a sua auto-protec o e protec o da sua fam lia, numa situa o de emerg ncia.

Ainda no que toca a informa o ao p blico elaborou-se v rias notas para os  rg os de comunica o social (OCS), para o per odo antes, durante e depois da  poca da chuva. Foram dadas algumas entrevistas aos OCS (asemana on-line; RCV; R dio Educativa; Record; RTC; Tiver; Nha Terra Nha Kretcheu).

S o v rias as participa es do SNPC junto das escolas prim rias e secund rias. Como exemplo,   a

realização de uma Palestra na Universidade de Cabo Verde com os Alunos do 4º. Ano da Disciplina de Geografia Departamento de Ciências e Tecnologias sobre a organização e funcionamento do Sistema Nacional de P. Civil de Cabo Verde, sensibilizando a comunidade estudantil e futuros professores de geografia para os temas ligados a protecção civil.

#### **Context & Constraints:**

Existe a necessidade de criação de um banco de dados com o registo dos desastres em Cabo Verde tanto para o apoio da tomada de decisões, para ser utilizado para fins científicos, nomeadamente determinação do período de recorrência e melhor conhecimento da tipologia dos riscos, para fins académicos e para a informação da população em geral.

No âmbito do projecto SIERA, está pensada a criação de uma base de dados para as catástrofes em Cabo Verde, que posteriormente poderá ser enriquecida e melhorada.

A colheita de dados tem sido um dos nossos maiores constrangimentos, por causa da fragmentação do território nacional e também da falta de formação dos poderes locais em matérias ligados a protecção Civil.

No séc. XXI, Cabo Verde conheceu uma grande massificação do ensino a todos os níveis e a construção de um grande número de hospitais. Devido ao número reduzido dos funcionários o SNPC não tem conseguido chegar a todas as escolas e hospitais, e também identificamos a falta de material didáctico, informação e sensibilização para ser distribuídos nestes estabelecimentos.

#### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national educational curriculum?**

No

#### **Means of Verification:**

\* No: Primary school curriculum

\* Yes: Secondary school curriculum

\* No: University curriculum

\* Yes: Professional DRR education programmes

#### **Description:**

Acredita-se que só se pode minimizar os riscos e as situações de emergência, se as pessoas estiverem devidamente informadas e educadas em matéria de auto-protecção.

Neste quadro a escola pode e deve desempenhar um papel crucial, pela vocação da sua missão e pela forma como se encontra organizada, enquanto espaço de formação e educação.

Tem sido um dos principais objectivos das autoridades de Protecção Civil de Cabo Verde levar para a Escola matérias de protecção civil, acreditando que só assim se poderá construir a tão almejada CULTURA DE PREVENÇÃO contra desastres.

Uma das acções já desenvolvidas pelo Serviço Nacional de Protecção Civil foi a Assinatura, em 2004, de um protocolo de cooperação, entre o SNPC, Direcção Geral de Ensino Básico e Secundário, Direcção Geral dos Transportes Rodoviários e Cruz Vermelha de Cabo Verde, com vista à introdução de matérias de protecção civil nas escolas. Está em fase de conclusão a construção de um documento-proposta que contém os conteúdos (matérias), objectivos e possíveis actividades a desenvolver no âmbito do ensino a serem inclusos nos programas de ensino. O referido documento está sendo estudado por uma equipa técnica criada pelo Ministério da Educação e Ensino Superior para se ocupar da revisão curricular e inclusão do tema da protecção civil nos curricula escolares, que brevemente será uma realidade aqui em Cabo Verde.

O Governo de Cabo Verde está profundamente comprometido e empenhado nesta matéria. Pese embora os poucos anos da sua existência. O Serviço Nacional de Protecção Civil tem levado a cabo várias acções formativas, de informação e sensibilização nas escolas de Cabo Verde, como simulacros, formações de como se deve proceder perante riscos de diversa natureza, primeiros socorros, regras para peões, regras e treino de evacuação, etc.

O Ministério da Administração Interna já implementou o Programa Escola Segura, que visa proteger os estabelecimentos de ensino e evitar situações susceptíveis de por em causa o seu normal funcionamento.

O SNPC participou na Formação de Professores em Avaliação Rápida pós-catástrofes, para o sector da educação, organizada pela UNDP + Unicef + Ministério Educação, a 26 Outubro de 2010, na sede das UNDP, onde apresentou temas ligados ao sistema da protecção e planeamento de emergência, onde também foram elaboradas fichas de avaliação rápida para o sector da educação.

#### **Context & Constraints:**

A protecção Civil tem sido um tema muito debatido em na sociedade Cabo-verdiana a todos os níveis. Tem havido um envolvimento a politico, da comunidade escolar e civil na discussão deste tema.

Tem havido alguns avanços para a introdução do tema da protecção civil a todos os níveis de ensino, mas ainda persiste a necessidade da produção dos manuais, formação dos formadores e de campanhas de informação.

#### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Quanto ao risco vulcânico os projectos MAKAVOL e MIAVITA têm desenvolvido algum trabalho para um acompanhamento contínuo desta actividade e uma melhor gestão deste risco. Relativamente ao risco sísmico, o Instituto Nacional de Meteorologia e Geofísica (INMG) e o projecto MIAVITA já tem instalado alguns sismógrafos para o acompanhamento da actividade sísmica nas ilhas mais recentes de Cabo Verde. O projecto MAKAVOL, para além da monitorização geoquímica, em 2011, prevê a instalação de uma rede sismográfica na ilha do Fogo e de estações de GPS, permanentes.

O INMG faz o acompanhamento diário do estado do tempo em Cabo Verde, tem estações meteorológicas em todas as ilhas, e diariamente envia dados das previsões ao SNPC. Para este ano está em curso o processo de instalação de marégrafos em algumas ilhas, para fazer o seguimento do nível médio das águas dos mar.

O Instituto Nacional de Gestão de Recursos Hídricos (INRGH), tem em curso projectos ligados à hidrologia superficial, que contemplam instalação de limnígrafos, e sistemas de seguimento dos caudais dos cursos de água, para a monitorização das cheias e inundações.

O Instituto Nacional de Estatística, deu início a um programa de colheita de dados relativos a danos ambientais e catástrofes, envolvendo um grande número de instituições nacionais com responsabilidade nesta matéria.

A Direcção Geral do Ambiente, elabora frequentemente relatórios sobre a qualidade do ambiente que servem de pista para a avaliação de riscos a nível nacional. Também existe projectos de seguimento da qualidade do ambiente e de seguimento do impacte das mudanças climáticas em Cabo Verde.

Com o projecto SIERA, pretende-se compilar alguns dados sobre os riscos em Cabo Verde e implementar mecanismos que poderão servir para a avaliação multi-risco. Este projecto prevê a criação de um observatório nacional de risco onde serão compiladas e seguidas dados relativos a todos os riscos que poderão afectar Cabo Verde.

**Context & Constraints:**

Este capítulo de avaliação e investigação ligado ao risco em Cabo Verde é um tem novo e ainda não existe muitos técnicos capacitados nesta matéria.

Ainda neste capítulo da investigação as capacidades nacionais continuam a ser fracas, grande parte por falta de investimento nesta área, a grande dispersão dos técnicos por muitas instituições do públicas e privadas, a falta de projectos conjunto das instituições nacionais, ausência de incentivos à produção científica, etc.

Muitos projectos de cooperação não têm seguimento quando terminam e grande parte dos trabalhos são desenvolvidos por técnicos internacionais e não há reforço da capacidade nacional.

Quanto à análise custo-benefício, a nível local tens registado boas experiências principalmente no que toca às cheias e inundações, mas existe a necessidade de uniformizar os critérios para esta avaliação.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

### Description:

Acredita-se que só se pode minimizar os riscos e as situações de emergência, se as pessoas estiverem devidamente informadas e educadas em matéria de auto-protecção.

No que toca a informação ao público elaborou-se várias notas para os órgãos de comunicação social (OCS), para o período antes, durante e depois da época da chuva. Foram dadas várias entrevistas aos diferentes Órgãos de Comunicação Social existentes no país, nomeadamente rádios, televisões e jornais, no sentido de sensibilizar a população no sentido adoptarem medidas mais pró-activas face às catástrofes.

Como instrumentos de informação ao público, o SNPC, dispõem de dois programas radiofónicos, uma na rádio nacional com o título: Protecção Civil - Mais Vale Prevenir, e na rádio educativa, com a designação: Educação e Protecção Civil.

Também dispomos de uma página na Internet com o seguinte endereço: [www.snpc.cv](http://www.snpc.cv)

É prática do SNPC, confeccionar Banner e Cartazes com o objectivo de informar o público em geral. Estes instrumentos de sensibilização ao público são colocados em diferentes pontos das cidades, para uma melhor informação do público.

O SNPC, em parceria com mais instituições com responsabilidades directas para a RRC, elaborou um folheto com 112 Conselhos de Segurança, tanto para os riscos naturais, tecnológicos, sociais, etc.

É prática do SNPC e dos agentes de protecção civil ministrarem palestras, com o objectivo de sensibilizar, principalmente a população estudantil, dos vários riscos a que se encontram sujeitas e as medidas que devem adoptar caso houver a manifestação de uma delas.

Regularmente são realizados exercícios de simulação, tanto em escolas, centros de saúde, aeroportos, e nas comunidades, aumentando assim a resiliência da população face a uma catástrofe.

### Context & Constraints:

Apesar dos avanços que tem havido em matéria de sensibilização da população, ainda nota-se a necessidade de massificar as campanhas de informação ao público, produzir materiais didácticos para este fim e envolver mais agentes de protecção civil nestas campanhas.

A principal dificuldade na implementação destas campanhas está ligada às questões financeiras e de alguma falta de material didáctico.

## Comoros (in French)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

2 - Some progress, but without systematic policy and/ or institutional commitment

#### Is there a national disaster information system publicly available?

No

#### Means of Verification:

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### Description:

La sensibilisation menée par le projet tsunami consortium a permis de sensibiliser les médias. De même, le projet DIPECHO I a formé les médias et le début du projet DIPECHO II a aussi favorisé une meilleure collaboration avec les médias dans le domaine de l'information sur les risques auxquels les Comores sont confrontées.

Un site web sur le Karthala a été créé lors du projet 2008 du PNUD. Ce site n'est malheureusement pas exploité aujourd'hui, bien que toujours financé par le PNUD.

Des programmes radios sont finalisés sur les risques de catastrophes (projet tsunami consortium). Un guide pédagogique sur les risques de catastrophes aux Comores à destination des enseignants du primaire et des posters sont développés dans le cadre du même projet.

Il y a une stratégie de communication pour le secteur de la santé (prenant en compte les situations de crise) avec des procédures et outils de dissémination établis.

Enfin, il y a un projet de mise en place d'un studio d'enregistrement à la météorologie nationale qui pourra servir pour la diffusion d'alertes télévisées.

#### Context & Constraints:

Les informations disponibles sur les aléas sont peu connues et insuffisamment diffusées et les moyens de communication existants sont mal exploités.

Il n'y a pas de stratégie d'information pour le pays, et les moyens disponibles (en ressources humaines et financières) pour cette activité sont inexistantes (dépendent de l'aide extérieure uniquement).

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

## Is DRR included in the national educational curriculum?

Yes

### Means of Verification:

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

### Description:

Un guide pédagogique – développé et diffusé en 2008, sur financement de l'UNISDR dans le cadre de la campagne 2006-2007 "la RRC commence à l'école" – a été remis à jour et réimprimé à 1000 exemplaires... ce guide est à destination des professeurs du primaire et permet de présenter les notions essentielles sur les risques suivants : volcan karthala, séismes, tsunamis, mouvements de terrain, cyclones, inondations, changements climatiques, risques d'incendies. Des formations à l'utilisation du guide ont été dispensées aux CIPR.

Le volcan du karthala a été introduit dans le programme du secondaire.

Un projet en Education en situation d'urgence (UNICEF) a permis de sensibiliser les établissements scolaires du pays sur la réduction du risque de catastrophe.

Avec l'appui de la Croix Rouge Française, un guide d'hygiène en milieu scolaire a été développé et diffusé (CRCo). Enfin, avec l'appui de l'UNICEF, l'ONG Cap d'Afrique a diffusé un manuel d'hygiène en milieu scolaire.

### Context & Constraints:

Le manque de budget ne permet pas la pérennisation des projets menés; notamment, la diffusion au plus grand nombre et la production d'outils pédagogiques appropriés pour appuyer le travail des enseignants.

### Priority 3: Core indicator 3

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

### Level of Progress achieved:

2 - Some progress, but without systematic policy and/ or institutional commitment

## Is DRR included in the national scientific applied-research agenda/budget?

No

- \* No: Research outputs, products or studies
- \* No: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR



**Description:**

Des études sur l'état de santé des récifs et mangroves ont été réalisées en 2010 dans le cadre du projet COSEP, financées par le PNUD et ont permis de mettre en avant l'importance d'investissements sans regrets pour ces écosystèmes particuliers.

L'organisation du colloque sur le Karthala (novembre 2008), dans le cadre du premier projet du PNUD en gestion des risques de catastrophes, avait permis de démontrer le potentiel économique du Karthala et donc l'importance de gérer cette aire de manière durable. Par ailleurs, le projet OCB du PNUD a aussi permis la conduite de nombreuses études scientifiques sur le Karthala et sur les bénéfices pouvant être tirés de la protection de cet aire.

**Context & Constraints:**

Il n'y a pas aux Comores d'instruments d'étude des risques et de leur impact potentiel sur l'économie. Les recherches dans ce domaine sont pratiquement inexistantes.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Do public education campaigns on DRR reach risk-prone communities?**

No

**Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Des formations ont été organisées auprès des gouvernements locaux (en 2008 avec le projet Karthala et en 2010 avec le projet Tsunami Consortium).

Des programmes radios sur les risques de catastrophes ont été réalisés (projet IO Consortium).

La sensibilisation de la population côtière sur les risques de tsunami avait été permise en 2008 avec un financement de l'ONU-SIPC.

La Journée du 13 Octobre 2010 à Moroni a permis de discuter des risques de catastrophes dans la capitale et la présentation d'un plan d'action pour la réduction des risques dans la ville.

**Context & Constraints:**

Au niveau local, il y a peu de compétence technique et d'activités de planification du développement : il est donc nécessaire d'appuyer l'information au niveau local.

La sensibilisation des communautés se fait essentiellement à travers les projets et donc est limitée dans le

temps: pas de stratégie nationale à ce jour.

Le COSEP (ou la DGSC dans le futur) devrait développer un département d'information et de sensibilisation pour poursuivre ces travaux initiés dans le cadre des projets.

---

## Cote d'Ivoire (in French)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

1 - Minor progress with few signs of forward action in plans or policy

#### Is there a national disaster information system publicly available?

No

#### Means of Verification:

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### Description:

Même lorsque les informations relatives aux aléas existent, elles sont difficilement accessibles eu égard au manque de réseaux et de système public d'échanges d'informations à différents niveaux.

#### Context & Constraints:

Pour rendre disponible et accessible les informations relatives aux aléas, il faut d'abord les collecter, les analyser et mettre en place un système d'échanges d'informations. A ce niveau, le renforcement du réseau d'acquisition de données hydrométéorologiques et la mise en place de réseaux de collecte d'autres données environnementales et socio-économiques s'avèrent indispensables.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### Level of Progress achieved:

1 - Minor progress with few signs of forward action in plans or policy

#### Is DRR included in the national educational curriculum?

No

#### Means of Verification:

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

La notion de risque due aux aléas naturels sera toujours nouvelle tant que les communautés n'ont pas pris conscience de la vulnérabilité de leur environnement. Conséquemment, les questions de réduction de risque sont très peu prises en compte dans les programmes scolaires. Les activités de formation sur ces questions sont encore bien timides et si elles existent, elles sont axées sur des secteurs tels que l'hygiène publique, la géologie, la télédétection, la géomorphologie et autres.

**Context & Constraints:**

Le principal défi à relever est d'intégrer la notion de réduction de risque des catastrophes dans les programmes scolaires pour emmener les enfants qui sont les décideurs de demain à se l'approprier. De plus, des politiques de formation, d'éducation et de sensibilisation relatives aux aléas subis et susceptibles d'être subis doivent être urgemment mises en œuvre afin que des mesures soient prises pour réduire les risques et pour atténuer les effets des catastrophes.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Bien que peu financées, des recherches et des études sont néanmoins faites dans les institutions de recherche dans le domaine de l'environnement pour la compréhension des phénomènes. Les thématiques sont peu orientées vers les impacts de ces phénomènes sur d'autres secteurs d'activités, cela en raison du fait que la notion de réduction des risques de catastrophes est relativement nouvelle, mais aussi en raison du non financement de la recherche et du peu de moyens disponibles pour les études.

**Context & Constraints:**

La solution à ce niveau reste fondamentalement le financement de la recherche et des études dans le domaine de la réduction des risques de catastrophes qui nécessitent des équipes pluridisciplinaires. Cela résoudra à terme le problème de la diversité et de la disponibilité de l'information et permettra aux décideurs d'orienter les politiques d'adaptation aux aléas.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Do public education campaigns on DRR reach risk-prone communities?**

No

**Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Des campagnes de sensibilisation ont existé pour les feux de brousse et pour les épidémies mais elles ont été suspendues par manque de moyens. Il faut néanmoins relever le fait que le Ministère de l'Intérieur à travers l'Office National de la Protection Civile sensibilise les populations sur les risques d'inondations et de glissement de terrain à l'approche de la grande saison de pluie.

**Context & Constraints:**

La contrainte majeure est la synergie d'actions entre les différentes entités. Pour y remédier, il conviendrait d'organiser, de façon périodique, de véritables campagnes d'information et d'éducation sur différents types d'aléas à l'endroit des gouvernements locaux et surtout à l'endroit des populations vulnérables.

## **Ghana** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

There are educational materials (handbills, brochures, pamphlets, newsletters etc) on disaster risk reduction. These are distributed countrywide. The NADMO news letter serves as a vital tool for information sharing and public education.

The NADMO website, [www.nadmo.org](http://www.nadmo.org) also provides data/ information on disaster risk reduction in Ghana. UNDP has assisted NADMO to improve sharing of information through ICT. The mass media is also extensively used for information dissemination.

Workshops, seminars, outreach programmes, durbars etc are often organized to disseminate information on DRR and CCA.

**Context & Constraints:**

Inadequate funding makes it difficult to carry out information dissemination programmes.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

The schools' curricula, educational materials contain some aspects of disaster management. However, disaster risk reduction and especially mitigation has not been included in the school curricula. In view of this no syllabi have been prepared for DRR study at the various levels (primary, secondary, university, professional).

**Context & Constraints:**

Lack of national policy on mainstreaming DRR into the school curricula.  
Lack of institutional commitment.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

## Is DRR included in the national scientific applied-research agenda/budget?

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

### Description:

Research has been going on at the institutional level. Based on the type of hazards they deal with. However methods and tools for multi risk assessment and cost benefits are as yet to be developed.

### Context & Constraints:

Lack of coordination and commitment.

Lack of adequate resources for DRR research.

## Priority 3: Core indicator 4

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

### Description:

Countrywide public awareness strategy exist at the national, regional, district and community levels. Public awareness strategy involves the use of both public and private electronic and print media, publication including books, handouts, brochures and newsletters on various disaster types. Outreach programmes and durbars to vulnerable communities. The medium of communication is in both English and local Languages .

The celebration of World Disaster Risk Reduction Day and International Civil Defence Day under various themes are used to heighten awareness.

### Context & Constraints:

Messages do not sufficiently get to targeted audience due to numerous programmes on different radio and television stations.

The Public does not show the desired interest in public education because of the perception that Ghana

rarely experiences major disasters.

Most media houses do not place much premium on disaster related information.

---

## Guinea-Bissau (in French)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

1 - Minor progress with few signs of forward action in plans or policy

#### Is there a national disaster information system publicly available?

No

#### Means of Verification:

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### Description:

Manque de volonté politique et de ressources financières

#### Context & Constraints:

La Guinée Bissau ne dispose pas de Service National de la Protection Civile, ni de plan communautaire d'alerte précoce et ni de réponse aux situations de crise et d'urgence, ni de Stratégie Nationale de Prévention des Catastrophes, et ni de plan d'urgence national multirisques. Les interventions dans ce projet permettront de réduire la vulnérabilité des communautés face aux catastrophes et accroître les capacités d'intervention communautaires et nationales lorsque de telles catastrophes se produisent

### Priority 3: Core indicator 2

*School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### Level of Progress achieved:

1 - Minor progress with few signs of forward action in plans or policy

#### Is DRR included in the national educational curriculum?

No

#### Means of Verification:

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

manque de volonté politique et des ressources

**Context & Constraints:**

La Guinée Bissau ne dispose pas de Service National de la Protection Civile, ni de plan communautaire d'alerte précoce et ni de réponse aux situations de crise et d'urgence, ni de Stratégie Nationale de Prévention des Catastrophes, et ni de plan d'urgence national multirisques. Les interventions dans ce projet permettront de réduire la vulnérabilité des communautés face aux catastrophes et accroître les capacités d'intervention communautaires et nationales lorsque de telles catastrophes se produisent

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Manque de cadre institutionnel, de volonté politique et des ressources

**Context & Constraints:**

La Guinée Bissau ne dispose pas de Service National de la Protection Civile, ni de plan communautaire d'alerte précoce et ni de réponse aux situations de crise et d'urgence, ni de Stratégie Nationale de Prévention des Catastrophes, et ni de plan d'urgence national multirisques. Les interventions dans ce projet permettront de réduire la vulnérabilité des communautés face aux catastrophes et accroître les capacités d'intervention communautaires et nationales lorsque de telles catastrophes se produisent

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Do public education campaigns on DRR reach risk-prone communities?**

No

**Means of Verification:**



- \* No: Public education campaigns.
- \* No: Training of local government
- \* No: Availability of information on DRR practices at the community level

**Description:**

Manque de cadre institutionnel

**Context & Constraints:**

La Guinée Bissau ne dispose pas de Service National de la Protection Civile, ni de plan communautaire d'alerte précoce et ni de réponse aux situations de crise et d'urgence, ni de Stratégie Nationale de Prévention des Catastrophes , et ni de plan d'urgence national multirisques. Les interventions dans ce projet permettront de réduire la vulnérabilité des communautés face aux catastrophes et accroître les capacités d'intervention communautaires et nationales lorsque de telles catastrophes se produisent

**Kenya** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

- \* No: Web page of national disaster information system
- \* Yes: Established mechanisms for accessing DRR information

**Description:**

As said earlier these informations are available but scartered all over and can only be available to people hooked to anetwork

**Context & Constraints:**

There is need to consolidate and coordinate this information to all stakeholder from a single entity organization

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Even though DRR has not been included in the national curriculum, a number of subjects with topics on DRR are being taught for example physical geography, environmental studies, social sciences, urban geography. The universities have comprehensive courses on DRR and there has been an upward trend on DRR professionals in the country.

**Context & Constraints:**

Emphasis on DRR still needs to be done and especially at the Primary school curriculum level, even by printing simple pictorial books on DRR.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Is DRR included in the national scientific applied-research agenda/budget?**

No

- \* No: Research outputs, products or studies
- \* Yes: Research programmes and projects
- \* Yes: Studies on the economic costs and benefits of DRR

**Description:**

A lot of research on DRR is being done in the country and this information is scattered with different institutions and sectors especially in the institutions of higher learning like the Universities, the UN system like UNDP, UNISDR, UNOCHA, WORLD FOOD PROGRAMME, IGAD, KENYA REDCROSS, ACTION AID, OXFAM GB, WORLD VISION, amongst others have carried out a number of research work.

**Context & Constraints:**

The challenge remains the consolidation of some of these research findings and coordinated sharing of the

information on these researches.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

Through the Administrative units public awareness raising is being done, the media is also helping out, a number of NGOs both international and local NGOs are also involved in the awareness raising also community based organization. The Government through the office of Government spokesman also provides weekly updates on any emergency in the country.

#### **Context & Constraints:**

A lot still needed to be done as informal settlements are on the rise especially in the urban centres.

---

## **Lesotho** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is there a national disaster information system publicly available?**

No

#### **Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

No DRR Information System therefore no data storage, not enough data available.

No adequate information dissemination channels available

**Context & Constraints:**

Lack of human and financial resources and expertise.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

Intergration of DRR into school curriculum for Basic Education is in progress.

Sensitization of Tertiary institutions to include DRR in the school curriculum is in progress.

**Context & Constraints:**

Progress is slow because of lack of expertise and financial resources.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national scientific applied-research agenda/budget?**

No

- \* No: Research outputs, products or studies
- \* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Lack of expertise and financial resources.

**Context & Constraints:**

Lack of financial resources.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Serious lack of human resources inhibit progress .

**Context & Constraints:**

Lack of human and financial resources inhibit progress.

---

**Madagascar** (in French)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

En collaboration avec le Ministère de l'Education Nationale et les Nations Unies (PNUD/ISDR), le BNGRC a élaboré un manuel scolaire pour les élèves et un guide pour les maîtres sur la GRC. Ces manuels sont disponibles dans toutes les circonscriptions scolaires du pays. En outre, cette année a également vu sous financement du PNUD, l'ouverture d'une formation multidisciplinaire axée sur la gestion des risques et des catastrophes au sein du Département de Droit, Economie, Gestion et Sociologie de l'Université d'Antananarivo. La première promotion compte 40 étudiants issus de divers milieux professionnels. Le cours dure 18 mois et sanctionné par un Diplôme d'Etudes Supérieures Spécialisées. Le BNGRC a également noté que les jeunes universitaires de divers domaines (Communication, Economie, Sociologie, Géophysique...) commencent à être nombreux à s'intéresser au thème de la RRC pour leurs mémoires de fin d'études.

**Context & Constraints:**

Le système d'information est opérationnel au niveau national. Ce qui n'est pas le cas aux différents niveaux décentralisés (régional, district, communal). Cela est surtout dû à l'insuffisance en termes de ressources matérielles, financières et surtout humaines.

Recommandations : (notamment pour le BNGRC) : Aller vraiment dans le sens de la décentralisation effective et l'opérationnalisation de ses branches.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* No: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

En collaboration avec le Ministère de l'Education Nationale et les Nations Unies, le BNGRC a élaboré un manuel scolaire pour les élèves et un guide pour les maîtres sur la GRC. Ces manuels sont disponibles dans toutes les circonscriptions scolaires du pays. En outre, cette année a également vu l'ouverture d'une formation multidisciplinaire axée sur la gestion des risques et des catastrophes au sein du

Département de Droit, Economie, Gestion et Sociologie de l'Université d'Antananarivo. La première promotion compte 40 étudiants issus de divers milieux professionnels. Le cours dure 18 mois et sanctionné par un Diplôme d'Etudes Supérieures Spécialisées.

Le BNGRC a également noté que les jeunes universitaires de divers domaines (Communication, Economie, Sociologie, Géophysique...) commencent à être nombreux à s'intéresser au thème de la RRC pour leurs mémoires de fin d'études.

**Context & Constraints:**

Pour ancrer véritablement la culture de risque chez les Malgaches, il serait judicieux d'incorporer la réduction des risques et des catastrophes dans les programmes scolaires à tous les niveaux.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

L'Institut d'Observation de Géophysique d'Antananarivo (IOGA) ainsi que le Service de la Météorologie Malagasy mènent des recherches en partenariat avec des organisations internationales dans le domaine de la RRC, notamment la détection et l'alerte.

Particulièrement, le Service de la Météorologie Malagasy contribue actuellement aux recherches sur la sécheresse, l'inondation, les cyclones tropicaux à Madagascar. Un protocole d'accord entre lui et le Ministère de l'Agriculture est en cours dans le cadre de l'assistance météorologique à l'agriculture (pluies provoquées...).

**Context & Constraints:**

L'insuffisance des ressources financières et humaines pour mener des recherches d'évaluation des risques est le défi majeur. Nous sommes dans une large mesure tributaires de l'appui de nos partenaires financiers et techniques internationaux pour ce faire.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

### Description:

De nombreux partenaires intervenants appuient et soutiennent les efforts du Gouvernement pour mener, améliorer les campagnes d'information pour créer une culture de prévention. Divers outils de communication ont été élaborés et diffusés dans les zones à risque (dépliants, affiches, spots télé). Par ailleurs, lors des ateliers de leçons apprises, les connaissances et pratiques locales en matière d'information dans le domaine de la RRC sont répertoriées et enregistrées pour les futures campagnes.

Cette année également, en collaboration avec un opérateur téléphonique local, le BNGRC a testé un nouveau système de communication et d'alerte touchant directement les populations menacées par les catastrophes imminentes : à travers l'envoi des SMS massif.

### Context & Constraints:

La diffusion des campagnes d'information fait aussi face aux problèmes de développement du pays (absence d'infrastructures électriques, routes, analphabétisme,...). Par ailleurs, les partenariats et collaborations avec le secteur privé sont rares. De même que la contribution active des populations victimes elles-mêmes est mal exploitée.

Recommandations : Conduire un diagnostic des pratiques et connaissances locales en matière d'informations en RRC (les victimes ont développé depuis toujours des systèmes d'information pour se protéger, pour se communiquer). Il est intéressant de répertorier ces pratiques et de les vulgariser. En d'autres termes, il est aussi essentiel d'adapter toutes les campagnes d'informations aux cultures locales.

Il faut aussi donner plus de place et de rôle au secteur privé et à la société civile (telle que les associations de scouts, les associations féminines...)

---

## Malawi (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### Level of Progress achieved:

2 - Some progress, but without systematic policy and/ or institutional commitment

### Is there a national disaster information system publicly available?

No

### Means of Verification:



\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Relevant information on disasters has been collected to some extent. A database has been developed recently but already Malawi Government is looking into linking it to similar information databases. There is a project proposal to publish disaster related data on the web.

**Context & Constraints:**

There has been limited compiling and sharing of information. There is also need to strengthen cooperation and networking among scientific community, academics, disaster planners at both public and private sector. Exchange of scientific and operational information among and across the professionals is important for effective decision making in DRR. Advocacy and use of scientific information, effective technology and standard communication is being promoted. The procurement of communication equipment including computers and satellite phones has increased access to data and information sharing possibilities.

**Priority 3: Core indicator 2**

*School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

There is an inclusion of DRR aspects in the primary school curriculum under different subjects namely social studies, agriculture and geography. Advocacy for inclusion of DRR in Secondary, University and professional curricula is being undertaken. Although DRR has yet to be included in the professional curricula, government in partnership with NGOs and support from donors is developing information, education and communication materials (training manuals) on DRR which will be used to train various officials involved in DRR.

**Context & Constraints:**

Currently, DRR stakeholders are strongly lobbying for the inclusion of DRR into education curricula at all levels. This is an advocacy issue which calls for adequate resources. Resources also need to be made

available for the actual development of the course materials. Although some training materials are being developed, the lack of financial resources still remains a big challenge.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

A flood assessment tool has been developed for flood assessments by stakeholders at national, district and local levels. The Malawi Vulnerability Assessment Committee also undertakes detailed assessments on vulnerability to food insecurity. Other stakeholders like FEWSNET also complement with assessments on famine and food security.

#### **Context & Constraints:**

So far, there has been limited investment in research methods and tools for a multi-risk assessments has been done. Studies on cost-benefit analysis especially on floods and drought (prolonged dry spells) have been done to inform decision making. However, lack of adequate resources is a challenge in the development of research methods and tools for a multi-risk assessments. However, a detailed pilot project proposal has been developed.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Although a countrywide public awareness strategy does not exist, government and other stakeholders are continuing to conduct awareness campaigns to the general public and officials at local level through workshops, trainings and public awareness campaigns in targeted vulnerable districts.

**Context & Constraints:**

Most of the awareness campaigns and training has been limited to only a few targeted rural districts and central level officials due to lack of adequate resources (financial, human and material). Many NGO's have been active in this field and a database on their activities and capacities has been developed at central level for better coordination and as a stepping stone towards a National Platform.

---

## Mauritius (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* No: Web page of national disaster information system
- \* No: Established mechanisms for accessing DRR information

**Description:**

Relevant information on tropical cyclone and heavy rainfall is readily available from the Mauritius Meteorological Services.

A study has been conducted on flood prone areas and this is available at the Ministry of environment and National Development Unit. Sea level data is also available at the Meteorological services for the last 20 years. Quantitative disaster data is located at different institutions, (The Central Statistics Office, the Ministry of Social Security, etc,) and with some effort can be put together.

**Context & Constraints:**

Community involvement is of prime importance in any programme of disaster risk reduction. There is a need of a central data bank and also certain mechanism to record non-meteorological disaster data, namely in the social, economic and environmental sector.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

A whole chapter on tropical cyclone and the cyclone warning system in Mauritius is taught at primary and secondary level. Some basic knowledge on, volcanoes, and earthquake is also there. More efforts are required regarding landslide, flash flood and tsunami.

Recently some endeavours are being made to introduce climate change at both the primary and secondary level. Some research studies, particularly by students for their projects at the final year of the degree course are being done at tertiary level.

**Context & Constraints:**

Further training materials need to be developed for torrential rains, land slide and tsunami.

Efforts are being made at this moment, in collaboration with the Mauritius Institute of Education and the Education department of the Ministry of Environment to develop curricula for tsunami. A climate change booklet for children has been developed at the Meteorological Services.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

- \* No: Research outputs, products or studies
- \* No: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

**Description:**

Mauritius does not yet have a particular institution which is looking at multi-risk assessment. The university people have just began to think in this direction.

One of the recommendations of the Fact Finding Committee set up after the 26 march 2008 floods in to set up a Central Disaster Centre

However, some research on tropical cyclone has been done at the Meteorological Services but not much on the community response to the impacts of cyclone or on methods to reduce risks apart from the existing warning system.

**Context & Constraints:**

Institutional framework has still to be developed. There is a lack of resources, both human and financial. Necessary incentive need to be created to apply science to practice.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

The citizens of Mauritius are well aware and well-educated regarding tropical cyclone. Some knowledge and understanding do exist for torrential rain, landslide and tsunami.

Public awareness campaign include audio and video and clips on television and radio, brochures, posters in public places government buildings and talks in educational institutions, community, women and youth centres.

**Context & Constraints:**

Though awareness of hazards is increasing, there is a tendency of the general public to overlook or simply ignore some of the basics of risk reduction.

One of the major challenge in Mauritius in the change in behavior of individuals and even of some organizations.

---

**Morocco** (in French)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Le Département de l'environnement a élaboré un Système d'Information Géographique (SIG) sur les risques naturels et technologiques à l'échelle du territoire national. Cette base de données a permis l'élaboration de cartes thématiques de répartition des risques au Maroc et pourra servir d'outil d'aide à la décision pour l'élaboration des plans de prévention des risques. Aussi un site web de la Direction Générale de la Protection Civile (DGPC) sera ouvert incessamment, celui-ci comporte toutes les informations sur les catastrophes survenues au Maroc, les mécanismes de prévention correspondants et les mesures de sensibilisation. La DGPC compte en faire un outil moderne d'information. Et afin de garantir la réussite de ce projet, cette Direction va investir en matière d'éducation des enfants en bas âge et des populations jeunes.

Des efforts sont en cours, en concertation avec le Ministère chargé de l'Education Nationale pour intégrer des modules de formation et d'information sur les risques de catastrophes.

Par ailleurs le Département de l'Environnement en collaboration avec le Centre Régional des Pays Arabes de l'ISDR est en cours d'élaboration d'un système de gestion d'Information sur les catastrophes (DesInventar) qui est une base de données sur les catastrophes qui permet le stockage des informations sur les catastrophes, les pertes en vies humaines, les dommages causés ...etc. Il permet également l'analyse de ces données et de les représenter sous forme de graphiques et de cartes etc..

**Context & Constraints:**

La mise en place d'un système national d'informations est une opération très délicate pour le Maroc compte tenu de sa composition sociale, de la diversité des niveaux d'éducation et des contraintes linguistiques.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

L'éducation à la sécurité fait partie intégrante des programmes scolaires du Ministère de l'Education Nationale aussi bien au niveau primaire, secondaire et collégiale. Plusieurs masters qui intègrent la réduction de risques de catastrophes ont été lancés par les universités marocaines (université Mohammed V, Université cadī ayad, ibn Tofail de Kénitra, FST de Tanger etc..) ainsi que des travaux de recherches sont élaborés par les instituts de recherches.

**Context & Constraints:**

Ces recherches sont sporadiques et ne couvrent pas la totalité des types de risques potentiels et concernent généralement des zones géographiques restreintes.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

La loi sur l'Eau 10-95 adoptée en 1995. Cette loi sur l'eau constitue la base légale de la politique de l'eau du pays. Elle a permis d'élaborer et de mettre en oeuvre la stratégie et la politique nationales en matière de gestion et de développement des ressources en eau de manière à accompagner et à soutenir le développement économique et social du pays, où la prévention des inondations et des sécheresses constitue l'objectif majeur. Elle contribue à la protection des populations et des biens contre les aléas climatiques et météorologiques

- La loi n° 11-03 relative à la Protection et la Mise en Valeur de l'Environnement (PMVE) adoptée en 2003 : Elle a pour objet d'édicter les règles de base et les principes généraux de la politique nationale dans le domaine de la prévention des pollutions et des nuisances.

La loi n° 12-03 relative aux études d'impact sur l'environnement dont l'objectif est d'évaluer de manière systématique et préalable les répercussions éventuelles directes et indirectes, temporaires et permanentes des projets sur l'environnement.

Le projet de loi sur les installations classées pour la protection de l'environnement : Ce nouveau texte a

pour objectif principal de remplacer la législation sur les établissements insalubres, incommodes ou dangereux de 1914, dont la nomenclature a fait l'objet d'une dernière adaptation en 1950. Il est basé sur une politique plus adaptée pour la maîtrise des risques inhérents aux activités industrielles notamment en ce qui concerne les autorisations d'ouverture des installations dites "classées".

Concernant l'évaluations des coûts, il n'existe pas un de système d'assurance pour fournir une protection financière contre les risques de catastrophe, cependant une nouvelle législation est envisagée (projet de loi N°34-08) pour combler cette lacune, elle est en cour d'adoption et elle pilotée par le Ministère des Finances.

#### **Context & Constraints:**

Le projet de loi N°34-08 exige que la couverture contre les tremblements de terre, les inondation le terrorisme soit comprise dans toutes les polices d'assurance.

L'absence de décret d'application pour la mise en oeuvre des lois précitées pour l'évaluation des risques environnementaux

#### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

En général, certaines campagnes sont menées soit au niveau central soit au niveau local. Cependant ces campagnes, se font dans la majorité des cas à travers les médias, ne sont pas systématiques et traitent souvent les risques dominants lors d'une saison. A titre d'illustration, une campagne de prévention des incendies de forêts est souvent menée pendant la saison d'été, par le Haut Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification et par tous les intervenants pour la protection des forêts et la prévention contre les risques d'incendies qui ravagent chaque année une large superficie de nos forêts. Ces campagnes sont souvent prolongées au niveau local, notamment au niveau des massifs forestiers les plus exposés aux incendies

Il est à signaler que le Département de l'Environnement a lancé Depuis 2004 un débat national sur les risques naturels et technologiques.

#### **Context & Constraints:**

En général ces compagnes de sensibilisation ont un caractère circonstanciel.

---

## **Mozambique** (in English)



### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

Yes

#### **Means of Verification:**

\* Yes: Web page of national disaster information system

> INGC web page (2010) [http://www.preventionweb.net/files/16411\\_ingclink.doc](http://www.preventionweb.net/files/16411_ingclink.doc) [DOC ]

\* Yes: Established mechanisms for accessing DRR information

#### **Description:**

This is an area where less progress has been made over the last three years. Attempts were made for the establishment of a national disaster information system, including information collection from local level, its storage, management and dissemination by the National Institute for Disaster Management to all DRR stakeholders, as shown in Figure 3.1. So far, INGC and CENOE are the national centers of DRR information system in the country.

A web page has been created by the INGC to enable virtual access of official DRR information to the general public. Important documents, such as the Master Plan for Disaster Prevention and Mitigation, the 2009 INGC study on climate change impacts on DRR, and press release documents are available on this website.

However, as internet penetration and access is still very low at local level, particularly in the districts, the use of VHF radios has been defined as the basic element for information collection system, as radios are less affected by network failures. The operation issues of this system have been tested during national, regional and community simulations conducted across the country every year.

Currently, two important initiatives are underway aiming at gathering and disseminating DRR data and information:

- A DRR specialized website is being created by the Ministry of Science and Technology;
- Under the GRIP project, disaster data for the last 30 years has been collected. Additionally, a National Knowledge Center, located at the National Institute of Meteorology (INAM), is being conceived to enable sharing and discussion of all national DRR datasets and studies. This center will be managed jointly by the Eduardo Mondlane University and INAM.

During emergency situations, radio, TV and newspapers remain the main officially and trusted mechanisms to disseminate information to cover a vast public on the impending disasters.

#### **Context & Constraints:**

Although there have been efforts to gather key information under one umbrella,

- DRR information is still scattered among several institutions responsible for primary data collection and analysis;
- Weak integration of DRR information, including emergency reports on the INGC web page;
- DRR information system is still weak with regard to regular data collection from local level;

- Lack of guidelines and methodologies to ensure easy implementation of the information system, particularly at local levels following the end of emergencies or simulation exercises;
- Absence of a culture of DRR data storage, management and dissemination in the form of national database.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

#### **Description:**

INGC and the Ministry of Education are working together to progressively integrate DRR into education curriculums of public and private education at different levels using different approaches. In the public education, floods and droughts hazards are integrated into the Natural Science text book at Primary education. In turn, cyclones, volcanoes and earthquakes are components of Physical Geography text book at Secondary School.

Disasters topics are also integrated into the University curriculum. At the public education, the Department of Physics, of the Eduardo Mondlane University, the main state university, runs two BSc courses, namely, Physics and Meteorology, and Oceanography.

So far, this department has been responsible for training of the majority of human resources of the National Institute of Meteorology, and the staff of the National Institute for Hydrography (INAHINA).

For 2011, two MSc courses will be launched at the Eduardo Mondlane University:

- The MSc Physical Geography and Disaster Management at the Department of Geography
- The MSc Climate Change and Disaster Risk Reduction at the Department of Physics.

At private education, the Mozambique Technical University (UDM), leads the integration of DRR into university education:

- A BSc Environmental and Disaster Management Engineering course has been taught since 2002
- The MSc Disaster Risk Management and Development will be launched in 2011.

Currently, new approaches have been adopted to integrate DRR into schools curriculums. For instance, at primary and secondary level, teachers have been trained to informally include DRR aspects in their subjects. At University level, students have been encouraged to undertake their dissertation on DRR themes.

Finally, after temporary closure, a professional course on Land Use Planning has been resumed with the reopening of the National Institute for Land Use Planning in 2010. People trained in this institute are expected to strengthen the capacity of the District Services of Infrastructures and Planning at district level.

**Context & Constraints:**

At primary and secondary education, only physical aspects of hazards are presented in the text books. The human, economic and social impacts, and the methods and techniques to prevent or reduce the negative impacts of disasters are still missing.

At university level, there is a limited number of DRR experts. As a result, the understanding of the concepts of hazard and disasters and their respective research methods, particularly for hazard analyses and assessments is still weak. Consequently, the vulnerability and risks assessments are often incomplete or misleading.

If not addressed, this fact may undermine all the results of the current efforts to integrate DRR into formal and informal education, particularly at local level where hazards take place, and where disaster risks are expected to be actively and urgently reduced.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Low advances have been made in this area. As a whole, Mozambique still devotes little attention to the importance and contribution of the national Scientific Research on fostering development in several areas, including DRR.

Since 2006, the Ministry of Science and Technology has struggled to bring Scientific Research into the national development agenda. The approval in 2006, of the Mozambique Science, Technology and Innovation Strategy, symbolizes this commitment.

This strategy puts emphasis on applied research and the creation of national research capacity by investing in Master and PhD training of Mozambican citizens, and the creation of scientific authority to guide all research activities that should play a critical role in the country's development, particularly, in the fields of natural sciences and technologies. Some results of the implementation of Science and Technology Strategy are:

- Environmental sustainability, including climate change and coastal area management as well as the linkages between environment and poverty and economic development and environmental impacts have been identified as one of priority of the national research agenda

- The establishment of the National Research Scientific Council and the researcher career
- The establishment of the Mozambican Academy of Science
- Allocation of annual research funds to the Ministry of Science and Technology to finance national research projects
- Concession of 50 annual MSc and PhD scholarships to Mozambican citizens to attend to Natural Science and technological courses particularly in Brasil, India, China, and Australia.
- Organization of scientific seminars by the Ministry of Science and Technology for the presentation of research outputs of the projects funded by the ministry research funds.

### **Context & Constraints:**

Over the years, Mozambique has relied on sectoral research, particularly that conducted by international consultants, to make important decisions in all sectors.

For instance, the recent INGC study on Climate Change impacts of DRR in Mozambique was led by international experts (50% of the people involved), with support of national researchers or sectoral officers (the remaining 50%), mainly, for data collection or for results validation. This scenario has resulted in low interest on funding national research activity, as a whole.

Specifically to DRR, the INGC 2011 Synthesis report show that around the country only 66 people are actively involved in DRR activities including research, of which only 3 are DRR experts, and only 50% hold PhD (3) and Master (27) degrees (See figures 3.1 and 3.2).

As such, although these people can deeply understand the physical processes of specific hazards correlated to their fields, they lack deep knowledge to correlate the physical processes with specific hazards research methods, the impact root causes (vulnerabilities) and suitable solutions to address multi-hazards impacts, particularly to economic sectors.

The spirit of DRR multidisciplinary research teams, linking academia, DRR institutions, social and economic sectors does not exist. As a result, the existing individual studies are not comprehensive enough.

Therefore, these individual or sectoral studies are still less relevant to provide solutions to national disaster risk concerns in different areas of interest.

There is also lack of systematic collection, publication and dissemination of existing national DRR studies scattered in a few government departments and research institutions. This fact reduces the interest of the academia and research institutions to be fully engaged in DRR research.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

### **Description:**

With the exception of the Master Plan for Disaster Prevention and Management, the Disaster management policy and the annual contingency plans, the country does not have any written strategy for DRR public awareness for both rural and urban communities.

But, the creation of culture of disaster prevention, through information dissemination is a national priority and is one of the DRR objectives of the Five Year Government Plan (2010-2014).

Therefore, institutionalized mechanisms and several sectoral initiatives are in place to build resilience to hazards at rural and urban communities.

These initiatives are currently carried out in the form of:

- Annual national, regional and communities simulation exercises, including municipalities, addressing the specific local most frequent hazards,
- Continuous creation and training of Local Committees for Risk Management across the country, including in municipalities and schools
- Training 188 Local Government members (District Administrators and Permanent Secretaries, Heads of the Administrative Posts, teachers, CSO and university students (see Figure 3.2);
- Dissemination of seasonal weather forecast and Contingency plans to all the levels, using the media and regular meetings with all stakeholders;
- Dissemination of official warnings and statements to the general public, and to specific locations on impending hazards, through the media, local governments, including SCO and Local Committees for Risk Management;
- Regular (weekly) dissemination of meteorological phenomena and concepts in the newspapers, by the National Institute for Meteorology.
- Regular dissemination of daily weather forecast by the National Institute for Disaster Management, through all the national TV and radio stations and newspapers.
- Permanent engagement of Government members at all levels, Parliamentarians, international development partners, and Civil Society to sensitize local communities to avoid building permanent homes in areas at risk of flooding, and stimulate them to intensify the production of drought resilient crops and other income generation activities out of agriculture.

### **Context & Constraints:**

The lack of a national DRR awareness and communication strategy with defined institutional roles and targets hinders the full assessment of the achievements attained and the identification of future needs, including in areas where local communities have been trained.

In other hand, lack of harmonization of general DRR messages and information to specific local hazards, long term development priorities and local adaptation needs remains a big challenge to the current efforts to build disaster resilience to rural and urban communities.

Findings from the HFA local dialogue held by UNISDR/Civil Society/ INGC in the district of Buzi, central Mozambique, showed that the enhance resilience at local level, the following actions should be taken:

- Maintenance of communication equipments, namely, antens and microfones, to insure accurate information exchange between the local communities and the District Administration
- Identification, recruitment and training of a local technician who can directly deal with DRR at district level.

## **Nigeria** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

Yes

#### **Means of Verification:**

\* Yes: Web page of national disaster information system

> NEMA (2005) <http://www.nema.gov.ng>

\* No: Established mechanisms for accessing DRR information

#### **Description:**

NEMA has a web site that is available nationally, the web site is also linked to the web sites of stakeholders. NEMA also reprints and circulate UNISDR publications.

#### **Context & Constraints:**

There is a need for database for disaster information apart from the website.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

#### **Description:**

The Curricula for DRR for primary and Secondary levels of education have been developed. The Curricula will be infused into 6 subjects.

Six Nigerian Universities have developed curriculum for Disaster Risk Reduction at the Postgraduate level. These Universities will award Masters degree in Disaster Risk Management. NEMA will support these Centres financially for three years to carry out research and teaching.

Disaster Risk Reduction has also been mainstreamed into professional programmes, like the Police Training College, Arm Forces Command and College, Nigeria Institute for Policy and Strategic Study, the In-Service Trainings for Civil Servants and National Security, Civil Defence Corps and National Youth Service Corps (a one year compulsory service period for graduates of Universities and Polytechnics).

**Context & Constraints:**

DRR curriculum at the Primary and Secondary Schools are not stand alone, but will be infused into identified subjects.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Baseline Studies for six (6) States had been carried out and the reports are available. A multi risk assessment tool was develop to collect data in communities during the vulnerability and capacity analysis.

The Centres for Disaster Risk Management and Development Studies are also to carry out research programmes. Equally, Students are expected to write a Research Project before the award of Masters in Disaster Risk Management.

**Context & Constraints:**

Study on economic costs and benefits of DRR has not been carried out.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

### Description:

As part of the Agency's efforts at taking Disaster Management to the grassroots and communities, community sensitization on flood risk awareness programme and market fire were organized for Grassroots Awareness Campaign in many Communities Development Councils located in all the geopolitical zones of the country.

The Grassroots Emergency Management Volunteers Corps (GEVC) program has been recognized as a veritable tool of DRR and is being pursued vigorously. The GEVC was initiated in 2008 and has so far spread to about 23 states with numerical strength of 6,408 registered volunteers, to achieve the goal of extending disaster management services to the grassroots.

The National Platform has completed the production of twelve resource materials in English language for public enlightenment and capacity building of different population groups in Nigeria. These include materials published by UN agencies which were adapted by NEMA those developed locally.

### Context & Constraints:

Some of the publications need to be translated to the local languages for effectiveness at the local level.

---

## Senegal (in French)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

## Is there a national disaster information system publicly available?

Yes

### Means of Verification:

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

### Description:



Un site web conçu à cet effet est en cours de finalisation et devrait être fonctionnel dans les prochains jours.

en outre, il existe dans le pays des structures spécialisées capables de renseigner les populations et les pouvoirs publics sur les éventuels risques encourus notamment en ce qui concerne l'érosion côtière, la biomasse et la disponibilité alimentaire

**Context & Constraints:**

Ces informations ne sont accessibles au grand public. Les canaux utilisés et les supports de communication ne sont pas toujours bien adaptés.

**Priority 3: Core indicator 2**

*School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

Au Sénégal, un module sur la RRC a été introduit dans le curriculum de formation des élèves sortants de l'Ecole Nationale d'Administration (ENA).

**Context & Constraints:**

Cette introduction de l'enseignement de la RRC doit être élargi aux écoles primaires et secondaires et même aux universités

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Dans un avenir proche, l'Etat mettra l'accent sur la recherche en RRC en incluant dans son budget national une ligne budgétaire destinée à la recherche appliquée.

**Context & Constraints:**

L'opérationnalité de la plateforme devrait permettre d'y arriver.

Les moyens financiers pas assez suffisants

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

La mise en place des réseaux à permis de sensibiliser certaines communautés de base notamment le réseau des journalistes en RRC et celui des femmes leaders de la banlieue de Dakar

**Context & Constraints:**

Les activités des réseaux sont très limitées.

le champ d'action très réduit

les moyens financiers et matériels insuffisants

---

**Sierra Leone** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* No: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

In a bid to sensitise vulnerable communities across the country in line with Priority III of the HFA, the Disaster Management Department has been making tremendous efforts in letting information be available to all Sierra Leoneans. These take the form radio, TV, workshops, public lectures, schools outreach programmes etc. Some of these programmes are done in our local dialects.

However, in spite of the above achievements, the department is yet to establish its own website. The means information on the net still scanty.

**Context & Constraints:**

The department is working in close collaboration with its key stakeholders to develop a departmental website and data base on all issues related to disasters

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

The Disaster Management Department has been conducting school sensitisation programmes in selected

schools in the Western Area and the Provinces. This is in line with priority III of the Hyogo Frame Work of Action which focuses attention on the use of knowledge, innovation, and education to build a culture of safety and resilience at all levels. The theme of the campaign is in line with the UN/ISDR's slogan; "disaster risk reduction begins at school".

The campaign is still in its pilot phase, with few schools selected from each of the twelve districts and the western area of the country. It is hoped that at the end of the pilot phase, the Disaster Management Department and its partners would now present a convincing argument, with tangible evidence based on successes scored, to the political decision makers, on the need to integrate DRR into the formal school curricula or at least part of school activities. Meanwhile, there have been preliminary discussions with officials of the Ministry of Education, Youths and Sports on the issue.

In Freetown, the usual annual inter Primary School Quiz competition on DRR was organised from the 24th – 31st May, 2010 .

In line with the above, the trend will not be completed as there is also need for a training workshop for teachers in the Provinces on DRR. A training of trainers' workshop was organised in six districts last year (2009) and the remaining six districts this year (2010).

The training targeted 10 Junior Secondary schools in each district with 3 teachers from each school. This amounted to a total number of 180 teachers trained for this year. Current number of DRR pilot schools is up to 102. Fifteen of these are primary schools in the western area, and the remaining 87 are Junior Secondary Schools.

**Context & Constraints:**

- The ratification/enactment of the DM Plan and policy which will enhance the integration of DRR into the National School Curricula
- Ministry of Education being reluctant to include DRR as a module/part of its Schools' extra Curricula activities.
- Inadequate funds to extend DRR training to Secondary Schools
- Cooperation of school authorities in conducting DRR activities like sensitization, DM lectures to capacitate students for the inter-primary school quiz competition
- Sustainability of DRR school clubs formed for interactive sessions among schools, weekly assembly lectures to capacitate their students on DRR issues

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Disaster Risk Reduction is not included in the national scientific applied research agenda as the country is not scientifically grounded. However there is a collaboration between the disaster management department and the two main universities of Sierra Leone. Infact the research of the national hazard profile was conducted by professors from the two universities. The department also enjoys a close collaboration with the nationan metreological services and the bureau for climate change.

**Context & Constraints:**

There is a dire need to link DRR with Scientific applied-research agenda and budget, this is especially so for the establishment of an effective and timely early wasning system. The upgrading of the Mets department fits into that category

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* No: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

As part of its public education campaign, the Disaster Management Department has engaged in numerous strategies in building a culture of resilience to disasters in vulnerable communities in Sierra Leone. Such strategies include:

- DRR school outreach programme on the theme Disaster Risk Reduction Begins at School.
- nationwide community sensitization awareness campaign through songs, skits and drama groups
- training of volunteers in identified disaster prone areas on Disaster Management
- organising television documentary programmes on the disaster prone areas, hazards faced,risks and mitigative measures to avert disasters
- Radio discussion programmes to sensitize the public on Disaster Management

**Context & Constraints:**

Inspite of the above, the department and its partners recognise the fact that more needs to take the public education campaign to the grassroot communities.

There is also the need to expediate the formal integration of DRR into the national primary school curriculum.

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### **Description:**

Different Institutions have various means to communicate hazards and risks to community and stakeholders. For example, the Tanzania Meteorological Agency (TMA), National Environment Management Council (NEMC) and National Land Use Planning Commission normally use radio, television, press release and their organization website etc.

Currently there is no consolidated database or website where various stakeholders and the general public can disseminate and access data and information on disaster risk management. Normally information on disaster are shared to stakeholders, community at risk and the general public through formal communication, disaster platform, press release, radio and television programs etc.

In the commemoration of International Day for Disaster Reduction October 2010, DMD Zanzibar conducted a 2 day workshops for students of higher learning institutions of Zanzibar as a base of exchanging knowledge and information on Disaster Risk Reduction issues. Six topics/issues were presented and discussed. DMD also organized and participated on live broadcasted radio and TV programmes where this year's theme (Making Cities Resilient – My City is getting ready) was discussed among panelists and viewers through phone calls.

#### **Context & Constraints:**

Resources (fund, technical knowhow and IT equipments) are major drawbacks. There is need to develop other means for information sharing like Annual Government Report on Disaster Prevention and Response, Database, Web based information on disaster etc., This should go parallel with educating the public on the importance of making follow up on various disaster information.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

\* No: Primary school curriculum

- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

The Handbook for Primary School training is on the final stage its Foreword is at the Office of the Permanent Secretary – Ministry of Education and Vocation Training for signature. Also the Teacher’s Training Kit for Primary School is on the final stage. The University of Dodoma and Ardhi University have established undergraduate and postgraduate degree programs on disaster management respectively. On the other hand there are general DRR training on various aspects provided by Disaster Management Department, Ministry of Health and Social Welfare and Ministry of Livestock Development and Fisheries.

Through UNDP 2011 – 2015 and The Zanzibar Strategy for Growth and Reduction of Poverty 2010 – 2015, DMD of Zanzibar plans to integrate/mainstream disaster risk reduction concepts in the Primary and Secondary School Curricula. Zanzibar was part of the recently UNISDR consultancy on developing the Teacher’s Training Kit for on disaster risk reduction to enable them to integrate hazard and risk issues into their daily teaching so as to make their schools a safe place.

DMD Zanzibar has conducted DRR related training to Media and town planners’ personnel.

**Context & Constraints:**

A proactive approach to reconciling indigenous and scientific sources of knowledge on hazards and risks in ways that make sense to local communities is still an ongoing challenge.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

- \* No: Research outputs, products or studies
- \* No: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

**Description:**

The main institutions undertaking basic and applied research on disaster and DRR are Ardhi University, Dar es Salaam University and Sokoine University of Agriculture. The researches undertaken are important for the purpose of improving local understanding of hazards, vulnerabilities and community preparedness and response behaviors.

**Context & Constraints:**

There is inadequate utilization of research findings due to lack of funds and knowledge to translate and integrate the said. Reward and incentives for researchers to engage in disaster risk issues should be encouraged.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

#### **Description:**

Sector specific awareness strategy known as National Avian Influenza Emergency Preparedness and Response Strategic Plan (EPRP) of 2006/7-2008/9 its revised version (NAPIP) and new RVF – EPRP both for 2010/11 – 2012/13; aimed at increasing individual and community preparedness for disasters exists.

Participation in public exhibitions (e.g. Farmer's Day, Public Service Week, Disaster Day) help to promote a shared understanding of roles and responsibilities of PMO-DMD, Local government Authorities, NGOs, Private sector and other Institutions in preparing for, and recovering from natural and manmade disasters.

DMD Zanzibar plans to broadcast a weekly DRR program through public TV and radio. Currently the programmes aired are those concerned with the commemoration of International Day for Disaster Reduction activities which include the drama, panel discussions, Minister's responsible for disaster reduction speech, special spot messages concerning DRR.

DMD Zanzibar usually prints and disseminates leaflets and educative posters for any erupting emergency that requires full public awareness. It normally cooperates with the concerned sector on the preparation of these educative materials.

#### **Context & Constraints:**

There is lack of financial resources to reach remote areas and local community since there is no budget for DRR at Local Government Level. The challenge is changing behavior of individuals (learning is an individual process) and organizations, and progressing intention into action.

---

## **Zambia** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through*



*networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

- \* No: Web page of national disaster information system
- \* No: Established mechanisms for accessing DRR information

**Description:**

A number of assessments have been done on common disasters that the country experiences e.g. droughts and floods. This information is disseminated to all levels and is stored by DMMU.

**Context & Constraints:**

The challenge is to have information that is in a format that is usable and readily available to all stakeholders. There are also challenges of poor technology infrastructure at community level which continues to hamper progress at that level.

We are now working on a web based common platform (ZEPRIS) with World Food Programme (WFP) which will be available for all who need information. The platform will develop links with other institutions.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

The country has had a regional course where Disaster Risk Reduction (DRR) and disaster management

are taught. Participants from various institutions have in the past attended this course. At tertiary level, the Mulungushi University and the University of Zambia have introduced courses relating to disaster management in their curricula.

**Context & Constraints:**

The major challenge remains to take the subject to the lower levels of school curricula at Primary and Secondary.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

The country has developed tools for conducting multi-hazard risk assessments. There are also capacities for doing rapid and impact assessments.

**Context & Constraints:**

Although there is capacity to conduct impact assessments, there is still a gap in relating investments in DRR to reduced losses due to this investment when disasters strike. This has made the calculation of cost benefit analysis difficult.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Currently the Disaster Management and Mitigation Unit have been conducting awareness campaigns on the national television and radio. There are plans to utilize local radio stations with messages transcribed in the local language. Furthermore, capacity is being built in the District Disaster Management Committees to conduct awareness campaigns in their districts. The Unit has also recently expanded its presence in all the nine provincial centers and it is expected that these offices will be a major conduit for public awareness raising in those Provinces.

**Context & Constraints:**

Lack of funds for comprehensive country wide public awareness to be mounted and also capacity building for all the districts and Satellite Disaster Management Committees

---

# Americas

---

## Anguilla (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### Is there a national disaster information system publicly available?

No

#### Means of Verification:

\* No: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### Description:

News Papers  
Mitigation Outlook Newsletter.  
Radio Interviews  
radio Soap Opera  
Plays  
Brochures  
Posters  
Flyers  
Displays  
News paper Pull Out  
Direct Mail  
Radio Quizes  
School Games

Development of web page is ongoing. Creation of National Media Network. Library available, Information on Disasters available at the Museum.

#### Context & Constraints:

All levels of govt, populations and sectors.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

DRR Begins in School Campaign, Riskland Games, Whistles and pencils

DRR incorporated into Social Studies and Humanities Curriculum from Kindergarten to Yr 6. Teachers have received training via Cdema workshop. Tackling what to do in emergencies, drills etc.

**Context & Constraints:**

Staff time and budgets.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

No

- \* Yes: Research outputs, products or studies
- \* Yes: Research programmes and projects
- \* Yes: Studies on the economic costs and benefits of DRR

**Description:**

Pilot of one village completed and working to add in climate change and adopt the assessment from a community based level.

Participation in the R3i initiative. GIS & Hazard Mapping is ongoing to create a collection of and creation of Geographic Based Data Layers for national mapping programmes which will facilitate HRV assessments.

**Context & Constraints:**

Project in process and an improved base data is being obtained.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Community meetings held in two villages to determine hazards applicable and consultations undertaken to discuss best practices for mitigation. (Sea Defence wall and Beacon Lights in Fishing Channel)

Public outreach and education materials, radio, newspaper and television. Public testing of the National Warning System. All Hazard Risk Reduction and Safety Fair. Summer Library Camp for 100 Children 5-15 yrs. Business Continuity Initiative has commenced and is able to reach private sector businesses and community members.

The National Media Network for DRR has been created to increase awareness and bridge the gap between technical information available and the information disseminated to the public thereby building a culture of safety and resilience to reduce the impact of disasters. It is anticipated that the Network will serve as a vehicle for developing a team of goodwill ambassadors based on prominent personalities to deliver the message of DRR to the community.

**Context & Constraints:**

Time & Budgets.

---

## **Antigua and Barbuda** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Antigua and Barbuda has formally established a website (NODS.gov.ag) where disaster management information can be found, this is in addition to the weready.org website which has been set up at the regional level to keep the people of the region informed. These are in addition to regular public information dissemination and training in the schools, work places and communities. Posters and brochures are distributed regularly to the general public and daily public announcements are on radio and television. News paper ads though less frequent are placed in the public's domain frequently.

In Antigua and Barbuda all the schools have received multi-hazard information and regular evacuation drills are conducted in a relatively short period. Recommendations will be made for mandatory specific disaster management activities over the calender year.

Ongoing research continues to occupy the focal point attention as we analyze and update multi-hazards data for prioritized intervention and cost benefits. This includes updating of data bases, hazard Maps and other critical information across sectors, ministries and other agencies.

This process is expected to be completed by the first quarter of 2011.

**Context & Constraints:**

Due to the limited staff and budgetary constrains, this process will take longer than anticipated, other nontraditional means of support are being explored.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

Disaster Management is part of the national schools curriculum. However, this needs to be formalized to

truly reflect DRR. As it stands now it is not clear who sets the standard and monitors the scope.

As part of the wider Caribbean intervention, through CDEMA, the University of the West Indies has developed and introduced specific information for the class room and teachers as part of the recently concluded Tsunami warning protocol for the Caribbean of which Antigua and Barbuda was a pilot country.

The issue of standards for the different grades is a matter of concern that needs to be addressed and reflected across the education institutions.

**Context & Constraints:**

This may require a revisit of the education policy and strategy to give full and unambiguous guidance to this process. The ministry of education may be unwilling to go out on its own to fully implement DRR in the schools and other educational institutions since most of the region's curriculum is set by the regional body.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Multi risk assessment tools are slowly being introduced. However, the skill sets are moving to private sector, and replacement has been an issue. Great progress has been made as the NODS, fisheries, agriculture, land and survey dept, statistical unit, Public works Department. The environment division has started a process that allows us to share information and analysis between these agencies.

The information is being used to assist with cost benefit analysis in DRR related matters. Where we are and where we need to be is a gap that needs to be filled.

**Context & Constraints:**

The information sharing process is still very challenging, the gains made so far must be enhanced for maximum benefit.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities



## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

### Description:

A country wide programme of awareness exists in Antigua and Barbuda, there is an ongoing effort to constantly update the information to make it fresh and relevant so it appeals to its beneficiary.

### Context & Constraints:

The present system works well. However the issue of sustainability is questionable since more than fifty percent of the electronic programmes are done through good will by the management of the media houses.

---

## Argentina (in Spanish)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### Is there a national disaster information system publicly available?

-- Nothing reported within this timeframe. --

### Means of Verification:

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

### Description:

No se cuenta con información consolidada. Las instituciones y algunos grupos (como el GPIP o las Direcciones de Protección Civil) comparten entre sí alguna información.

Del mismo modo la Cruz Roja Argentina ha lanzado en el 2010 la plataforma virtual SIGRID (Sistema de Información de Gestión de Riesgos de Desastres), aunque por el momento su utilización está limitada al público interno (miembros de CRA).

### Context & Constraints:

El reto continua siendo: Consolidar información y compartirla generosamente, buscando la vías de acceso a la comunidad.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

#### **Description:**

Si bien aún no se ha incluido la RRD en las curriculas de la educación formal Primaria y Secundaria (con disparidad, en algunas materias lo incorporan aunque no de manera articulada), la comunidad educativa demanda crecientemente orientación al respecto.

A nivel universitario en cambio, se va incluyendo el tema en alguna de las carreras (Geografía, Ingeniería, etc) y existen Seminarios o Post Grados académicos de alto nivel (Universidad del Salvador, Universidad de Tres de Febrero). La USAL-IIDEC suscribió un acuerdo específico con la EIRD-Las Américas, en 2009. También se consolidan OSC que se especializan en la formación académica de RRD. Al respecto, en la Pcia. de Córdoba la CRA ofrece una Tecnicatura en Prevención y Atención de Desastres.

Asimismo, se incrementan las iniciativas promovidas por el estado, universidades u OSC (Seminarios, Talleres, Reuniones, Cursos Superiores, etc).

En 2009/2010, como se dijo al detallar sobre la Plataforma Nacional, se dió un impulso especial a la participación académica (ver el ítem correspondiente). Este embrionario espacio está recabando información para consolidarse.

#### **Context & Constraints:**

Se podrán impulsar espacios de “armonización” académica que permitan no solo mejorar la calidad de las iniciativas actuales sino facilitarlas y promoverlas en zonas de alto riesgo.

Recomendaciones como las expresadas en los Indicadores Básicos 1 y 2 de la Prioridad de Acción 2 también permitirán poner a disposición herramientas producidas por los diferentes actores especializados y actualizar, por ejemplo, una agenda común y compartida con las diferentes y periódicas actividades de capacitación.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

El algunas especialidades el nivel de evaluación e investigación es realmente alto. Pero no es parejo ello. Hay temáticas, como la del Desarrollo Territorial, que exigen niveles de evaluación importantes y en base a las investigaciones se ha diseñado un Plan de Inversiones y Desarrollo Territorial por parte del gobierno nacional, como ya fuera comentado. Pero aún no ha alcanzado el mismo nivel en los niveles provinciales y locales.

Hay un fuerte compromiso en tal sentido desde la coordinación de la Plataforma Nacional, que busca por diversas vías el mejor acceso a la problemática.

**Context & Constraints:**

El fuerte compromiso a nivel del gobierno nacional, todavía no ha alcanzado a otros niveles.

Algunos aportes en post grados de especialización universitaria (como la USAL, por ejemplo) resultan importantes, pero se muestran aislados en el contexto general.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Tanto desde la Dirección de Protección Civil como de la Comisión Cascos Blancos, se desarrollan en forma permanente planes y programas para mejorar la resiliencia de las comunidades a través de una estimulación de su cultura en la temática. Ello alcanza niveles urbanos y rurales, niveles nacionales, provinciales y locales, y son desarrollados -en el caso de Cascos Blancos- en fuerte alianza con organizaciones no gubernamentales y líderes comunitarios locales.

De la misma manera, Cascos Blancos ha suscripto convenios o Memorandum de Entendimiento con autoridades provinciales y locales (Provincias de La Pampa, Córdoba, Santa Fe, Buenos Aires, Tierra del Fuego, ciudades como la capital de Córdoba, Rosario o Bahía Blanca, sólo para dar algunos ejemplos) que

buscan mejorar la resiliencia de las comunidades.

También organizaciones de la sociedad civil se han mostrado sensibles en este aspecto, vehiculizando apoyos para fortalecer la resiliencia.

Incluso acuerdos conjuntos como los de DNPC-Asociaciones de Bomberos Voluntarios, Cascos Blancos-SAPSED, o la Red de Prevención y Preparación para las Emergencias, van en ese sentido. Importantes Congresos y Jornadas Internacionales se realizaron durante 2010: en Mendoza y Santa Fe y en especial las Jornadas Internacionales de Prevención de Riesgos y Emergencias, organizadas por el Ministerio del Interior y el Gobierno de la Provincia de Buenos Aires, en Mar del Plata, profundizan el proceso.

En esta misma línea puede incluirse el Memorandum de Entendimiento entre el Ministerio del Interior de la Nación y la Cámara Argentina de Transportes Automotor de Materiales Peligrosos (CATAMP)

#### **Context & Constraints:**

Las limitaciones presupuestarias, a veces impiden ampliar los programas de la manera que resultaría de interés.

La sensibilización de la comunidad necesita otro pilar, además, y este es el de los medios de comunicación masiva. En ese sentido, la Plataforma Nacional cuenta entre sus miembros solamente a una agencia de noticias especializada (RENA), pero que por el momento no trasciende a lo masivo sino que mantiene alcance entre los expertos en el tema.

---

## **Barbados** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### **Description:**

Currently, information dissemination on disasters is not systematic, but the DEM works assiduously, through the DEOs, to get information to communities through flyers, posters, lectures and presentations.

The DEM uses various media including mass media, public lectures, exhibitions, open days, PowerPoint presentations and videos to reach all segments of the population. This is the case for all hazards, but particularly at the start of the hurricane season. Strategies have been developed to reach specific target groups, including children, the elderly, the physically challenged, and tourists. Publications, documentaries, brochures and public lectures have been widely used and advantage is taken in a post-recovery environment to reach the specific population segments. Attempts are also being made to establish a library/documentation center to specially provide disaster management and DRR information.

The DEM partners with the Public Sector, such as the local professional associations of engineers and architects to support the concept of constructing disaster resistant building including private homes.

The Emergency Management Act, 2006 Cap 20 provides the legal authority for the DEM to request access to information including data sets from key public and private sector entities for disaster management and disaster risk reduction purposes. Databases have been shared with DEM to enhance its Geographic information System and efforts.

The proposed Integrated Coastal Risk Information Platform (ICRIP) to be initiated in April 2011, which makes use of the results of Natural Hazard and Risk Assessments for each coastal hazard. In these assessments, both hazard maps of the different hazards will be prepared, as well as inventories of vulnerable infrastructure, property and population, and estimates of probable losses to public and private assets. End users, such as the DEM, will have full access to all data and (most) other system functionality.

**Context & Constraints:**

Although some use is made of the internet department and agencies in both the public and private sectors are not operating at the same level and so there is a disparity in the way systems are utilized.

Not all the systems being used are user-friendly and greater training across the wide spectrum is required.

There is definitely a need for greater integration of information systems to ensure access and sharing.

Agencies which develop data information systems are reluctant to share for various reasons. There is still the tendency for agencies to perpetuate a turf war as it relates to the sharing of information and there is growing concern about the lack of control over how the information is used and the inability to recoup the financial outlay to produce the information in the first place.

The upgrade of DEM to better utilize information and communication technology is very slow.

Currently the information flow is severely limited, and although some use is made of the internet, the DEM does not regularly update the website with information for use by the public.

It is expected that the ICRIP will solve many of the issues related to the public's access to information on disasters, and will provide a basis upon which further components on non-coastal hazards may be added in subsequent years.

**Recommendations**

The ICRIP be considered an extremely vital component of the CRAMP, and that it be implemented expeditiously.

Accelerate the process of enhancing the capacity of DEM to lead the national disaster management programme.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

Disaster risk reduction is not included as a matter of policy within the national educational curriculum at all levels from primary to tertiary. However the topic and issues relating to disaster management and disaster risk reduction are infused into several subjects within the curriculum like geography, social studies and science, at all levels.

Research papers and class projects at the primary secondary and tertiary levels are increasing, with many group projects encouraged among students. Increasingly students seek out information in the library of the disaster office or demand that relevant information be provided by use of web-pages and the Internet.

Greater involvement in school disaster management and the development of disaster plans for schools is being promoted among principals and staff with enthusiastic support from the school population at all levels. Greater use is being made of functional and full scale simulation exercise for specific hazards to which school populations are vulnerable.

A school safety programme with assistance from the USAID Office of Foreign Disaster Assistance (OFDA), the Ministry of Education and the Department of Emergency Management is being instituted at the primary level with the hope of achieving greater infusion in the curriculum. In addition, specific training courses are designed and conducted targeting the public and private sectors and where possible infused into the training programmes of response agencies like the police army, fire services and health institutions.

Educational materials are developed and widely circulated in country. Teacher training for tsunamis has been initiated through the Barbados's teacher training institution, and this approach will be replicated in other training institutions.

**Context & Constraints:**

Lack of a definitive policy regarding disaster management and disaster risk reduction being infused into existing curriculum.

Lack of educational materials including instructors' and student manuals and readily available.

School curriculum is overcrowded and more encouragement for infusion into existing subjects needs to be encouraged.

**Recommendations**

- Secure a policy directive for greater incorporation of DRR concepts and practices in all levels of the curriculum.
- Establish disaster risk reduction units within the learning institutions.
- Greater encouragement for students at the secondary, undergraduate and graduate levels to undertake

research projects relating to DRR.

- Examine ways to further incorporate DM and DRR into existing training schedules and such courses made mandatory especially for the lower levels of the public service.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

A number of individual projects have resulted in some risk assessment results for Barbados. A pilot project for storm surge modelling and vulnerability assessment for the city of Speightstown (an area prone to flooding) was conducted and produced useful hazard maps for the area. It was generally agreed, however, that the project should have extended to include economic loss data, so that the DEM would have a template upon which to build for the complete risk assessment cycle. The project did produce maps showing vulnerable zones for events with different probabilities, and identified the critical infrastructure in the inundation zones.

Another such project for tsunamis was completed by the Norwegian Geotechnical Institute for the capital city, Bridgetown. The Consultants identified a few credible scenarios, and modeled the propagation of tsunami waves from the source to the shores of the city. Based on available high resolution bathymetry, they were able, as with the Speightstown storm surge project, to produce high resolution hazard maps for the city, showing areas vulnerable to different tsunami wave heights. In collaboration with the University of the West Indies, Cave Hill Campus in Barbados, a vulnerability assessment was added as a component of the project, where a post-graduate student identified all the critical buildings in the city inundation areas and was able to ground-truth them for incorporation into a risk map.

These and similar projects have been completed over the years, but with little or no incorporation of the results into planning and development policies. In addition, the replication of the excellent results obtained has not been performed thus far. No cost benefit analysis has been conducted using the damage assessment reports from disasters over the years.

#### **Context & Constraints:**

The financial outlay involved in the conduct of risk and vulnerability assessments has been prohibitive. However, with the projected losses and damage from climate change impacts, the necessity for these assessments and analyses has been brought to the attention of policy makers, who have agreed to make the funding available for the CRAMP project. The risk and vulnerability assessments for all coastal hazards will be completed under this programme.

One constraint continues to be the cost benefit analyses to support the decision making process with

respect to planning and development policy decisions.

#### Recommendations

The Ministry of Finance and Economic Affairs will need to take on board the results of the CRAMP and put in place methods and tools for cost benefit analysis in relation to hazards.

Other hazards experienced by Barbados other than coastal hazards must also be included in the vulnerability and risk assessments. Without these, Barbados will not have a truly multi-hazard programme, with all risks identified and managed.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

#### **Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

#### **Description:**

The Department of Emergency Management, DEM, as the lead agency for comprehensive disaster management in Barbados has been successful in its collaboration with the Standing Committee on Public Education and Awareness in implementing a comprehensive public education and awareness programme at the national and community levels utilizing a mass media approach.

Supplements are developed for both major newspapers annually throughout the Hurricane Season. In addition, articles on specific hazards are written and widely disseminated on crucial national and international days for specific hazards.

Disaster Management and DRR specialists make regular appearances on popular talk shows on both radio and television programme with high listenership and viewership. These programmes usually have a community call-in facility where there is direct interaction with the public. Public education and awareness programmes are also sponsored by the public sector, particularly those whose primary function is linked to disaster risk reduction services and private entities like insurance companies etc. DEM also develop hazard-specific brochures and in conjunction with the Government Information Service radio and television Public Service Announcements (PSAs) are aired throughout the year.

The Public Awareness strategy targets specific segments of the population as well. Oral presentations are also made to community-based organizations like Neighbourhood Watch Organisations, Parent Teachers' Associations (PTAs), Boys Scouts and Girl Guide Associations etc.

#### **Context & Constraints:**



There is a lack of a dedicated mass communications specialist within the DEM to conceptualise multimedia programmes in a systematic way, and to liaise with private sector entities for programme sponsorship and delivery.

The DEM is unable to harness the expertise and resources of the private sector for product enhancement.

Public education and awareness is geared almost exclusively to preparedness and response. Equal emphasis needs to be placed on prevention, mitigation and recovery.

Recommendation

Develop a multi-year public awareness and education programme inclusive of specific multi-media campaigns especially on anniversary of disaster events.

---

## **Bolivia** (in Spanish)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

Yes

#### **Means of Verification:**

\* Yes: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### **Description:**

[www.bivapadbolivia.org](http://www.bivapadbolivia.org), [www.defensacivil.gob.bo](http://www.defensacivil.gob.bo), [www.sinager.org](http://www.sinager.org)

#### **Context & Constraints:**

No existe plena continuidad de estos medios debido a limitaciones en los procesos de generar la información y falta de medios y recursos humanos

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Existe dentro de la actual curricula consideraciones sobre la ocurrencia de catástrofes y algunos factores de amenaza esto por parte del Ministerio de Educación en coordinación con el Viceministerio de Defensa Civil.

Existe trabajo en algunos municipios que están siendo implementados por las instancias departamentales de educación y en algunos municipios que soportan de manera recurrente eventos adversos, estos últimos están siendo coadyuvados por agencias de asistencia humanitaria, ONG´s y agencias de Naciones Unidas (UNESCO, UNICEF), bajo la coordinación del Viceministerio de Defensa Civil y el Ministerio de Educación.

**Context & Constraints:**

Aun se mantiene la expectativa en relación a la aprobación de la Ley de Educación donde se incluye la temática de reducción de riesgo de desastres.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

- \* No: Research outputs, products or studies
- \* Yes: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

**Description:**

Algunos ejemplos en este compo son los estudios realizados por el IRD, ASDI, IHH.

Además el Viceministerio de Defensa Civil ha promovido la elbaración de investigaciones sobre la aplicación de la GRD en el contexto de los gobiernos municipales.

**Context & Constraints:**

Aun esta debil este componente, dado que las investigaciones no siempre sonconsiderados en la elaboración de estrategias y programas.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

A través del Ministerio de Educación en coordinación con el Viceministerio de Defensa Civil y el apoyo de ONG´s, agencias humanitarias y de desarrollo

**Context & Constraints:**

No existe continuidad de estas acciones

---

**Brazil** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Desenvolvimento de mapa de ocorrência de desastres, montando um banco de dados de histórico de todos os desastres notificados à Secretaria Nacional de Defesa Civil, e já disponibilizados no sitio da internet.

**Context & Constraints:**

ocorrência e a intensidade dos desastres depende muito do grau de vulnerabilidade dos cenários de

desastres e das comunidades afetadas do que pela magnitude dos eventos adversos em medidas preventivas são essenciais para minimizar o desastre.

A partir da constatação de que os desastres podem e devem ser minimizados, cresce a importância da mudança cultural relacionada ao senso de percepção de risco. A percepção de risco é diretamente proporcional ao grau de desenvolvimento social de uma determinada comunidade ou grupo populacional, considerado em seus aspectos psicológicos, éticos, culturais, econômicos, tecnológicos e políticos.

O grande desafio da Defesa Civil no Brasil e da Estratégia Internacional para Redução de Desastres no mundo é o de minimizar os danos humanos, materiais e ambientais e os consequentes prejuízos econômicos e sociais resultantes da ocorrência de desastre. Ao incrementar o senso de percepção de risco e o comprometimento por parte das autoridades públicas, por meio da criação e operacionalização de Coordenadorias Municipais de Defesa Civil, teremos a redução de ocorrência de desastre no Brasil.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

#### **Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

#### **Description:**

1. Realização de atividades educativas e preventivas com iniciativa dos órgãos do sistema nacional de defesa civil em interação com escolas a fim de conscientizar e sensibilizar a população sobre riscos a que estão expostas e como proceder em situações de emergência
2. Implementar a cultura de prevenção e percepção de riscos, incluindo-se na grade curricular de acordo com a legislação educacional vigente, o tema “ defesa civil” como eixo transversal multidisciplinar , com ênfase na prevenção, capacitando todos os agente envolvidos no processo de ensino e aprendizagem.
3. Estimular a formação de agentes mirins nas escolas e comunidades implementar atividades de defesa civil voltados a crianças, adolescentes e jovens, e fomentar projetos de cunho científico e tecnológico sobre defesa civil nas instituições de ensino superior.
4. Estabelecimento de regulamentação no Estatuto da Cidade com o objetivo da destinação das construções que não cumprem com sua função social à habitação ou abrigos temporários para os desabrigados em casos de desastres.

#### **Context & Constraints:**

promoção de mudança cultural, relacionada com a cidadania participativa, com a segurança global da população e com a redução dos desastres, depende da colaboração ativa dos sistemas de ensino formal e informal existentes no Brasil. É importante que os sistemas de ensino participem de projetos que tenham

reflexos preponderantes sobre a qualidade de vida e sobre o crescimento da expectativa de vida da população.

Desta forma é importante que os conteúdos relacionados com a segurança global da população, com a redução dos desastres e, sobretudo, com a redução das vulnerabilidades dos cenários e das populações em risco sejam incluídos nos currículos escolares de primeiro e de segundo grau e nas atividades de ensino informal.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

1. Participação das universidades no mapeamento e monitoramento das áreas de riscos, bem como no levantamento e demarcação das áreas não edificantes e edificantes com restrições. 1. Participação das universidades no mapeamento e monitoramento das áreas de riscos, bem como no levantamento e demarcação das áreas não edificantes e edificantes com restrições.

#### **Context & Constraints:**

. Criar parcerias com previsão orçamentária entre as universidades e órgãos de defesa civil no desenvolvimento de estudos, pesquisas técnicas e capacitação relacionados a riscos e desastres e a implementarem projetos de extensão e sistemas de gerenciamento de interesse da defesa civil. 2. Criar parcerias com previsão orçamentária entre as universidades e órgãos de defesa civil no desenvolvimento de estudos, pesquisas técnicas e capacitação relacionados a riscos e desastres e a implementarem projetos de extensão e sistemas de gerenciamento de interesse da defesa civil.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

#### **Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Realização de eventos técnicos para elaborar e aperfeiçoar planos de contingências para o enfrentamento da maior frequência e intensidade de desastres naturais provocados pelas mudanças climáticas . Análise de estudos e pesquisas concentrados no âmbito federal (SINDEC) e difusão das informações pertinentes para órgãos de Defesa Civil estaduais e municipais, com o objetivo de apoiar o estudo e o mapeamento das áreas nas quais há riscos de desastres e de elaborar mapas temáticos sobre as vulnerabilidades dessas áreas em relação às mudanças climáticas.

**Context & Constraints:**

Promover o conhecimento dos efeitos das Mudanças Climáticas aos Órgãos Estaduais, Municipais e comunitários de Defesa Civil, com vistas a orientá-los e assessorá-los sobre os impactos dessas mudanças, avaliando os riscos e a conseqüente minimização dos desastres relacionados.

---

## British Virgin Islands (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

> <http://www.bviddm.com/index.php>

\* No: Established mechanisms for accessing DRR information

**Description:**

The Public Information, Education and Awareness programme seeks to reduce disaster vulnerability by increasing the public's awareness, understanding and ability to cope with the extreme conditions that hazards can pose. The DDM's website provides up-to-date information and maps regarding potential threats such as hurricanes and tropical storms. Public education materials and safety information as well as studies, plans and pertinent documents are available.

An early warning system is in place to warn the public of any impending dangers. Seven sirens are located throughout the Territory and are tested monthly. The early warning system was recently upgraded at critical facilities like schools, police and fire stations, clinics and parks. People who are unable to hear the sirens at these facilities will have access to an indoor unit that gives an warning tone and instructions issued by the DDM. Installation and training is ongoing.

Four radio stations and four television stations are equipped to transmit emergency broadcasts received directly from the DDM. The DDM also has HF and VHF radios and satellite phones available for when other forms of communication fail.

Recently, a new Amateur VHF Repeater was installed. This VHF repeater system has enhanced the ability of local HAMs to communicate with other HAMs in the Virgin Islands and surrounding Caribbean islands on the VHF Net. The installation of a VHF Community repeater provides basic communications for Government agencies and NGOs who require communications but were unable to do so due to budgetary constraints.

**Context & Constraints:**

The emergency broadcast television 'Ticker' will not be operational during 2010 while BVI Cable upgrades their system.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* No: Professional DRR education programmes

**Description:**

In May 2004, 27 schools were given School Preparedness Status Questionnaires. At that time, it was theorised that 74% of our educational institutions were unprepared to face any hazard. To address this deficiency, in 2008 the DDM with assistance from the Department of Education launched a "Disaster Plan Development Project" for all Government Schools in the Territory. This project is an expansion of the Fire Safety Project which sought to ensure that all schools were equipped with the requisite number of fire extinguishers and First Aid Kits and that school administrators were properly trained in Fire Suppression, Basic First Aid and CPR.

The Disaster Plan Development Project, like the Fire Safety Project, targeted Primary Schools and Day Care Centres (private and public). This year, the services of a consultant is being utilised to provide

guidance to twelve schools in the development, testing and implementation of their individual Disaster Plans. These Plans will include procedures for all hazards as well as other emergency situations. The intent of School Disaster/Emergency Contingency Plans is to give the staff, students, and parents a guide to use in the event of an actual disaster/emergency. The plans seek to be the main tool to be used by school administrators to manage emergency response activities. It is the intention of the DDM to further expand this project to develop a School Disaster Management Policy in conjunction with the Ministry and Department of Education and to create criteria for "School Safety and Preparedness".

In 2008, a Summer programme exposed students to aspects of disaster management. Additionally, activity and handbooks have been developed by the DDM for use in schools. The Associate degree program at the community college continues to expand and now incorporates elements of safer building design.

**Context & Constraints:**

No constraints were identified.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Multi-risk assessment and cost benefit analysis provisions are not currently in place but plans are included in CDM Strategy and Programming Framework 2009-2013 as items to be achieved. Advances are being made in the area of multi-risk assessment through the EU's Regional Risk Reduction (R3i) project being implemented by the UNDP.

**Context & Constraints:**

There is a need for more technical expertise to undertake the work, funding and training in cost benefit analysis as it relates to DRR.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities



## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* No: Training of local government

\* Yes: Availability of information on DRR practices at the community level

### Description:

The DDM produces monthly radio and television programmes that focus on disaster management. The programmes are broadcasted on all local radio and television stations. Additionally, the DDM website was updated to reach a broader target audience and to educate the population on disaster management issues. Documents, brochures, plans and other documents are available on the website.

Efforts are being made to inform the public about improved design and building techniques to reduce risk and improve resiliency. In 2009, training for building professionals was held. These training sessions covered topics such as:

- a. Seismic Hazards & Design.
- b. Environmental Impact Assessment (EIA) and Hazard Vulnerability Assessments (HVA).
- c. Safe Design & Construction Methods for the Virgin Islands.

Additionally, brochures and other educational material produced by the DDM are available on the departments website and DVD's can be purchased from their offices.

### Context & Constraints:

There is a need to increase the level of awareness and preparedness among private sector organizations. Incorporating disaster risk management into the economic/financial sectors with consideration given to incentives to support such efforts was not achieved. There is minimal support for this initiative as there are no laws in the Virgin Islands mandating private companies to develop plans.

---

## Canada (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

## Is there a national disaster information system publicly available?

Yes

### Means of Verification:

\* Yes: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

PublicSafety.gc.ca is the lead Web site for public safety information in Canada and provides Canadians with information and services relating to public safety from the Government of Canada and its partners.

Health Canada developed and disseminated public guidance documents to promote a culture of emergency preparedness for all Canadians with understandable advice on risk reduction in times of emergency such as “Preparing Your Family for an Emergency.”

Public Safety Canada maintains the Canadian Disaster Database, which contains data on natural and non-natural disasters which impact Canadians, excepting crime and war. This data is informed by multiple agencies and provides a publicly accessible source of information on losses incurred as a result of disasters in Canada.

Natural Resources Canada (NRCAN), via the GeoConnections Program, leads the implementation of the Multi-Agency Situational Awareness System (MASAS) – Canada’s trusted national geospatial framework for emergency management officials that enables seamless multi-level and multi-agency, time-relevant, authoritative information sharing to improve situational awareness and reduce the loss of life and property.

MASAS enables the formation of a near real-time common geographic picture of disasters for emergency officials based on common and interoperable disaster alert messages, event notifications, map symbols and underlying geographic information describing natural hazards, infrastructure and Canada’s landmass. MASAS enables disparate early warning and alerting systems to seamlessly provide a common picture of disaster events to emergency management and response systems and support a common understanding of disasters by decision-makers.

NRCAN’s seismologists routinely answer public and media queries which spike with felt domestic or catastrophic international earthquakes.

**Context & Constraints:**

The contents of the Canadian Disaster Database undergo constant revision as new disasters occur and more information about past disasters becomes available. Cost and loss data in particular are subject to regular update since there are currently no standardized guidelines for collecting this type of information.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

In Canada, the provinces and territories have exclusive jurisdiction over primary and secondary school curriculum. School boards in Canada may include lessons on natural hazards and DRR, however, this is not implemented through a national level initiative. Disaster prone areas across Canada do include hazard specific curriculum content coordinated at the municipal school board level.

The Canadian Emergency Management College is a federal government learning institution providing Programs and resources to the emergency management community across Canada. The College is an integral part of Public Safety Canada and supports its responsibility to enhance learning in all four pillars of emergency management.

Emergency Preparedness Week is coordinated by Public Safety Canada and involves all provinces and territories, first responders, organizations like the Red Cross and the private sector. It is a collaborative event with hundreds of activities across the country, all aimed at raising public awareness of the need to be prepared for emergencies.

Public Safety Canada’s “72 Hours: Is your family prepared?” campaign includes a range of publications and hazard specific promotional materials, a dedicated website ([www.GetPrepared.ca](http://www.GetPrepared.ca)), social media, advertising, collaborative arrangements, exhibits and special events.

Natural Resources Canada’s Public Safety Geoscience Program is developing classroom resources and lesson plans that will be available for middle and secondary schools nationally to better understand the geographic scope and potential impact of geohazards (earthquakes, landslides and tsunamis) in Canada.

The program also contributes as a member of the BC Earthquake alliance, which organized the first province-wide drill ever held in Canada in January 2011, via “ShakeOut BC,” where more than 10% of the population participated. This served as the catalyst for broad-based discussions regarding emergency preparedness. Drills are expected to continue and expand to other provinces and territories in future years.

**Context & Constraints:**

In addition to work of FPT governments to increase the profile of DRR in Canada, numerous private educational institutions have established emergency management and DRR programs at the college, undergraduate and graduate levels.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

Research on DRR is included in the research Programs of Government of Canada departments. Examples include:

The Canadian Weather Research Program aims to improve the accuracy and timeliness of public weather warnings. Emerging products include weather ensemble predictions that provide risk-based information for decision-makers.

The Climate Change Impacts and Adaptation Program supports the generation of improved knowledge of Canada's vulnerability to climate change with a goal to better assess the risks and benefits posed by a changing climate and to build the foundation upon which appropriate decisions on adaptation can be made. It supports scientific activities to fill knowledge gaps regarding vulnerability to climate change; to assess impacts and adaptation; to enhance collaboration between stakeholders and scientists; and to facilitate policy development.

NRCan leads several projects, such as the Climate Change and Adaptation Program, Geoscience Program, the Canadian Hazards Information Service, and GeoConnections. These projects and programs exist to enable Canadians and decision-makers to prepare and mitigate the effects of disasters through the provision of on-demand remote-sensing, geographic, geomatics, and topographical information.

Public Safety Canada encourages Canadian natural hazards research and networking through the Canadian Risk and Hazards Network launched at the 2005 World Conference on Disaster Reduction. The Network serves as an important forum to discuss mitigation activities and research in Canada.

Environment Canada is working with Public Safety Canada to develop criteria to identify significant events during flooding and extreme rainfall return periods. Real-time access to water level and flow data is provided by the Meteorological Service of Canada Water Survey and its provincial partners to provincial and municipal authorities. Flood risk area designations from a previous flood risk mapping Program contribute towards reducing flood damages and risks to the public.

**Context & Constraints:**

The National Disaster Mitigation Strategy (NDMS) recognizes that sustainable Canadian mitigation activities must draw from and build upon domestic and international disaster mitigation research initiatives, scientific developments, best practices, and lessons learned from disaster events. The NDMS supports new and ongoing research efforts that build a knowledge base for mitigation decisions. Research is essential to the program.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

The “72 Hours: Is your family prepared?” campaign includes a range of publications and promotional materials, a dedicated website ([www.GetPrepared.ca](http://www.GetPrepared.ca)), social media, advertising, collaborative arrangements, exhibits and special events such as Emergency Preparedness Week, which is held the first week of May.

Emergency Preparedness Week is coordinated by Public Safety Canada and involves all provinces and territories, first responders, organizations like the Red Cross and the private sector. It is a collaborative event with hundreds of activities across the country, all aimed at raising public awareness of the need to be prepared for emergencies.

Public Safety Canada manages the National Exercise Program, which conducts operational exercises to enhance the National Emergency Response System and engages multiple Federal departments as well as provincial/territorial and municipal governments in these exercises.

The Canadian Emergency Management College is a federal government learning institution providing Programs and resources to the emergency management community across Canada. The College is an integral part of Public Safety Canada and supports its responsibility to enhance learning in all four pillars of emergency management.

In coordination with its government and non-government partners, the Public Health Agency of Canada (PHAC) has developed web-based portals to facilitate the exchange of best practices and information related to health emergency management, including disaster reduction and preparedness materials.

**Context & Constraints:**

In Canada, resilience is defined as the capacity of a system, community or society to adapt to disturbances resulting from hazards by persevering, recuperating or changing to reach and maintain an acceptable level of functioning. Emergency management aims to strengthen the resiliency of citizens, responders, organizations, communities, governments, systems and society overall to keep hazards from becoming disasters. Resilience minimizes vulnerability or susceptibility to damage from hazards by creating or strengthening social and physical capacity in the human and built-environment to cope with, adapt to, respond to, and recover and learn from disasters.

---

## **Cayman Islands** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial

resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system  
> Cayman Prepared <http://www.CaymanPrepared.Gov.Ky>

\* No: Established mechanisms for accessing DRR information

**Description:**

The Cayman Prepared website is well established and is regularly updated with current disaster risk information.

Good relationships exist with all media and awareness and disaster risk reduction information has strong market penetration throughout the Cayman Islands through radio, TV and print publications.

Awareness seminars are widely available to business and educational institutions

**Context & Constraints:**

The Cayman Islands has a significant transient labour pool. New residents may not be aware of extent of hazard threats in the Cayman Islands or the particular (historical) threats in the geographical vicinity of their residence or workplace.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* No: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

Efforts are underway to establish a formal (annual) schedule for disaster awareness seminars and emergency drills in the schools, targeting all students.

Most schools have information about hurricanes and earthquakes in their curriculum but it is yet not mandated.

**Context & Constraints:**

The students are not yet exposed to information about the full range of hazards and more work needs to be done to inform young people about threats such as fire, flood, tsunami etc.

There is a certain amount of resistance to formally setting aside time for awareness seminars for the entire student body of an academic institution - perhaps it would be more appropriate if a specific age group was targeted for the disaster awareness information to avoid repetition.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

> Enhancing the Climate Risk and Adaptation Fact Base for the Caribbean CCRIF (2010)

[http://www.preventionweb.net/files/13946\\_enhancingtheclimateriskandadaptatio.pdf](http://www.preventionweb.net/files/13946_enhancingtheclimateriskandadaptatio.pdf) [PDF ]

> ENHANCING CAPACITY FOR ADAPTATION TO CLIMATE CHANGE IN THE UK OVERSEAS TERRITORIES PROJECT (2009)

[http://www.preventionweb.net/files/13946\\_climatechangestrategypeoworkshoprep.pdf](http://www.preventionweb.net/files/13946_climatechangestrategypeoworkshoprep.pdf) [PDF ]

> Preliminary Vulnerability Assessment of Grand Cayman (2009) <http://www.caymanprepared.ky/pls/portal/docs/PAGE/NEMHOME/RESOURCES/PUBLICATIONS/PRELIMINARYVULNERABILITYASSESSMENTCAYMANISLANDS19062009.PDF>

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Storm surge maps have been completed for a number of hurricane path scenarios.

Work is being done to analyze the flood threats from excessive rainfall events including the identification of flood prone areas. It is hoped that this information will eventually inform the decision making process and lead to effective mitigation and prevention strategies

**Context & Constraints:**

Work needs to be done to identify areas vulnerable to the earthquake threat.

Natural run off areas, wetlands, locations prone to flooding and places where the sea traditionally breaches the coastline in storms need to be identified and researched to identify (at a minimum) appropriate minimum elevations and or setbacks. Ideally this information would result in special consideration given to planning (construction) applications for these vulnerable areas.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**



4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Hurricane and Earthquake awareness seminars and drills are scheduled annually in the schools. Earthquake and Hurricane Awareness information is regularly published in the range of media outlets. Awareness tips highlighting preparedness and readiness are in steady rotation on many radio stations. Public Awareness campaigns are reaching all segments of the society.

**Context & Constraints:**

Traditional forms of presenting preparedness information - such as brochures and display boards etc appear to be less impactful and effective than the delivery of this information through visual mediums such as video and television.

Some care needs to be taken to avoid 'exhausting' and desensitizing the populace with too much or over driving disaster preparedness information.

Recent earthquakes and hurricanes have resulted in a very highly hazard attune and aware populace, but it is anticipated that within a fairly short period of elapsed time (following the impacts) the public will begin the process of forgetting.

**Chile** (in Spanish)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

> Pagina Oficial ONEMI (2010) <http://www.onemi.gov.cl>

\* No: Established mechanisms for accessing DRR information



## **Description:**

Los expertos de ONU en su visita a Chile manifiestan que: "Hay información relevante sobre desastres pero no está articulada para su diseminación y socialización. La noción de reducción del riesgo y la cultura de seguridad y resiliencia es parcial y fragmentada"

En términos generales se puede decir que no existe en el país, incluso entre las instituciones que participan del Sistema Nacional, un consenso y claridad conceptual sobre la terminología a utilizar. Las diferentes leyes, reglamentos, planes, programas y documentos utilizan distintos conceptos y vocabulario para referirse al tema.

La RRD es un concepto que se maneja principalmente entre las ONG de carácter internacional. La información que se puede obtener sobre este tema está consolidada en páginas de Internet de acceso público como la Estrategia Internacional de Reducción del Riesgo de Desastres. Esta terminología no es de fácil acceso para las autoridades del mundo estatal y menos para el público en general.

ONEMI no cuenta con una sección especial (Digital ni física) que aúne los principales documentos asociados al concepto Reducción de Riesgo de Desastres. Esta situación se traspasa a otros organismos del Estado. Sin embargo, el Centro de Documentación y el sitio web de ONEMI contienen información relevante sobre riesgos de origen natural, orientación ciudadana en situaciones de emergencia, espacios de atención dirigidos a la comunidad escolar (ONEMI Educa) y al público en general (Oficina de Información Ciudadana). Además, la comunidad se informa sobre eventos relevantes en materias de emergencia a través de los reportes periodísticos. La página web también incluye alertamientos por situación de incendios forestales y por actividad volcánica.

## **Context & Constraints:**

El principal desafío en este aspecto se relaciona con la sensibilización del Sistema Nacional de Protección Civil y del público general en reducción del riesgo de desastres. El Gobierno, a través de ONEMI, está generando campañas de difusión que buscan generar un lenguaje común con respecto a la reducción del riesgo de desastres. El documento final generado por la visita de la ONU marca un antes y un después en la sensibilización del tema.

ONEMI está en proceso de diseño de una página institucional que busca responder a estándares internacionales de calidad en traspaso de información. Para su diseño se ha basado en las mejores prácticas internacionales. Se espera que esta información sea de calidad, segura y de fácil acceso. Se están desarrollando campañas sistemáticas de información y sensibilización a la comunidad. Por ejemplo, en Enero del 2011, se lanzó junto al Servicio Nacional de Turismo una campaña que educó a los veraneantes en la preparación frente a las distintas variables de riesgo.

Por otra parte, el terremoto del 27/F ha llevado a la realización de diversos seminarios en el año para analizar la situación desde distintos sectores, públicos y privados. En todos ellos se ha incorporado el tema de la Reducción de Desastres. Algunos ejemplos:

- Panel "TELECOMUNICACIONES EN SITUACIONES DE EMERGENCIA", Colegio de Ingenieros de Chile, 11 de Mayo de 2010.
- Seminario "Planes de Emergencia después del 27 de Febrero: Una oportunidad de Aprendizaje para Chile", Centro de Formación Técnica Esperanza Joven. 28 de Octubre.
- "Reducción del Riesgo y Manejo de Emergencias: Un desafío al nivel local", organizado por la Subsecretaría de Desarrollo Regional y ONEMI y que convocó a varios alcaldes de comunas vulnerables (Noviembre 2010)
- "Diálogos para la reconstrucción con enfoque territorial", organizado por el Ministerio de Salud y la Subsecretaría de Desarrollo Regional. (Noviembre 2010)

## **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

## **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

En el marco curricular chileno, el tema de Reducción del Riesgo de Desastres está incluido desde la perspectiva de los Objetivos Fundamentales Transversales, específicamente a través de los Ámbito de Crecimiento y Autoafirmación Personal y la Persona y su Entorno, como también, en lo Objetivos Fundamentales Verticales Y Contenidos Mínimos Obligatorios correspondiente al sector de Historia, Geografía y Ciencias Sociales 7º año de Educación Básica y en 1º año de Enseñanza Media sector ciencia.

Durante el 2010 se elaboraron nuevos Programas de Estudio desde 5º Año de Educación General Básica a 1º Año de Educación Media, a implementar durante el año 2011 que, profundizan las temáticas relacionadas a sismos, con motivo del terremoto y tsunami que afectó al país el 27 de febrero de 2010. El Ministerio de Educación está a cargo de desarrollar lineamientos generales para el trabajo de estos objetivos en los colegios. Algunas de las acciones realizadas son:

- Creación de la Comisión Nacional de Seguridad Escolar. (Decreto Exento N°283/201)
- Revisión de Planes Integrales de Seguridad Escolar y Manual de Seguridad en Sala Cunas.
- Consolidación de la semana de la Seguridad Escolar.

El terremoto del 27 de Febrero del 2010 requirió ser abordado, en primera instancia, con apoyo y acciones de resguardo de la integridad vital, atención de necesidades de alimentación, seguridad, vivienda, de salud física y mental, de conectividad y comunicaciones. En este contexto, se priorizó por la recuperación de los espacios (infraestructura) de los establecimientos educacionales afectados, y posteriormente a la recomposición de la labor educativa, y al clima escolar que permitió las condiciones propicias para el aprendizaje.

En este mismo contexto, se establecieron trabajos conjuntos con la Fundación Mustakis y Unicef:

- Convenio de Colaboración Ministerio de Educación - Fundación Mustakis: en terreno convocaron a todos los actores de 50 establecimientos educacionales de las regiones de O'Higgins, del Maule y del Biobío para realizar talleres de recuperación emocional y afectiva, - En el primer semestre de 2010 el Ministerio de Educación y Unicef realizaron cinco talleres en la Región de Valparaíso: "Taller de intervención psicosocial en situación de desastre", En el segundo semestre de 2010 el Ministerio de Educación y Unicef realizan ocho talleres en las regiones de O'Higgins, del Maule y Biobío: "Talleres de intervención psicosocial en situaciones de emergencia y post-emergencia" El año 2011 se comienza con la distribución del material educativo "La Familia y la Escuela preparada ante desastres" a los establecimientos educacionales subvencionados del país a través de los Departamentos Provinciales de Educación; y a padres, madres y apoderados/as a través de los "Ciclos de Mesas Provinciales Participativas, Centros de Padres y Apoderados: Actores clave en la promoción del apoyo de la familia en la educación". En educación universitaria y para adultos no se incluye formalmente el tema. ONEMI está a cargo de la capacitación de los integrantes del Sistema Nacional de Protección Civil. Diversas ONG, como OFDA y

Cruz Roja, capacitan en temáticas asociadas a RRD. El mundo privado, como por ejemplo la Cámara Chilena de la Construcción, genera seminarios y cursos de capacitación en normas sismo resistentes. En general, estas instancias no están homologadas en un lenguaje común.

### **Context & Constraints:**

El terremoto del 27 de Febrero dejó 420 establecimientos educacionales públicos siniestrados en las regiones afectadas, 4013 establecimientos inhabilitados y 60.031 alumnos quedaron sin aulas para reincorporarse al sistema. La hora y fecha del evento impidió que éste se convirtiera en un desastre de proporciones mayores.

En el proceso de reconstrucción, el Ministro de Educación Joaquín Lavín logró en escaso tiempo, gracias a la colaboración y coordinación con el mundo privado y otras instituciones, el restablecimiento de las clases instalando colegios modulares y la habilitación de alternativas para las clases.

Los desafíos futuros implican, en términos curriculares, el objetivo de incorporar contenidos específicos asociados a la reducción del riesgo de desastres en todos los niveles. De la misma forma, mediante alianzas con organismos de formación, se buscará fomentar este tema en la formación de docentes, directivos y en las mallas de carreras universitarias.

En ONEMI se ha llegado a la conclusión que se hace necesario crear una Academia de formación de nivel internacional. Los cursos actuales de ONEMI ya fueron reformulados post-terremoto y para mediados del 2011 ya existe el compromiso de llegar a la población, autoridades y país en general con una oferta renovada y moderna de capacitación en el tema. (Por ejemplo, incorporando metodologías de capacitación a distancia) Así mismo, diversos sectores, como por ejemplo salud, están incorporando el tema de la RRD en sus mallas de capacitación.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

### **Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

### **Description:**

No existen procesos continuos ni integrados de investigación de amenazas múltiples. Los estudios existentes dependen en su mayoría de iniciativas dispersas y en general son llevadas a cabo por organismos no gubernamentales. Una buena práctica realizada fue el proyecto PROTEGER Coquimbo (2007-2009) que, en colaboración con JICA, tuvo como objetivo generar un ordenamiento territorial para la gestión del riesgo que permita identificar sectores vulnerables.

A modo de ejemplo, UNESCO, a través de fondos obtenidos en proyecto Dipecho VI de la Comunidad Europea, desarrolló el 2010 una investigación y trabajo en las comunas de Lota, Coronel y Penco.

Asimismo, Save The Children, mediante ACHNU, desarrollo diversas actividades en Cauquenes para estudiar el grado de afectación de la población, en particular infantil, con posterioridad al terremoto.

PNUD y oficinas asociadas a la Estrategia Internacional, trabajan día a día en estos aspectos, pero el dialogo con los organismos gubernamentales y, en particular con ONEMI, no es lo suficientemente fluido

aún para permitir un traspaso e integración de los aspectos.

Existen indicadores de impacto monetario, pero son desarrollados reactivamente de acuerdo a los eventos específicos. No existen herramientas específicas de análisis de variables socioeconómicas. En este aspecto, se toma como indicación de vulnerabilidad y como medida, la encuesta CASEN que desarrolla el Ministerio de Planificación y Cooperación.

**Context & Constraints:**

Por el momento, desde el Gobierno, no se han desarrollado iniciativas concretas que permitan estandarizar sistemas de evaluación de impacto de políticas, programas, capacitaciones o actividades asociadas a la reducción del riesgo de desastres.

El principal reto contextual identificado es la elaboración de instrumentos válidos, replicables y perdurables en el tiempo, con lógica de costo-beneficio, que permitan ir evaluando el impacto de las diferentes acciones y medidas que permitan darle seguimiento al Marco de Acción de Hyogo.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

La sensibilización comunitaria ha sido uno de los principales objetivos del país con posterioridad al terremoto recién ocurrido, para lo cual el Gobierno y ONEMI han diseñado diversos planes y programas de participación comunitaria.

El 2010 ONEMI lanzó los programas de simulacros y simulaciones “Atento Norte”, “Atento Centro” y “Atento Sur”. El objetivo principal de estos ejercicios es educar a la comunidad frente al riesgo de terremoto y tsunami, practicar la coordinación entre los integrantes del Sistema Nacional y Regional de Protección Civil y evaluar la operatividad de la red de telecomunicaciones de cada región.

Se realizaron ejercicios de evacuación en las regiones de Arica y Parinacota, Tarapacá, Antofagasta y Coquimbo, donde se movilizaron a más de 250.000 personas. En total se distribuyeron más de 800 mil volantes y folletos con orientaciones preventivas para la comunidad. También se efectuaron simulacros y simulaciones en la zona centro (Región de Valparaíso) y sur del país (La Araucanía y Los Ríos) como una manera de potenciar transversalmente la cultura de la prevención a lo largo de todo el territorio nacional. Se contó con la participación de líderes y rostros reconocibles para la población que colaboraron en la difusión de mensajes radiales y televisivos.

En Octubre se realizó el Mes de la Protección Civil con actividades preventivas en todo el país y paralelo a la semana de la seguridad escolar. En Enero del 2011 junto al Servicio Nacional de Turismo, ONEMI lanzó

una campaña nacional de sensibilización, en castellano e inglés, con orientaciones para actuar frente a amenazas múltiples.

### **Context & Constraints:**

El principal desafío para trabajar a nivel comunitario está en generar campañas sistemáticas de sensibilización y educación de la población en temas de reducción del riesgo y mantener su importancia en la conciencia de la población.

Para el 2011 se espera la realización de 15 Mega simulacros regionales (uno por región) y diversas simulaciones. En estas instancias se aprovechará de capacitar a actores públicos, privados y comunitarios en sistemas de alertamiento. Además, se medirán y analizarán los tiempos de respuesta de los diferentes comités operativos de emergencia.

En relación a los programas de participación comunitaria, se estudia la forma de fortalecer la relación con las ONG como Save The Children, Cruz Roja, World Vision, UNESCO o las chilenas Hogar de Cristo y Un Techo Para Chile, entre otras, para llegar a las comunidades. El objetivo es lograr que éstas sean agentes multiplicadores de la Reducción del Riesgo de Desastres.

En temas de formación, se fortalecerán los convenios con la Asociación Chilena de Municipalidades y con la Subsecretaría de Desarrollo Regional para generar una oferta atractiva y moderna de capacitación de las autoridades locales. El foco estará en el empoderamiento del encargado de emergencias comunal y en la formación de equipos municipales de respuesta.

Por último, para llegar al público masivo se están diseñando campañas de difusión focalizadas en la importancia de la reducción de desastres tratando de replicar buenas prácticas y generando apoyo interagencial.

---

## **Colombia** (in Spanish)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

Yes

#### **Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### **Description:**

Es importante resaltar dos aspectos importantes frente al tema de la información hay una correlacionada con la cuantificación de los desastres y hay otra para los temas de gestión del riesgo, frente a la primera hay disponible una información sobre desastres que consolida la DGR a nivel nacional, departamental y municipal, la cual está disponible en forma virtual y física en torno al tema de los desastres, existen bases de datos desde el año 1993 disponible y actualizado a septiembre 30 de 2010 y accesible a las entidades del Sistema Nacional para la Prevención y Atención de Desastres.

Los comités regionales y locales poseen toda la información de ocurrencia de desastres en bases de

datos, dicha información es compilada y consolidada en la Dirección de Gestión del Riesgo, DGR. Para acceder a dicha información el SNPAD cuenta con el portal [www.sigpad.gov.co](http://www.sigpad.gov.co).

De igual forma a través de los centros de información de todas las entidades pertenecientes al Sistema Nacional de Prevención y Atención de Desastres, poseen la información sobre experiencias anteriores (desastres) que favorecen el interés en el tema por parte de las comunidades. De forma complementaria la disponibilidad de información sobre Inventarios Históricos de Desastres, también se puede consultar a través de una red de información mediante el acceso a la página [www.desinventar.org](http://www.desinventar.org) igualmente se cuenta con el Centro de Información Red BiVa PAD, biblioteca virtual Andina para la Prevención y Atención de desastres, donde se compilan todos los documentos, informes, estadísticas sobre el tema.

Hay establecidas en el país por parte de las universidades líneas de investigación en Gestión del Riesgo que complementan los aspectos del conocimiento a nivel nacional, al menos 10 instituciones de educación superior ofertan cursos de posgrado con títulos de Especialización en Gestión de Riesgos.

En suma se dispone de un sistema unificado de reporte de desastres mediante el cual se comparte información liderado por la DGR, y el cual es la fuente oficial para los diversos medios de comunicación sector estratégico que apoya los procesos de difusión de la información.

### **Context & Constraints:**

Entre los retos están:

Modernización y optimización del Sistema Información Geográfico para la Prevención y Atención de Desastres.

Estructuración y desarrollo de una política de generación de información para la reducción del riesgo que facilite el acceso (Tecnológicos y Costos) a la comunidad en general.

Diseño de estrategias de divulgación y socialización por parte de las instituciones del SNPAD de la información concerniente sobre la Gestión del Riesgo, especialmente para empoderar a la comunidad para incentivar la participación de la misma en los procesos de planeación a través de diferentes medios (virtuales, físicos).

Desarrollo de procesos conceptuales y metodológicos para la generación, depuración y utilización de información tanto de amenazas como de vulnerabilidad .

Consolidación de redes de información articuladas con el SIGPAD.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Is DRR included in the national educational curriculum?**

No

### **Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* Yes: Professional DRR education programmes



**Description:**

Si bien algunas instituciones del orden nacional y regional ha visionado el potencial que tiene el desarrollo de la temática, desafortunadamente los procesos consolidación han sido esporádicos y aislados. Es de destacar los avances en la inserción del tema ambiental en la educación, complementada esta con la temática de la Gestión del Riesgo en el Plan Decenal de Educación. De igual forma se resaltan avances en educación formal y no formal, liderados por universidades en especial a nivel de posgrado el tema de la Gestión del Riesgo, a su vez entre la oferta no formal se encuentra una gran gama ofrecida por las entidades operativas (Defensa Civil, Bomberos, ARPs, etc) las cuales tienen un gran sesgo a la atención. Frente a la temática educativa, El Ministerio de Educación Nacional a través del Programa de Educación Ambiental, Subdirección de Articulación Educativa e Intersectorial - Dirección de Calidad para la Educación desarrolla en 12 departamentos el proyecto "Incorporación de la dimensión ambiental en la educación básica y media, en zonas rurales y urbanas del país", con acciones relacionadas en formación a docentes y demás agentes educativos en el marco del reconocimiento de situaciones y problemas ambientales locales y regionales, como lo orienta la Política Nacional de Educación Ambiental, entre los que se destacan las temáticas relacionadas con la prevención de desastres.

En este orden de ideas la DGR ha desarrollado dos estrategias para el fortalecimiento del tema, a saber: i) A través del Proyecto de Asistencia Técnica en Gestión del Riesgo a nivel Municipal y Departamental, liderando la construcción y divulgación de una Guía Metodología para apoyar la formulación de Planes Escolares con énfasis en Gestión del Riesgo implementado una estrategia de capacitación a nivel departamental y municipal. Igualmente trabajando en el "Plan Escolar para la Gestión de Riesgos", como herramienta integrada a los procesos educativos y no atomizada, como generalmente se trabaja.

**Context & Constraints:**

En la actualidad, falta más liderazgo por parte del Ministerio de Educación y por las demás entidades del sistema para una articulación interinstitucional efectiva que trascienda hasta los planes educativos a nivel nacional, regional y municipal.

Consecuencia de lo anterior, es el bajo abordaje del tema de la Gestión del Riesgo como parte transversal al currículo escolar, con las obvias debilidades de explicitar la relación entre las problemáticas ambientales y las de los riesgos (naturales y antrópicos).

Igualmente se ha presentado una descontextualización de las acciones realizadas en materia de reducción de riesgos y atención de desastres (por ejemplo el manejo del "Plan Escolar para la Gestión de Riesgos") y los proyectos educativos ambientales, desde una mirada de las realidades ambientales locales y regionales (ausencia de contextualización de diagnósticos ambientales), en donde los estados de riesgos y los desastres sean entendidos como problemáticas de gestión social, productos de desequilibrios en las relaciones entre ambiente natural y sociocultural, como se especifica en la Política Nacional de Educación Ambiental.

Complementando lo anterior y como una de las limitaciones más estratégicas se encuentra la baja cualificación de profesionales en el campo educativo que manejen, entiendan y transmitan de forma integral la gestión del riesgo, con lo cual, los procesos de formación a nivel escolar se ven sesgados más por iniciativas individuales que por un proceso académico formal.

Retos: Estructurar e implementar el Plan Nacional de Formación y Capacitación en Gestión del Riesgo. Consolidar y unificar técnica, conceptual y metodológicamente los instrumentos y herramientas utilizadas para los procesos de formación en Gestión del Riesgo.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

### **Description:**

Las autoridades en los ámbitos nacional y regional tienen un importante papel que desempeñar en el fortalecimiento de las capacidades técnicas y científicas para desarrollar y aplicar metodologías, estudios y modelos para evaluar las vulnerabilidades y el impacto de las amenazas, lo que incluye el mejoramiento de las capacidades de monitoreo regional y las evaluaciones afines.

Si bien existe responsabilidad por parte de diversas entidades técnicas del Sistema Nacional de desarrollar investigaciones en torno al tema de su competencia generando herramientas metodológicas para orientar a los demás niveles territoriales para realizar evaluaciones de amenazas y vulnerabilidades. Dichas Investigaciones giran en torno a amenazas principales geológicas, geofísicas, hidrológicas e hidrometeorológicas - las cuales han desarrollado protocolos a nivel nacional.

Cabe destacar, que en un grado importante la aplicación de metodologías, estudios y modelos para evaluar las vulnerabilidades y el impacto de las amenazas se encuentran materializados en los procesos de Ordenamiento Territorial que se hacen a nivel municipal y regional, de igual forma en los procesos de Planeación y Ordenamiento de las principales cuencas hidrográficas del país, entre otros procesos de ordenamiento, lo anterior se ha logrado gracias a la implementación de una política nacional liderada para consolidar el desarrollo territorial comenzando con el ordenamiento del mismo.

En la actualidad el Departamento Nacional de Planeación -DNP - está liderando un proceso de evaluación de las inversiones realizadas a nivel nacional, regional y municipal en gestión del riesgo, para analizar el costo efectividad de las mismas, y para evaluar como se ha reducido la vulnerabilidad del Estado ante desastres naturales.

### **Context & Constraints:**

Se presentan debilidades en cuanto a recursos económicos y capital humano, para desarrollar métodos, herramientas e investigaciones sobre la Gestión del Riesgo. Lo anterior, se complementa con las diversas corrientes de pensamiento, que han obstaculizado desde una visión técnica de los parámetros básicos para realizar el abordaje técnico de las investigaciones.

Existe procesos incipientes pero no muy dinámicos, un proceso de descentralización para que entidades a nivel local y regional desarrollen investigaciones de calidad (responsabilidad de generar términos de referencia, disponibilidad presupuestal para estudios e investigación).

De igual forma, no se han incorporado los análisis de costo beneficio en torno al riesgo para articularlo a los procesos de planificación (investigaciones en proceso de formulación), con las obvias consecuencias de la falta de articulación entre los resultados técnicos de las investigaciones y la toma de decisiones en lo político.

Entre los retos están:



Consolidar procesos técnicos y metodológicos para liderar procesos de evaluación del riesgo los cuales serán los insumos para los diversos procesos de formación formal y no formal en Gestión del Riesgo.

En el marco del Sistema Nacional de Ciencia y Tecnología liderar procesos presupuestales para consolidar las estrategias de investigación científica aplicada a la reducción del riesgo.

Diseñar una metodología por parte del DNP para realizar el seguimiento de las inversiones correlacionadas con el Gestión del Riesgo de Desastres para así poder evaluar con esta información la relación costo/beneficios de las mismas, con el fin de poder direccionar políticas a nivel nacional, departamental y municipal para optimizar las inversiones correlacionadas con la gestión del Riesgo.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

En la actualidad conscientes de la necesidad de realizar una estrategia contundente de divulgación frente a la temática de Gestión del Riesgo la DGR ha promulgado y desarrollado una campaña de sensibilización frente a las diferentes amenazas y como actuar frente la ocurrencia o materialización de alguna de ellas, dirigida a la comunidad en general a través de una estrategia en medios masivos de prensa, radio, televisión y virtual desarrollando la temática de gestión del riesgo.

Adicionalmente se reconocen procesos a nivel municipal y departamental dirigidos a concientizar a la comunidad para liderar procesos en términos de la preparación para desastres, más no en términos de prevención del riesgo, entre las estrategias a destacar están: Bogotá “con los pies en la tierra” y puntuales como la amenaza de erupción del Volcán Nevado del Huila, Machín y Galeras, Región de la Mojana frente al tema de inundaciones, tsunami en Tumaco y Costa Pacífica, entre otros.

De igual forma a través de todos los procesos de asistencia técnica que lidera la DGR a nivel nacional en especial los referentes al desarrollo de la temática de Planes Municipales para la Gestión del Riesgo y los Planes Locales de Emergencia y Contingencia.

#### **Context & Constraints:**

Se realizan campañas y procesos de sensibilización pero no como proceso continuo en el tiempo (debe ser permanente y estar articulado), pero aún están fraccionadas.

El Papel de los medios de comunicación y los profesionales del medio en cuanto al tratamiento del tema

del riesgo (articulado al tema de la educación) es mas de protagonismo cuando existen afectaciones tanto en vidas humanas como en bienes y servicios referidos a las grandes ciudades .

Los altos costos económicos, técnicos y humanos que demanda este tipo de campañas.

Entre los Retos están:

La estructuración e implementación de una estrategia nacional de difusión, socialización, información y divulgación sobre la gestión del riesgo, sostenida en el tiempo.

Consolidar los procesos de formación y capacitación en Gestión del Riesgo a nivel Nacional.

Empoderar a la comunidad como gestora de su propio desarrollo, con lo cual conduzca a aumentar los procesos de participación de esta en la toma de decisiones de desarrollo a nivel municipal y departamental.

Gestionar recursos financieros y alianzas estratégicas para el sostenimiento de este tipo de iniciativas.

---

## Costa Rica (in Spanish)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

> Sistema de Información para Emergencias (1993) <http://cne.go.cr>

\* Yes: Established mechanisms for accessing DRR information

#### Description:

En un sistema de información geográfico con datos a nivel de país, provincia, cantón y distrito. Además por región y por cuenca. Tiene vínculo con otros medios de "gobierno digital".

#### Context & Constraints:

El recurso informático requiere ser actualizado, pasará a ser una "plataforma de información" con acceso a diversas páginas de institutos de investigación y con variables relacionadas a la vulnerabilidad con un enfoque de uso al ordenamiento del territorio y para la gestión local, es decir, para el uso de las municipalidades.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

En todo el ámbito de niveles de educación se ha incluido. En primaria y secundaria llegado al programa de formación ambiental. En el nivel universitario en algunas carreras o como cursos opcionales y dos universidades estatales tienen maestrías de gestión del riesgo. En las universidades privadas se desarrollan como seminarios, cursos opcionales

**Context & Constraints:**

En todos los casos falta orden en cuanto a los fundamentos de concepto.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

- \* Yes: Research outputs, products or studies
- \* Yes: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

**Description:**

Las universidades estatales (en este país realizan investigación de muy alto nivel) tienen un programa de investigación en desastres, cuyo rol principal es la gestión y asignación de los recursos disponibles para las investigaciones. La CNE aporta recursos para investigaciones: Estudios de cuenca, estudios de impacto ambiental, emplazamiento de sitios de obras de inversión pública, estudios hidrológicos, estudios de percepción, Estudios de geotécnica, simulaciones, modelajes, informes y análisis del clima, sismicidad,

mareas, vulcanismos, estudios probabilísticos, tesis, entre otros.

**Context & Constraints:**

Año a año se producen muchas investigaciones de diversa índole sobre los que no cabe la referencia a un estudio en particular.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Año a año se hace una campaña de difusión en los medios de comunicación masiva, con dos focos: preparación para el período de lluvias y prácticas preventivas. Se prepara material escrito de divulgación sobre diversas amenazas para atender demandas de información del público.

Para los gobiernos locales se realizan talleres de formación y se brinda asesoría especialmente para la elaboración de los planes de ordenamiento del territorio.

**Context & Constraints:**

Se ha dado un mayor énfasis a un público urbano, siendo que se debe mejorar la información para las zonas rurales, especialmente las que tienen los mayores índices de pobreza. No es que no haya habido trabajo en esas zonas pero debe ser más sistemático.

**Cuba** (in Spanish)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

- \* No: Web page of national disaster information system
- \* Yes: Established mechanisms for accessing DRR information

**Description:**

Se aplica en todo el país un Programa de Comunicación para la Reducción de Desastres, que incluye estrategias para la información sobre cada peligro de desastres, en las diferentes etapas del Ciclo de Reducción de Desastres, adecuado a las características de cada territorio que facilita el papel de los medios de comunicación masiva (radio, TV y prensa escrita) mediante la transmisión de un mensaje más claro y preciso a la población, con énfasis en las autoridades y líderes locales.

Los sitios nacionales, y los distintos órganos de prensa (nacionales y provinciales) y los organismos e instituciones que poseen páginas Web divulgan habitualmente sobre los peligros de desastres y las medidas de protección para la prevención, la preparación, la respuesta y la recuperación, informan los daños ocasionados ante los impactos y los eventos relacionados con los desastres, todos disponibles para los actores relevantes y para la información de la comunidad.

Los preparativos para la respuesta se han fortalecidos con los planes de reducción de desastres que se elaboran en todos los niveles territoriales y en las entidades hasta las localidades, los cuales se actualizan anualmente, de acuerdo a la reducción del riesgo de cada lugar.

**Context & Constraints:**

Las condiciones creadas por la Revolución Cubana, desde 1959, garantiza la preservación de valores tales como acceso universal a la cultura; salud pública, educación y seguridad social para todas las cubanas y cubanos. Las limitaciones que se presentan están localizadas en la escasez de financiamiento para el desarrollo integral y sostenible del país

**Priority 3: Core indicator 2**

*School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Existen programas de estudio curriculares sobre la reducción de desastres, en los niveles de enseñanza primaria (3er y 5to grados), secundario (8vo), pre-universitario y en el nivel superior (universitario) para médicos, veterinarios, arquitectos e ingenieros; y en el resto de las carreras universitarias se incluyen temas de reducción de desastres como partes de asignaturas relacionadas. También se realizan actividades no curriculares como círculos de interés, concursos y otros. Se imparten cursos de postgrado, maestrías, diplomados en Reducción de Desastres, con el otorgamiento de créditos académicos y grados científicos. Se organizan eventos (talleres, seminarios, congresos) nacionales e internacionales sobre Reducción de Desastres.

**Context & Constraints:**

Las condiciones creadas por la Revolución Cubana, desde 1959, garantiza la preservación de valores tales como acceso universal a la cultura; salud pública, educación y seguridad social para todas las cubanas y cubanos. Las limitaciones que se presentan están localizadas en la escasez de financiamiento para el desarrollo integral y sostenible del país

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

Los estudios de peligros, vulnerabilidades y riesgos (PVR) se realizan a todo nivel por los sectores claves atendiendo a los tipos de peligros y disponen de los recursos presupuestarios para realizar las investigaciones necesarias. Sus resultados y productos se presentan a las autoridades locales y superiores para la toma de decisiones para la reducción de riesgos de desastres.

**Context & Constraints:**

Las condiciones creadas por la Revolución Cubana, desde 1959, garantiza la preservación de valores tales como acceso universal a la cultura; salud pública, educación y seguridad social para todas las cubanas y cubanos. Las limitaciones que se presentan están localizadas en la escasez de financiamiento para el desarrollo integral y sostenible del país, como consecuencia del injusto bloqueo a que nos tiene sometido el gobierno de EEUU

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

En las comunidades de mayor riesgo se realizan, con la participación directa de las autoridades locales y las instituciones de salud, científicas, sociales y los medios de comunicación, actividades para la reducción de desastres para el conocimiento de las vulnerabilidades y riesgos a que se encuentran sometidos y realizar las acciones de prevención, preparativos, respuesta y recuperación oportunamente. Para información de los pobladores se realizan charlas, temas debates, lectura de comunicados, propagandas escritas como: plegables, carteles y otros. En temas sanitarios se organizan brigadas con la participación comunitaria para controlar las medidas de higienización y evitar la propagación de enfermedades o epidemias.

Las campañas de educación pública sobre el proceso de reducción de desastres se realiza en todo el país.

**Context & Constraints:**

Las condiciones creadas por la Revolución Cubana, desde 1959, garantiza la preservación de valores tales como acceso universal a la cultura; salud pública, educación y seguridad social para todas las cubanas y los cubanos. Las limitaciones que se presentan están localizadas en la escasez de financiamiento para el desarrollo integral y sostenible del país, como consecuencia del injusto bloqueo a que nos tiene sometido el gobierno de EEUU

---

## **Dominican Republic** (in Spanish)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

- En el país no existe un sistema de información para la reducción de riesgo a desastre, aunque existen algunas iniciativas aisladas y la ley establece la creación del “Sistema Integrado de Información”.
- Existen algunos avances en el Centro de Operaciones de Emergencias(COE), envían las alertas a través de correos y celulares a un público específico. También tienen una página donde mantienen información sobre los daños ocasionados por los eventos y niveles de alertas.
- En el caso particular del MINERD existen esfuerzos para la realización de un cambio de paradigma, enfocándose más a la prevención de los desastres que a la respuesta.

**Context & Constraints:**

- Existe la necesidad de sistematizar las informaciones existentes en el Sistema Nacional de Prevención, Mitigación y Respuesta.
- Crear una herramienta que facilite el acceso a las informaciones.

**Priority 3: Core indicator 2**

*School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

- En la última revisión curricular de los indicadores de logro de los niveles de Inicial y Básica se trabajó el tema de la Gestión de Riesgo en las disciplinas básicas, lo que garantiza su inclusión en el currículo.
- La propuesta del Plan Estratégico del Ministerio de Educación tiene una línea referente al tema de gestión de riesgo.
- En la parte operativa actualmente se están realizando acciones para estandarizar una Guía para la Realización de los Planes Escolares de Gestión de Riesgo.
- En el nivel superior (en la UASD), existen iniciativas en la incorporación en la Gestión de Riesgos de los planes de estudio de algunas facultades. En la de Educación se definió un postgrado en educación ambiental y de riesgos y se ha avanzado en la formación de los docentes en el tema.
- En la facultad de Salud se ha definido una carrera de soporte básico, a través de la escuela de salud



publica se realizan cursos de postgrado sobre la gestión de riesgo en salud.

- En el nivel superior (en la UASD), existen iniciativas en la incorporación en la GdeR de los planes de estudio de algunas facultades, en tal sentido, se ha definido en la facultad de Educación un postgrado en educación ambiental y de riesgos y se ha avanzado en la formación de los docentes en el tema. En la facultad de Salud se ha definido una carrera de soporte básico, que a través de la escuela de salud pública se realizan cursos de postgrado sobre la gestión de riesgo en salud.

**Context & Constraints:**

-Nuestro mayor reto en este sentido consiste en la coordinación externa e interna para realizar una Gestión Integral que tenga un mayor impacto en la comunidad educativa. También la mejor definición de los roles y funciones de las instancias que trabajan el tema en el MINERD.

-En el presupuesto general del ministerio se destinen los fondos necesarios para la realización de las actividades de capacitación, entrenamiento, difusión de informaciones y operativización de los planes.

-En el Nivel superior, que las universidades incorporen en sus planes de desarrollo académico e institucional la gestión de riesgos de desastres, que se definan estrategias de inclusión del tema en la formación del futuro profesional del país.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

- En el caso de las universidades, se realizan de manera aislada, se estudios e investigaciones como tema de tesis, tanto de grado como postgrado, sobre temas relacionados con la gestión de riesgos.

**Context & Constraints:**

- Es necesario establecer un mecanismo para definir temas de investigación de acuerdo a las necesidades determinadas en el país que planteen soluciones a los principales problemas detectados en el país con relación al riesgo de desastres.

Debe definirse programas de maestrías y doctorados para fortalecer el grado de especialización del recurso humano.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Do public education campaigns on DRR reach risk-prone communities?**

No

**Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

- Se han desarrollado algunos esfuerzos para el fortalecimiento de la capacidad local en gestion de riesgos, a traves de proyectos con recursos externos, basicamente en cuanto a la orientacion e informacion de las autoridades locales y algunas organizaciones comunitarias.

- Existen documentacion elaboradas por proyectos locales y que se consiguen de forma facil a pesar de que la informacion no esta centralizada ni organizada,

**Context & Constraints:**

- Que se defina una estrategia nacional de informacion publica y educacion ciudadana, sobre los principales riesgos del pais y medidas para reducirlos y enfrentar adecuadamente el impacto de un desastre y sobreponerse en el menor tiempo posible.

- En la tarea de educar a la ciudadanía debe incorporarse las universidades en coordinacion con el ministerio de educacion.

- Recopilar la documentacion elaborada por los proyectos para revisarlas y organizarlas.

-Vincular los gobiernos a la educacion comunitaria.

---

**Ecuador** (in Spanish)**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

Se encuentra publicada en la pagina web de la Secretaría toda la información relacionada con mapas informes y material de difusión.

Se ha realizado 8 cuñas radiales con temas relacionados con el volcán Tungurahua y Cotopaxi en gestión de riesgos y señalética, la información se encuentra en la página web.

www.snriesgos.gob.ec

**Context & Constraints:**

Conformar una red nacional de información desde los medios de comunicación y la comunidad a través de medios audiovisuales en dos idiomas considerando que la mayor población es indígena y se encuentra asentada en lugares vulnerables.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

Nivel de progreso 3

El Ministerio de Educación esta trabajando en la implementación de un programa de gestión de riesgos, se esta formulando una Estrategia de Gestión de Riesgos con el auspicio de Naciones Unidas y se lanzará proximately un programa que incluye la formulación de una Guía; y un programa con los siguientes ejes :a) Mejoramiento de la infraestructura física utilizando proceso institucional de Gestión de Riesgos dentro de la malla curricular, b) organización de estudiantes y profesores para el manejo de la respuesta, c) Elaboración de mapas de riesgos y recursos, conformación de brigadas y realización de simulacros, d) vinculación con la comunidad en temas de gestión de riesgos.

Este programa comienza con la publicación de una guía para los planes de emergencia de acuerdo con la

Secretaría Nacional de Gestión de Riesgos y capacitación, la ejecución de este programa esta auspiciada por Plan Internacional y OFDDA - USAID,

Así mismo en el nivel superior existe ya especialización y Diplomado en Gestión de Riesgos en la primera Universidad del País Instituto de Altos Estudios Nacionales.

Se esta incentivando para que en las carreras de pregrado se incorpore esta temática.

**Context & Constraints:**

Implementar la cultura de prevención de riesgos a través de la inserción real del tema en la curricula desde el Ministerio de Educación de manera transversal.

Fortalecer el plan de capacitación a los educadores en gestión de riesgos.

Contar con un pensum de estudios sobre gestión de riesgos en todos los niveles primario secundario y superior asi mismo como especialización en la universidad.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

La Secretaría Nacional de Ciencia y Tecnología SENACYT tiene presupuesto para el apoyo en proyectos de investigación científica en el tema de gestión de riesgos.

Así mismo se estan trabajando propuestas de investigación en este campo en las Universidades y Escuelas Politécnicas encaminadas a la investigación de esta área para conocer mejor el comportamiento de los fenómenos naturales a los que esta expuesto el país.

**Context & Constraints:**

Contar con una línea de financiamiento permanente para la investigación de los fenómenos naturales y hacer un análisis de costo - beneficio de lo que cuesta la inversión en proyectos de investigación.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Se ha diseñado material de comunicación y educación para la comunidad y para la población escolar el mismo que esta disponible en la pagina web: [www.snriesgos.gob.ec](http://www.snriesgos.gob.ec), para deslaves erupciones volcánicas, incendios forestales, inundaciones, sequía, tsunamis.

Se ha diseñado campañas educativas para la comunidad, y se ha desarrollado cursos para comunicadores para el fomento de la información y sensibilización frente a la Gestión de Riesgos.

Se ha tomado a los comunicadores sociales como socios estratégicos, se ha publicado la Guía comunitaria de Gestión de Riesgos.

**Context & Constraints:**

Contar con una estrategia nacional de sensibilización pública implementada y un plan de acción a largo plazo, que cuente con objetivos específicos la misma que organiza la manera en que se informa a la población en general; sobre el riesgo de desastres y las formas en que el público puede tomar acciones para reducir su grado de exposición a las amenazas.

---

## **El Salvador** (in Spanish)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Existe información sobre los desastres y sobre fenómenos que puedan afectar al país; sin embargo esta se encuentra dispersa, entre los diferentes organismos e instituciones, que no siempre está disponible al público.

**Context & Constraints:**

Falta de mecanismos para la recopilación y sistematización de la información existente y de un adecuado procedimiento para el acceso al público en general.

Debe mejorarse el intercambio de información entre las instituciones.

Fortalecer la coordinación para trasladar la información eficiente entre las Instituciones del Sistema Nacional de Protección Civil,

Además se debe generar una información oportuna, completa y de uso público, por medios radiales, televisivos, Internet, durante los eventos de emergencia, además que esté disponible para investigadores, académicos, instituciones, y público en general.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

En el marco de la Reforma Educativa se presenta el Plan 2021, el cual contempla como acción prioritaria: Evitar situaciones de riesgo y disminuir la vulnerabilidad dentro de los centros escolares con la participación de los miembros de la comunidad educativa.

Se dispone de una herramienta denominada: Plan de Protección Escolar, así mismo se ha Incluido el tema de Gestión de Riesgos en las competencias educativas de los programas de Educación básica.

Para reducir la situación anterior, en la estructura, del Ministerio de Educación (MINED), tiene organizado desde el nivel central un plan de prevención institucional, que permite llegar a las 14 Direcciones Departamentales, en las fases del antes durante y después de la emergencia.

El plan de Prevención Institucional ha sido oportuno en la aplicación en las fases:

**ANTES:**

La implementación del Plan de Protección Escolar a nivel nacional, en el cual se desarrollan actividades principales, de diagnóstico, capacitaciones y simulacros según las amenazas identificadas.

La coordinación permanente como parte del Sistema Nacional de Protección Civil, Prevención y Mitigación de Desastres.

Creación de un sistema de comunicación con red nacional, a fin de facilitar información oportuna, antes durante y después de la emergencia, se ha entregado radios de transmisión de alcance a los técnicos de las 14 Direcciones Departamentales del país.

Conformación del Centro de Operaciones del MINED, ubicado en el nivel central, permite canalizar la información y respuesta oportuna durante la emergencia, alcance nacional.

Conformación de las comisiones de protección departamental de Educación, quien coordina con la Gobernación en los 14 departamentos del país.

Se ha implementado la matriz de riesgo, como un instrumento de apoyo a los planes de Protección Escolar, a fin de reflejar la situación multiamenaza de los centros educativos

Coordinación interinstitucional es una estrategia de alianza muy importante en la implementación de los procesos en las acciones de prevención a desastres.

#### **DURANTE:**

Activar los comités del Plan de Protección Escolar con la participación activa de toda la comunidad educativa.

En la atención a la emergencia, la respuesta inmediata en la atención Psicopedagógica, que provee desde nivel central a los lugares donde se considera de mayor necesidad, el equipo técnico capacitado, es el que está a cargo y coordina con el nivel departamental y local, dotando de materiales de apoyo en las actividades del plan.

Disposición de los alimentos del programa de alimentación y salud escolar, que incluye la dotación de equipo mínimo para su uso y consumo, a las víctimas de emergencias y que se encuentran en los Centros Escolares que funcionan como albergues.

#### **DESPUES:**

Atención Psicopedagógica, a fin de normalizar la actividad educativa, en la comunidad escolar afectada por la emergencia.

Continuidad de la actividad escolar, garantizando el derecho a la educación y en casos extremos la implementación de estrategias educativas elaboradas, previamente a fin de lograr finalizar el ciclo escolar.

Evaluación de los daños en la población educativa, mobiliario y equipo de los centros educativos, mediante la aplicación de instrumentos previamente diseñados por las instancias correspondientes de la evaluación e infraestructura, institucional.

#### **CAPACITACIONES:**

La entrega técnica del plan de protección escolar, considerando el apoyo de riesgolandia, video y otros materiales, dirigida a personal clave del MINED.

Apoyo técnico a nivel local, a fin de fortalecer la prevención y respuesta ante emergencias y desastres, considerando de vital importancia su actuación en las primeras 72 horas de ocurrida la emergencia o desastres.

Desarrollo de talleres nacionales, de socialización y aplicación de las actividades del plan de prevención institucional, dirigido a personal técnico central y departamental.

Capacitación sobre la inclusión del tema de prevención a desastres en los programas de estudio, dirigido al equipo de la jefatura de currículo de la gerencia de gestión pedagógica responsable de la elaboración de los programas de estudio.

#### **MATERIALES EDUCATIVOS:**

El diseño, reproducción y distribución de material bibliográfico de apoyo, entre los más relevantes, colección cipote, que lleva el tema de prevención a desastres principalmente en los libros de texto de la asignatura de ciencia salud y medio ambiente, ciencias sociales; así como el Plan de Protección Escolar, juego educativo riesgolandia y video sobre gestión para la reducción del riesgo en el sector educativo, acompañado de su respectiva capacitación, dirigida a técnicos del nivel central, departamental y local.

El tema de Reducción de Riesgos está presente en los Programas de estudio, actualizados por niveles, desde parvularia a bachillerato, los temas se encuentran en todos los programas, sin embargo se pueden

ver mayor énfasis en las asignaturas de ciencia salud y medio ambiente, ciencias sociales, en forma gradual en cada grado de estudio.

El reglamento de la ley de Educación Superior incorpora el tema gestión para la reducción del riesgo, como uno de los temas principales que deben abordarse en las carreras de estudios que ofrecen las Instituciones de Educación Superior. (IES)

Algunas carreras con especialidad en gestión para la reducción del riesgo a desastres, ofrecidas por algunas instituciones de educación superior, en carreras de especialidad del tema, en otras como ingenierías y medicina.

El Programa Social educativo 2009-2014, "VAMOS A LA ESCUELA" vincula el tema de prevención, principalmente en las siguientes líneas estratégicas: Fortalecimiento de la gestión curricular e institucional en los centros educativos, currículo pertinente y aprendizajes significativos y equidad en el acceso y permanencia en el sistema educativo. Así mismo, el plan social sostiene en sus Fuerzas impulsoras del Modelo, la necesidad de garantizar una concertación social por la educación, que permita el involucramiento y participación activa de la comunidad educativa: familia – comunidad territorial y educativa.

Los factores considerados son los siguientes: • Diseños curriculares y materiales de estudio relevante y pertinente. • Directivos docentes y profesorado comprometidos con la mejora del ejercicio docente y con el desarrollo de aprendizajes significativos en los y las estudiantes. • Centros educativos adecuados, seguros, organizados y democráticos.

Así mismo El Programa Social Educativo, se compromete en el COMPONENTE 6: Mejoramiento de condiciones de infraestructura para centros escolares beneficiados a fin de garantizar una infraestructura segura y en buen estado, con el mobiliario y equipo suficiente y adecuado en los centros educativos del sector público, concretizado por medio del PROGRAMA DE MEJORAMIENTO DE LOS AMBIENTES ESCOLARES Y RECURSOS EDUCATIVOS, cuya concepción es: Ambientes seguros, cómodos y adecuados se constituyen en una condición indispensable para estimular un mejor desempeño del profesorado y del personal administrativo y para favorecer aprendizajes efectivos en el estudiantado.

#### **Context & Constraints:**

Se necesita la capacitación de Docentes en el tema de la gestión de riesgo, por lo tanto es necesario incluir en la Currícula universitaria en la formación de docentes.

Se han realizado esfuerzos considerables, sin embargo, aún no se cuenta con una cobertura estimada en la implementación del plan de protección escolar debido a limitaciones en aspectos importantes, especialmente en recursos financieros y/o las capacidades operativas.

Si bien es cierto, que se han desarrollado avances muy provechosos en relación al tema, de gestión para la reducción del riesgo a desastre, es importante señalar algunos aspectos que limitan continuar impulsando la cultura de prevención en la comunidad educativa, en más de cinco mil centros educativos oficiales del país, es la falta de recursos que permitan dar asistencia técnica de seguimiento y evaluación sobre la implementación de la aplicación del tema en los programas de estudio y el plan de protección escolar, otra dificultad presente es la capacitación permanente del mismo tema.

#### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies



\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Se está participando a nivel regional en el Proyecto de la Reducción del Riesgo Sísmico, donde entre otros elementos se está trabajando para evaluación de la vulnerabilidad sísmica estructural para efectos de costo-beneficio

En el Plan de Gobierno se establece la necesidad de fortalecer las capacidades científico y técnicas del Sistema Nacional de Protección Civil y su vinculación con centros académicos, de investigación científica y de la sociedad civil para identificar los escenarios potenciales de riesgo y formular medidas de prevención, mitigación, de intercambio y aprendizaje entre las comunidades.

**Context & Constraints:**

Fortalecer los vínculos con las instituciones encargadas de la investigación científica a nivel local y regional.

Falta de recurso financiero que permita potencializar la capacidad técnica científica del personal de las instituciones del sistema nacional de protección civil del País.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Do public education campaigns on DRR reach risk-prone communities?**

No

**Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Se ha reproducido y distribuido material educativo, así como acciones de formación y capacitación que recogen algunas de las áreas de Gestión de Riesgos, pero no bajo un marco de planificación nacional hacia los niveles departamentales, municipales y comunales,

**Context & Constraints:**

Falta de recurso humano y financiero, para desarrollar campañas públicas y educativas en torno a la Gestión para la Reducción de Riesgos a Desastres.

Falta de una estrategia nacional de sensibilización pública para estimular una cultura de resiliencia ante los desastres, con un elemento de alcance comunitario en las zonas rurales y urbanas.

## Guatemala (in Spanish)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### Description:

La Secretaria Ejecutiva de CONRED, maneja una página de web en la cual pueden encontrarse boletines, recursos de información y recursos institucionales donde informa sobre las actividades que se realizan en la gestión de reducción de riesgo y los otros componentes que involucran a la institución. Se ha implementado la conexión con las redes sociales como facebook, twitter, Youtube, RSS y Flinck.

Otra página de internet relacionada al sistema de información es la del Instituto Nacional de Sismología, Vulcanología e Hidrología (INSIVUMEH) donde se encuentra el monitoreo del clima, pronóstico del oleaje, imágenes satelitales del monitoreo del clima en tiempo real, boletines especiales vulcanológicos, niveles de los ríos y otra información de importancia para la toma de decisiones

Complementa esta información la página web de la Secretaria de Programación y Programación de la Presidencia –SEGEPLAN- donde se publica información sobre los mecanismos que se implementan para articular la gestión para la reducción de riesgo a los desastres en los procesos de desarrollo.

CONRED, maneja un sistema de manejo de información en caso de emergencia o desastre conocido como SISMICEDE. Es una base de datos que registra, almacena y procesa la información de relevancia para la atención de eventos. Esta información se genera desde las sedes regionales, delegados o instituciones que integran el sistema CONRED y la misma es actualizada y verificada.

#### Context & Constraints:

Los estudios realizados para determinar las condiciones socioeconómicas del país, establecen en promedio que más del 70% de la población guatemalteca vive en condiciones de pobreza y un 28% no alcanza a tener las mínimas condiciones de vida en comparación al resto de la sociedad, tales como agua potable, nutrición o años esperados de vida.

Datos que permiten establecer que por cada mil personas sólo existen 126 aparatos de televisión, y que únicamente el 0.80% de la población cuenta con computadoras personales.

Estadísticas que nos hacen suponer que aunque reconozcamos que los medios electrónicos son una

herramienta poderosa para comunicar que debe ser fortalecida, se hace necesario establecer otros mecanismos de divulgación que ponga a disponibilidad de grupos enteresados información relevante sobre los desastres.

Por todo lo anterior es necesario ampliar la divulgación de información más allá de los medios electrónicos, así como el desarrollar una política prioritaria dentro de la estrategia de comunicación.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

- \* Yes: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* Yes: Professional DRR education programmes

#### **Description:**

El Currículo Nacional Base del Ministerio de Educación –MINEDUC- incluye la GRRD, aunque aún no se plasma en forma concreta el concepto en los libros de texto en los niveles primario y secundario. Asimismo, desde la SE-CONRED se busca reforzar los conocimientos en materia GRRD a alumnos, maestros y supervisores educativos, a través de talleres, pláticas, cursos abiertos y programas de visitas guiadas. Estas actividades van dirigidas a establecimientos públicos y privados.

El MINEDUC está reestructurando la Unidad de Gestión de Riesgos, cuyo objetivo es incluir la GRRD en el proceso educativo y de infraestructura del sector.

En la educación superior, principalmente en la Universidad estatal, se imparten maestrías y postgrados en Gestión para la Reducción de Riesgo a Desastres en las Facultades de Ingeniería, Arquitectura y Medicina.

El Instituto Nacional de Administración Pública, imparte cursos formativos y diplomados dirigidos a profesionales que laboran en los distintos sectores de la administración pública, cuyo objetivo es capacitarlos en el tema.

En el marco de la MNDRRD, se inició un proceso de incidencia curricular, para concientizar y capacitar a quienes facilitan el proceso de enseñanza-aprendizaje en todos los niveles; así como la formación docente y formación alternativa. Esta temática es promovida por la Subcomisión de Gestión del Conocimiento.

Existe un esfuerzo interinstitucional que busca rescatar, valorizar y promover los conocimientos y sabidurías ancestrales desde la perspectiva de la gestión para la reducción del riesgo a los desastres y está por institucionalizarse una Comisión de Seguimiento que tiene como función la sistematización de

esos conocimientos, para tener sistemas alternativos de información y alerta temprana en las comunidades más vulnerables.

### **Context & Constraints:**

Aunque la RRD está incluida en los planes educativos, el enfoque en las guías didácticas es sobre la amenaza, sin tomar en cuenta la vulnerabilidad, ni hace referencia al manejo adecuado de los recursos naturales, para reducir los riesgos a los desastres. El reto es lograr que se materialice correctamente en forma comprensiva para los distintos niveles educativos, tanto del sector público como privado.

El MINEDUC debe asumir una mayor responsabilidad para capacitar a los docentes en materia de GRRD, para que haya una mejor comprensión de la temática y pueda correctamente ser trasladada en el proceso enseñanza-aprendizaje.

Las actividades de la Subcomisión de Gestión del Conocimiento son importantes porque desde ahí puede lograrse que el MINEDUC emprenda la capacitación de los docentes en GRRD. Así mismo, involucra a actores de la educación pública y de la educación superior, aunque debe ampliarse la convocatoria.

Finalmente, es uno de los mayores retos es la institucionalización del proceso de armonización de los conocimientos y sabidurías ancestrales de los pueblos en la gestión para la reducción de riesgo a desastres, considerando la multietnicidad y pluriculturalidad del país.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

Guatemala es mayormente afectado por las amenazas de tipo hidrometeorológico, cuyo impacto se traduce en deslizamientos e inundaciones. Por ello, SE-CONRED actualmente trabaja en la producción de información para realizar evaluaciones de amenazas múltiples. En deslizamientos, ha contrapuesto diferentes resultados como: cartografía de alta definición (ríos, cortes de talud, cobertura vegetal, modelo de elevación, pendiente y su orientación, geología...), firma espectral de deslizamientos en zonas altas y todo el país, comprobación con imágenes hiperespectrales; y lo referente al impacto por deslizamiento en los últimos 10 años. Se validó la información resultante con incidentes de deslizamiento en 2008, con una certeza de 91,53%, y 90,25% en 2010. Para inundaciones se desarrolló la cartografía del país, se identificó la firma espectral del suelo en condiciones secas y húmedas para establecer condiciones topográficas del terreno susceptible a inundaciones. Se validó la información resultante con los eventos de 2,008 llegando a una certeza del 90.35% y 91,2% en 2010.

En el mismo tema, se trabajó el proyecto de Evaluación Probabilística de Riesgos en Centroamérica

(CAPRA, por sus siglas en inglés) que pretende fomentar la comprensión del riesgo de desastres a través de la visualización de los mapas de riesgo, tomando en cuenta tanto la intensidad como la frecuencia de las amenazas durante un período determinado.

Por otro lado, actualmente se elabora el instrumento que incorporará la gestión de riesgo en la formulación de los proyectos de inversión pública, contemplando la relación costo–beneficio y criterios para valorar e imputar en los costos del proyecto las medidas de mitigación. Este instrumento permitirá operativizar, internalizar y homogenizar la RRD en la formulación y evaluación de proyectos de preinversión e inversión pública. Asimismo, en el marco normativo del Sistema Nacional de Inversión Pública para la presentación de proyectos 2011 el tema está presente.

**Context & Constraints:**

SE-CONRED ha avanzado en la generación de información que permitan realizar mejores estudios para la evaluación del riesgo. Sin embargo, aún no se concluyen los análisis para impacto por deslizamientos e inundaciones, por lo que debe continuarse en la generación y análisis de información en estos temas y en el resto de incidentes que impactan al país.

El proyecto CAPRA también ha aportado una plataforma que permita un adecuado manejo de la información para generar mapas de riesgo. Sin embargo, presupone que el país cuenta con toda la información necesaria para construir los mapas de riesgo, por lo que a pesar de contar con la plataforma más no con la información en el formato requerido, será en un futuro cuando pueda aprovecharse su potencial. Mientras tanto es importante lograr la transferencia de archivos entre el programa que se utiliza actualmente y el de CAPRA, así como gestionar la capacitación técnica para los usuarios de manera que se deje toda la capacidad técnica instalada en el país para aprovechar el potencial de dicha plataforma.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

La Subcomisión de Gestión del Conocimiento de la MNDRRD promueve la información y comunicación que permita la divulgación permanente a la población sobre la temática; así como apoyar y fomentar la sensibilización y fortalecimiento de la cultura de seguridad y resiliencia de las comunidades urbanas y rurales.

La SE-CONRED cuenta con una estrategia institucional de comunicación para actuar como coordinador y apoyo de los esfuerzos institucionales enfocados a prevenir, mitigar, atender y reconstruir los daños causados por desastres, mediante acciones y actividades comunicacionales de respaldo al trabajo de todas las áreas de la entidad. Dentro de las actividades se emprenden campañas estacionales para: temporadas de descanso de la población, prevención de incendios forestales, temporada de invierno, frío y las propias en época de emergencias. Todas estas campañas de información se promueven a través de conferencias de prensa así como acción mediática, a través de los medios masivos y alternativos.

**Context & Constraints:**

El plan de comunicación aún tiene un enfoque centralizado, muy urbano, tomando en consideración que es en la ciudad donde se concentran la mayor parte de los medios masivos de comunicación social y donde más se refleja la discriminación. A pesar que esta estrategia contempla los ejes de género y la cuestión étnica, al menos no existe visiblemente una estrategia que contemple una comunicación eficaz en los idiomas mayas, garífuna y xinca, que son los otros tres pueblos que componen la estructura social de Guatemala.

Debido a lo anterior, el reto más importante es que la estrategia de comunicación refleje la multiculturalidad del país, para que la información pueda llegar hasta los últimos rincones de Guatemala.

---

## Honduras (in Spanish)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Las restricciones son de la limitacion al publico en general para conocer mas sobre los temas de RRD.

**Context & Constraints:**

Las limitaciones son que aun no contamos con una plataforma unificada nacional para poder realizar las consultas necesarias.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Existe el acuerdo "tácito" entre la Secretaría de Educación y COPECO de incluir en la Curricula de Educacion Primaria, elementos de la gestión de riesgo en las diferentes materias que ya existen.

Lo que existe en la actualidad es un compromiso voluntario y no obligatorio de divulgar a titulo personal dependiendo del catedrático el tema de la RRD

**Context & Constraints:**

Las limitantes son que no existe un sistema de indicadores que permita evaluar el nivel de impacto de dicha curricula.  
(No hay metodos de evaluación)

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

- \* No: Research outputs, products or studies
- \* Yes: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

**Description:**

Existen ya muchos esfuerzos a nivel de educación superior el haber constituido una Maestría en Gestión de Riesgos, Diplomados con orientaciones técnicas específicas (ingenieros, arquitectos, geólogos, y demás). Existen además contemplados en la Ley del SINAGER los Oficiales de Prevención que de ahora en adelante estarán evaluando el tema de la Prevención así mismo contribuyendo a los análisis costo - beneficio. No existe una línea presupuestaria dentro del estado para la RRD, lo que se ha acostumbrado

es atender a las contingencias en vez de prevenir.

**Context & Constraints:**

Si hay esfuerzos pero son muy aislados y no están integrados. No existe recurso especializado y el profesional especializado no está integrado al sistema de prevención. Las limitantes es la inversión en preparar personal calificado y posteriormente a la preparación académica adecuada no existen los recursos financieros dentro del sistema gubernamental para contratar dicho personal y de la misma forma dichos profesionales no les garantiza el estado una estabilidad laboral ni profesional.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

No

**Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Es mínima la cultura de la prevención en las zonas Rurales y Urbanas. Aun no es política de estado sino que solo existe el interés a nivel de las organizaciones no gubernamentales (iniciativa de ellos).

**Context & Constraints:**

Los pocos recursos con los que cuenta el estado solo se dedican en su mayoría a la contingencia, pero esta contemplado dentro de el Plan de Nación (Firmado en 2010 por Presidente Lobo Sosa)

---

**Jamaica** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes



**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

The ODPEM continues to use all available medium to disseminate information at various levels to the wider population. The Organization's website and sub-site serve as a major source of information gathering for thousands of individuals and institutions. The use of the local media is an avenue that is frequently explored and taken advantage of get the message of Disaster preparedness out with maximum reach.

Cognizant of the fact that there are individuals with varying disabilities, effort is made to have information available in various format. The use of the internet and text messaging services have also aided the organization to reach numerous persons.

The ODPEM is currently engaging with private sector interests with the aim of disseminating information through various media (print/electronic) Over the last few years a number of independent initiatives were undertaken by the private sector to independently communicate preparedness and awareness-building information.

NWA now on board with Public education. IWCAM public education programme for watershed management at the community level.

JPS informing persons on prevention methods.

ADRA targeting religious groups through its health education programmes to inform about disasters.

**Context & Constraints:**

Financial limitations remain the greatest challenge to the organization's ability to tap into as many markets as possible. Ongoing dialogue is maintained with media houses, special interest groups and donor agencies for partnership to make the goal more achievable.

**Recommendations**

The organization is making recommendation for some of these services to be available free of cost or sponsored largely by the Corporate entities. The ODPEM envisions being able to carry information to the visually impaired, the hearing impaired and other special population without being restricted by budgetary constraints.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Substantial achievement has been attained in the area dissemination of Disaster Preparedness information to a wide cross section of the Jamaican population. Numerous programmes have either been undertaken or are currently on stream to sensitize the nation to disaster preparedness. The School's curricular at the Early Childhood, Primary and Secondary levels have embraced the concept of Disaster Preparedness as an important topic area. There has been a significant increase in the number of learning institutions provided with training in Disaster Preparedness annually. Official inclusion into the school curriculum has been advanced and further advances are planned by the Ministry of Education.

Major stakeholders such as the Ministry of Education and school administration have been actively involved in promulgating the message thus increasing awareness. A recently concluded workshop has seen more than Three Hundred Principals, Teachers and Caregivers from approximately One Hundred (100) schools and Child Care Institutions trained in building Schools' Resilience to Disasters. Arising from this Disaster Plans have been developed by these participating institutions and a channel of communication established between the ODPEM and the respective schools.

Schools Safety Programme.  
 Joint programmes with international universities established.

**Context & Constraints:**

A major challenge that Jamaica as a nation and the ODPEM as an organization face with regards to maximum reach of the message of Disaster Preparedness is a lack of financial resources. Considerably more could be realized if funds were available. Several of our educational facilities do not have the educational facilities to effect the necessary activities to make their institutions more resistant to the likely impact of disasters.

Mainstreaming DRR is slow in many instances simply because it is dependent on personalities and not legislation.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

- \* Yes: Research outputs, products or studies
- \* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

Agencies with authority have been identified at the national level with the necessary expertise to carry out multi-risk assessments. Accepted scientific methodologies have been used to carry out these assessments with the aid of GIS technology. GIS also facilitates project assessments. At present data is shared between key agencies such as the Meteorological Service, Earthquake Unit, Mines and Geology, Water Resources Authority and the National Disaster Organisation, ODPEM.

ECLAC and USAID/OFDA methodologies have been used to assess the impact of hazards. Vulnerability assessment methodologies have also been established and models developed for hazard impact analysis. CDERA, as the regional response agency has developed reporting strategies and bench-marking tools for participating states. These tools are used for evaluation and monitoring at the regional level.

Agricultural research - hazard resistant crops and livestock.  
Climate change centre established at UWI.  
Infraststructure (road devpt) - materials to strengthen road base.  
Scientifi approach applied to community research development.

**Context & Constraints:**

There is a need for strengthening the capacity of human resources at the National Disaster Organisation to do meaningful work in this area. The additional human resources on implementation would also act as a national coordinator for harnessing the necessary information from the agencies who have done research to bring a more holistic approach to research conducted.

No effort made to integrate Cost Benefit Analysis as compared to Latin American counterparts.

Absence of the data formulated at the national level translated to the community based level to effect action.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Achievement level upgraded to 4 from 3 since 2009 report.

Through the National Disaster Management Structure, state agencies, Non Government Organization's and Community Based Organization the National Disaster Office has been able to effectively reach urban and rural communities. Information and knowledge is shared and capacity built. Vulnerable communities and institutions are identified regularly and training sessions scheduled to equip persons with the requisite knowledge and skills to build community resilience.

Community-based programmes are encouraged and promoted at the local level as a means of gaining participation of grass-roots populations. The concept of participatory action and monitoring is also adopted. Joint programmes are conducted with the assistance of major partner agencies such as the Jamaica Fire Brigade and First Aid Service providers with a view to improving skills sets for community-based response until external assistance can be provided.

Active involvement of NGOs in public education.

Recent partner-funded project to build resilience in vulnerable communities.

Commemorative events at community level (hurricane preparedness month) help embed hazard awareness.

**Context & Constraints:**

A general lack of resources to address capacity building in all vulnerable communities that exists.

Sustaining Community Disaster Management groups.

Establishing ownership of community disaster management programs at the municipal authorities so as to enhance the government and democratic process in relation to Disaster Risk Reduction.

Information provided is generally not translated into action

---

**Mexico** (in Spanish)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

México continúa la atención de los distintos temas que abarca la prevención de desastres, favoreciendo las necesidades de las Unidades Estatales de Protección Civil y de la población en general, a través de su divulgación en eventos académicos y de alto nivel.

Bajo dicha premisa, se ha instrumentado la primera etapa del proyecto de la Biblioteca Virtual del SINAPROC, mediante la puesta en marcha temporal del sistema de consulta vía electrónica de los

registros bibliográficos de todas las colecciones que conforman el acervo documental del CENAPRED. Asimismo, se trabaja en mejorar las herramientas informáticas y telemáticas para acercar la protección civil a la población y, se promueve el trabajo en red a nivel comunitario para el despliegue de medidas simples y accesibles que, no obstante, resulten efectivas para incrementar la resiliencia y resistencia de la comunidad a los desastres.

Cabe señalar que la mayoría de las instituciones que forman parte del SINAPROC, cuentan en sus páginas electrónicas con amplia información sobre los riesgos de desastres, ejemplo de ello es un micrositio recién instalado en el portal electrónico de INMUJERES, que cuenta con publicaciones y materiales sobre la gestión integral del riesgo con perspectiva de género y en materia de salud, se cuenta con un sitio electrónico con información básica y de apoyo, según lo establecido en el programa de urgencias epidemiológicas y desastres, la cual incluye acceso a bibliotecas virtuales y fuentes de monitoreo para las diversas amenazas naturales y riesgos por la actividad humana.

En cuestión educativa, los libros de nivel primaria y secundaria que distribuye la Secretaría de Educación Pública (SEP), ya incorporan el tema de protección civil y cambio climático.

#### **Context & Constraints:**

Difundir la página web nacional en todos los niveles de instituciones del sector e involucradas en las acciones de preparación y respuesta en salud ante un desastre, fomentar que los 32 SESA desarrollen sus páginas web con los complementos regionales de riesgo y mantener actualizada la página web y la red de enlaces con los SESA e instancias vinculadas para el intercambio de información.

#### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

\* Yes: Primary school curriculum

\* No: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

#### **Description:**

La Coordinación General de Protección Civil (CGPC), trabajó durante 2010 con la Secretaría de Educación Pública (SEP) para reformar el plan educativo y cuyo producto, es la incorporación en el plan de estudios de primero y sexto año de primaria de los conceptos iniciales de la gestión integral de los riesgos, protección civil e identificación de riesgos. A partir de este ciclo escolar, toda la educación básica por disposición presidencial, incorpora dichos conceptos en las materias de geografía, español, exploración de la naturaleza, educación cívica y ética. Dicho plan estaba ideado a ser incorporado en el

2012.

Con el fin de divulgar la reducción del riesgo de desastres, se continua con la coordinación de los programas de capacitación que desarrolla el CENAPRED sobre la prevención de desastres y la protección civil, a nivel nacional e internacional, principalmente en países de Centroamérica y el Caribe; se supervisa el contenido temático de nuevos cursos de protección civil y la elaboración de material didáctico de apoyo; se coordinan actividades de capacitación con unidades de protección civil estatales y municipales, dependencias federales, organismos no gubernamentales y paraestatales y la iniciativa privada de México; se coordina la planeación del "Diplomado en Dirección de Programas de Protección Civil", y del programa de capacitación del Plan de Emergencias Radiológica (PERE) para asegurar una respuesta adecuada ante una emergencia radiológica en la Central Nucleoeléctrica de Laguna Verde.

En materia de salud, como meta anual del programa de urgencias epidemiológicas y desastres, se realizan al menos 6 sesiones de capacitación para los responsables de los 32 SESA y personal involucrado en la operación del mismo. Se elaboraron 6 manuales para la atención de la salud ante desastres y lineamientos para la seguridad en salud relacionados con desastres y se provee asesoría a los 32 estados del país.

#### **Context & Constraints:**

Los planes de estudio de niveles de educación básica del país además de considerar información sobre el riesgo de desastre, deben de incluir información relativa al cuidado del medio ambiente. Además, se deben actualizar constantemente los manuales y lineamientos sobre desastres con la particular colaboración de las diversas áreas operativas involucradas en la atención de un desastre.

Con el propósito de divulgar información a toda la población mexicana, la Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT), la Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA), la Secretaría de Gobernación (SEGOB), a través de la Coordinación de Protección Civil y el Instituto Nacional de las Mujeres (INMUJERES), elaboraron materiales para la población infantil con información sobre riesgos de desastre.

#### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

#### **Description:**

Los programas de investigación del CENAPRED, analizan los principales factores del riesgo: la amenaza que representa cada fenómeno, la probabilidad de su ocurrencia, la vulnerabilidad de la sociedad ante su presencia y el grado de exposición ante los fenómenos. Muchos de estos programas, han rendido frutos

que se traducen en una efectiva reducción de la vulnerabilidad de distintos sectores de la población mexicana ante las frecuentes manifestaciones, a través de la concepción de diversos dispositivos de preparación.

Como parte de las iniciativas del Gobierno de México, la Secretaría de Salud, mantiene dentro del programa de urgencias epidemiológicas y desastres, un sistema de información que genera datos para cada evento que se atiende, el cual colabora en la elaboración de reportes e informes que permiten tomar decisiones para la programación y planeación, así como para los ajustes futuros del programa nacional. Asimismo, desarrollan estudios de caso y de brotes de enfermedades que se generan durante el desastre.

**Context & Constraints:**

Actualizar y modernizar el sistema informático EPI-Desastres, así como las variables y formatos primarios de concentración, y desarrollar asimismo, un sistema automatizado para la realización de la Evaluación de Daños y el Análisis de Necesidades de Salud–EDAN Salud.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Se promueven esquemas accesibles de capacitación y jornadas culturales regionales sobre el manejo integral del riesgo de desastres: formación de autoridades locales, capacitación en aspectos financieros de la prevención y las emergencias, capacitación comunitaria, escolar y laboral relativa a la reducción del riesgo de desastres.

Durante las Jornadas Regionales de Protección Civil, se realizan talleres sobre la reducción del riesgo de desastres, transferencias de riesgos, hospital seguro, entre otros, y se instala una feria con información relevante de protección civil, que incluye guías o recomendaciones del Gobierno de México a la población sobre cómo actuar en caso de emergencias. Estas Jornadas se realizan anualmente y se dividen en 4 regiones.

Además, actualmente INMUJERES trabaja en un proyecto conjunto con el Programa de Naciones Unidas para el Desarrollo en México (PNUD) en el sureste del país (Yucatán, Quintana Roo, Tabasco, Chiapas y Oaxaca), relativo a la gestión integral del riesgo con perspectiva de género, enfocando sus esfuerzos en la sensibilización y capacitación de funcionarios de las Unidades de Protección Civil Municipales y las Instancias Municipales de la Mujer.



En relación a los municipios, el Gobierno de México, bajo el liderazgo de la Coordinación General de Protección Civil, presentó en septiembre del presente año el "Programa Municipio Seguro: Resistente a Desastres".

Dicho Programa, se enfoca en el papel del municipio como ente responsable de velar por la protección civil de sus habitantes, lo que lleva a la elaboración de estrategias y políticas que aseguren el desarrollo local, reduciendo el riesgo de vulnerabilidad. Una vez establecido el gobierno local como el principal articulador de la protección civil en eventos de crisis, el Programa tiene por objetivo la reducción del riesgo de desastre en las pequeñas localidades y municipios, vinculando los esfuerzos de la sociedad, la iniciativa privada y el gobierno local.

**Context & Constraints:**

Se está trabajando para que la información relativa a la reducción de desastres llegue a todos los niveles y a toda la población.

Continuar la promoción del "Programa Municipio Seguro: Resistente a Desastres".

---

## Nicaragua (in Spanish)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

> Sistema Nacional para la Prevención, Mitigación y Atención de Desastres (2008)

<http://www.sinapred.gob.ni>

\* Yes: Established mechanisms for accessing DRR information

**Description:**

La información oficial es transmitida a todo el país a través de un flujo constante a través de las Comisiones de Trabajo Sectoriales y las redes territoriales del Sistema, fortalecidas con las municipalidades y el gabinete del poder ciudadano.

Existe información disponible con acceso al público a través de las Oficinas de Acceso la Información Pública de la Secretaria ejecutiva del SINAPRED

Los materiales de educación formal del país tienen incorporada la temática de reducción del riesgo a través de los programas que impulsa el Ministerio de Educación.-

Se ha avanzado en el manejo de la información electrónica, utilizando las nuevas tecnologías de la información y la comunicación (TIC's), estos avances son acompañados de Redes informáticas en el país



como Red de Información Humanitaria REDHUM, que distribuye información humanitaria a nivel nacional y regional y talleres de Manejo de información entre la Red Humanitaria. Otras redes virtuales como la Biblioteca Virtual en desastres (BVD) con información en línea con información sobre salud y desastres, SINIA que contribuyen en la difusión relevante sobre las emergencias y/o desastres naturales.-

Existe también de un marco jurídico que sustenta la implementación de los procesos de comunicación en situaciones de desastres, A nivel de instituciones que conforman las Comisiones Técnicas Sectoriales se trabaja conjuntamente en la producción de materiales informativos y educativos, dependiendo de los escenarios de riesgos, que son difundidos en el ámbito local.

**Context & Constraints:**

Existen limitaciones en la producción de materiales bajo las versiones populares, tomando en consideración que nuestra población vulnerable tiene poca escolaridad.-

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

La Secretaría Ejecutiva del SINAPRED y Ministerio de Educación impartieron 18 talleres de capacitación y sensibilización para la reducción de riesgo de desastre en los municipios de mayor vulnerabilidad de Nicaragua.

Durante el año 2010, se ha entregado la cantidad de 3,758 documentos conteniendo las guías de funcionamiento de los comités regionales, departamentales y regionales; 335 ejemplares de la Ley 337 y 195 documentos referidos a los Planes de Respuesta del SINAPRED acompañado de un CD ilustrativo.

En este mismo año, la Dirección territorial de la SE-SINAPRED ha efectuado 83 talleres de asistencia técnica en los principales municipios del país para la incorporación de la gestión de riesgos en la planificación municipal. Realizándose conjuntamente con el Ministerio de Educación la capacitación a 199 docentes del Municipio de León sobre el uso de guías y cuadernos de gestión del riesgo en el marco del Proyecto BOSAI, financiado por la cooperación japonesa.

A nivel de formación técnica la SE-SINAPRED ha capacitado a 24 jóvenes con el objetivo de que sirvan como elemento multiplicador en los municipios de los departamentos de Nueva Segovia, Estelí, Madriz,

León, Masaya, Granada, Chontales y Managua.

**Context & Constraints:**

Se debe brindar atención a la recuperación.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

El desarrollo de las herramientas de investigación científico-técnica en Nicaragua, ha tenido importantes avances, en los últimos años, elaborándose estudios y mapas de amenazas y riesgos municipales, apoyados por agencias de cooperación que se encuentran en el país, un logro importante es la formación de técnicos municipales en el uso de estas herramientas y la elaboración de mapas de riesgo elaborados con fondos de proyectos comunitarios.-

El estudio de vulnerabilidad sísmica de Managua, con el que se estimaron las probables pérdidas por terremotos en la Ciudad de Managua, es uno de los estudios que sirve como insumo para las medidas de prevención, mitigación y preparación ante desastres. Sus datos se han utilizado para el Proyecto Regional "Análisis Probabilista del Riesgo para Centro América" que se finalizara en el 2010. Esta será una de las primeras herramientas en la región que brindara insumos a las aseguradoras para iniciar las gestiones en la transferencia del riesgo.

La Universidad de Ingeniería dentro del Programa de estudios ambientales urbanos territoriales (UNI-PEAUT) promueve cursos de postgrado vinculados a especialización en urbano-ambientales y de ingeniería sismo-resistente. Hasta la fecha se han realizado dos ediciones de la Maestría de Medio Ambiente, Mitigación y Prevención de desastres, con una graduación efectiva de 18 másteres.

El Centro de Investigaciones Geocientíficas, instancia académica especializada de la Universidad Nacional Autónoma de Nicaragua (CIGEO/UNAN-Managua), impulsa la tercera edición de la Maestría Centroamericana en Evaluación de Riesgo y Reducción de Desastres, igualmente la UNAN-León a través del impulso de postgrados sobre metodología de reducción de gestión de riesgo.

**Context & Constraints:**

1.- A nivel municipal no se están aprovechando el conocimiento de los técnicos que han sido capacitados en el uso de estas herramientas científicas.-

2.- Se han realizado diferentes esfuerzos a nivel nacional con la participación de instituciones públicas, privadas y el sector académico para avanzar en los métodos e investigaciones sobre las amenazas, sin

embargo, el progreso ha sido lento para incidir en planes y políticas.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

Existe una estrategia nacional de divulgación, sin embargo, es necesaria su actualización con base a las prioridades y las necesidades actuales del país.

A través del SINAPRED se promueve campañas nacionales y locales con medidas preventivas y de sensibilización ante desastres, estas iniciativas se acompañan con elaboración y distribución de materiales informativo sobre normas de comportamiento ante la presencia de eventos naturales o antrópicos que promueven el incremento de su capacidades para enfrentar y reducir el riesgo en la comunidades.-

En las comunidades más vulnerables existe conocimiento y concientización de los riesgos, involucrándose la población en los distintos sistemas de alerta temprana, donde han sido capacitados a través de simulacros coordinados por los organismos ejecutores como Defensa Civil, INETER, Alcaldías y agencias de cooperación que se encuentran en el sector.-

#### **Context & Constraints:**

A pesar de estos avances se debe continuar con campañas de comunicación masiva sostenida y desarrollada coordinadamente entre la SE-SINAPRED, instituciones miembros del SINAPRED, el sector privado y organismo presentes en las comunidades para informar, promover la gestión integrada de riesgo y las acciones a tomar por la población a todo nivel administrativo.

---

## **Panama** (in Spanish)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

## Is there a national disaster information system publicly available?

Yes

### Means of Verification:

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

### Description:

Se han realizado esfuerzos por contar con material de información para las escuelas sobre las amenazas ,tal es el caso de la revista “El Volcán Barú, Lo que debemos saber acerca de un gigante dormido”, que se elaboró con la participación del Instituto de Geociencia, La Universidad de Panamá, La Secretaría Nacional de Ciencia y Tecnología y el Sistema Nacional de Protección Civil, en las que dan a conocer la amenaza , como nace, como identificar la vulnerabilidad y como reducir la vulnerabilidad.

Se están realizando esfuerzos dentro de las instalaciones del Sistema Nacional de Protección Civil para reactivar el Centro Nacional de Documentación e Información Para la Reducción del Riesgo (CENDIRR), el cual tiene la misión de recabar toda la información en cuanto a riesgo y ponerla a disposición de la población.

Es necesaria mayor promoción de material institucional para la comunidad, documentos que sean informativos sobre los riesgos y que reflejen los avances del país en el tema.

El Ministerio de Educación, mediante sus programas educativos, induce al estudiante o al docente a la investigación sobre la temática, mediante el acceso a la información existente en las instancias relacionadas con el tema.

En la Universidad de Panamá, se instituye la Comisión de Educación para la gestión del Riesgo en la Facultad de Ciencias de la Educación y con ella se inician actividades de divulgación sobre la prevención del riesgo, a través de murales y afiches en el edificio de la Facultad.

Se elaboró el Plan de Seguridad y la señalización del edificio con el apoyo de SINAPROC.  
Se capacitó a un grupo del personal docente y administrativo en temas de gestión del riesgo.  
Se han realizado jornadas de capacitación en el tema de gestión del riesgo a estudiantes de las siguientes carreras:

Licenciatura en Ciencias de la Educación con énfasis en Orientación Educativa y Profesional  
Licenciatura en Ciencias de la Educación con Énfasis en Educación Preescolar  
Licenciatura en Educación con Énfasis en Educación Primaria.  
Profesorado en Educación

Se han establecido relaciones interinstitucionales entre la Facultad de Ciencias de la Educación y:

Sistema Nacional de Protección Civil (SINAPROC)  
Ministerio de Educación (MEDUCA)  
Office of US Foreign Disaster Assistance for Latin America and the Caribbean (OFDA/LAC) .

Se ha establecido un programa de Prácticas Profesionales como Opción al Trabajo de Graduación entre SINAPROC y la Facultad para desarrollar el Programa de Seguridad Escolar en las Zonas Escolares de Panamá Centro y la Zona Escolar de San Miguelito, las Cumbres y Chilibre.

**Context & Constraints:**

Existe un marco jurídico para el establecimiento de un centro de información sobre amenazas Ley 7 ,Capituloll, Art 5 Numeral 1

Recopilar y mantener un sistema de información, a través de un centro de datos modernos, con la finalidad de obtener u ofrecer las informaciones necesarias para la planificación de estrategias y medidas sobre Gestión de Riesgo y Protección Civil.

Pero hace falta fortalecer el tema, se cuenta con un Nacional de Documentación e Información Para la Reducción del Riesgo (CENDIRR), que se está tratando de activar.

Es necesaria mayor promoción de material institucional para la comunidad, documentos que sean informativos sobre los riesgos y que reflejen los avances del país en el tema.

Es necesario que el Ministerio de Educación cuente con un centro de información sobre Gestión de Riesgo de apoyo a la comunidad educativa que así lo solicite, el cual debe estar ubicado en la Dirección Nacional de Educación Ambiental, ya que es el punto focal sobre el tema.

Se debe fortalecer las plataformas ya existentes y lograr concentrar la información en un solo lugar.

Poco intercambio de información y de experiencia sobre la temática en mención con los estamentos involucrados.

Aunque se han iniciado diferentes acciones para alcanzar el indicador n 1. todavía hacen falta mucha más acciones y apoyo institucional, con políticas y cronogramas de actividades bien definidos.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

En la actualidad existe en el proceso educativo de enseñanza aprendizaje de Panamá, la integración de los temas de Reducción de Riesgo en la educación formal como un eje transversal en todos los niveles educativos, para la inserción de los mismos en el currículo de la Educación Básica General y Media.

El Ministerio de Educación (MEDUCA) a través de la Ley 34, de junio de 1995, la cual reforma la Ley 44

de 1947, eleva la Oficina de Educación Ambiental a Dirección Nacional de Educación Ambiental.

Se inserta el eje transversal de Educación Ambiental paralelo al eje de Gestión del Riesgo.

Se mantiene sensibilizado, capacitado y revisado el Programa Curricular de la Escuela Normal Juan Demóstenes Arosemena de Santiago de Veraguas, formando docentes capacitados en Gestión del riesgo con seminarios.

Se realizan Seminario Obligatorio de Administración del Riesgo con 48 horas presenciales y 32 horas de prácticas en escuelas primarias, como parte de la formación de los docentes de la ENJDA.  
Se cuenta con el Plan Nacional de Desarrollo Humano para una Cultura en Gestión del Riesgo a Desastre.

Capacitación de aproximadamente 500 docentes con el Manual de Gestión del Riesgo en las regiones de Chiriquí, Bocas del Toro, Darién, Comarca Ngöbe Bugle.

Encuentro de Coordinadores Nacionales y Regionales de Educación Ambiental y Gestión de Riesgo para elaborar el Plan Operativo Anual.

Se elabora la Guía Técnica para la Planificación, Diseño, Construcción y Mantenimiento de Escuelas Seguras.

Se elaboró Plan de Seguridad Escolar de Panamá (Ministerio de Educación).  
Capacitaciones de aproximadamente 1,200 docentes de Básica General y Media a nivel nacional, en Gestión del Riesgo.

Se cuenta con el Manual para –Docentes de Educación Básica General (Preescolar, Primaria y Promedia), elaborado en conjunto por el Ministerio de Educación y El Sistema Nacional de Protección Civil, un instrumento que promueve valores, conceptos, actitudes y conocimientos para evitar los riesgos y para atenuar sus efectos en casos de presentarse un evento adverso, es un instrumento pedagógico, puesto al servicio de los docentes del país con el fin de que les permita a partir de lo establecido en los Programas de Estudio de la Educación Básica General, de las condiciones del Centro Educativo y de su contexto general, definir con claridad, pertinencia y sustento científico, las acciones a desarrollar en materia de prevención, reducción de riesgos y preparativos de respuesta ante desastres.

Se cuenta con aproximadamente 70 escuelas con su Plan de Seguridad Escolar  
Aproximadamente 100 centros educativos debidamente señalizados.  
En relación a este indicador la Facultad de Ciencias de la Educación ha realizado las siguientes actividades:

Participación como representantes de la comisión de Educación Para la Gestión del riesgo en la Elaboración del Plan para el Desarrollo Humano Sostenible en gestión del Riesgo.

Participación en la Elaboración del Manual de Gestión del Riesgo para Docentes de Educación Básica General.

Elaboración del Seminario de Gestión del Riesgo como parte del Plan de Estudio de Estudio en las transformaciones curriculares de las carreras de Licenciatura en Educación Preescolar y Primaria

### **Context & Constraints:**

El Ministerio de Educación no contempla presupuesto para desarrollar los programas de Gestión a nivel nacional, por lo general solo se cuenta con el apoyo externo de instituciones (internacional y otras organizaciones).

Poca participación de los (las) directores(as) de los centros educativos en la temáticas para que apoyen el programa.

Se observa muy poco personal capacitado involucrado y consciente para trabajar como facilitador en el desarrollo del programa.

Falta de apoyo de los medio de comunicación social en la labor educativa sobre la temática.

Baja motivación de los docentes para que realicen el proceso de enseñanza aprendizaje en el tema de riesgo.

Necesidad de fortalecimiento nacional y regional para el desarrollo del programa.

Necesidad de seguir fortaleciendo las coordinaciones interinstitucionales con las instancias relacionadas con el tema de Gestión del Riesgo.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

El Ministerio de Educación no cuenta con presupuesto asignado para el desarrollo de investigaciones de este tipo. Lo que se puede desarrollar se hace en un marco de competencias Institucionales.

La Faculta de de Ciencias de la Educación no ha realizado acciones específicas para poder alcanzarlo, y la universidad en su conjunto deberá establecer políticas bien definidas que integren a todos los estamentos, ya que de manera particular otras instancias sí realizan acciones en estas áreas.

La Secretaria Nacional de Ciencia y Tecnología promueve becas y apoyos para trabajos de investigación en temas relacionados con el riesgo, tal es el caso de la convocatoria para un el Estudio de Sistemas de Alerta temprana para Tsunami.

Existen a su vez trabajos de graduación en universidades como la USMA, la Tecnológica.

#### **Context & Constraints:**

Lograr concienciar a los decidores de los presupuesto de la importancia de contar y asignar presupuesto necesario para el desarrollo del programa. Hace falta mayor apoyo para programas de investigación e divulgar las que se han estado realizando.

Hay voluntad institucional para llevar a cabo esta misión, pero se carece de incentivos económicos para seguir adelante .

### Priority 3: Core indicator 4

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### Level of Progress achieved:

2 - Some progress, but without systematic policy and/ or institutional commitment

#### Do public education campaigns on DRR reach risk-prone communities?

Yes

#### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### Description:

No existe una estrategia como tal que podamos utilizar como marco para diseminar la información a la población. Los medios de comunicación solo emiten los boletines enviados de ETESA y las recomendaciones que hace el SINAPROC a las comunidades que pueden ser afectadas por un evento, a la vez diseminan la información de las alertas, y le dicen a la comunidad que hacer.

Más que todo dentro de las obligaciones de SINAPROC es proporcionar a la ciudadanía información. Se trabaja con comunidades y municipios vulnerables y se les organiza a través de Comités de Gestión Local de Riesgo en las cuales se les capacita sobre las amenazas se elaboran planes de emergencia y se les proporciona Equipos de comunicación con frecuencia directa a SINAPROC.

Nuestro país tiene un sistema de Gobierno Centralizado con la mayoría de los municipios Subsidiados sin recursos para atender el tema, por lo que recae en el Sistema Nacional de Protección civil la tarea de desarrollar este tema:

Municipio de Boquete.  
Municipio de Panamá.

Con apoyo de programas y agencias internacionales se ha podido llegar a los siguientes Municipios: como:

Con apoyo del proyecto BOSAI- JICA      Municipio de Barú  
Municipio de Mariano  
Municipio de Capira

Con apoyo de PREVDA      Municipio de Chagres  
Municipio de Panamá (Junta comunal de San Martín).

Programa Conjunto de Cambio Climático      Comarca Embera  
Comarca Ngobe Bugle  
Comarca Kuna de Wargandi.

Desarrollo Sostenible      Provincia de Bocas del Toro.



Existe débil participación en cuanto los a medios de comunicación para divulgar información sobre la temática en mención, debido a la falta de sensibilización de los mismo, la misma debe ser permanente.

**Context & Constraints:**

Mayor sensibilización por parte de los medios de comunicación a través de jornadas para lograr una mayor participación de los mismos.

Existe el marco legal solo hace falta recursos para diseminar la información y articular una estrategia con el fin de involucrar a actores claves.

Los esfuerzos se están realizando solo que el impacto se disemina por falta de una estrategia definida.

---

## Paraguay (in Spanish)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

No existe, este es uno de los desafíos que debe ser encarado por el Gobierno Nacional, en una serie de avances que viene realizando en la política de Reducción de Riesgo, que se inicia con la creación del Comité de Emergencia Nacional en el año 2000 y luego en el año 2005, con la creación de la Secretaría de Emergencia Nacional. La nueva administración del Gobierno Nacional a dado un giro y cambio de paradigma a una política de Reducción de Riesgo y un fortalecimiento a los gobiernos locales de un estado anterior de solo respuesta a los eventos una vez ocurridos.

**Context & Constraints:**

Si bien, existe información historica de desastres, en la Secretaría de Emergencia Nacional, la misma no es accesible a todo los niveles, la falta de recursos financieros es una de las determinantes de esta situación. Existen trabajos sobre zonas vulnerables o en situación de riesgo, llevados a cabo por la Secretaría de Emergencia Nacional en el apoyo de la Entidad Binacional Yasireta, pero los mismos son recientes y su socialización no a llegado todavía a todos los niveles nacionales.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

Si bien, el tema de la Reducción de Riesgos de Desastres no se encuentra incluida en el maya curricular de las instituciones educativas de los distintos niveles, existen avances significativos para la inclusión del tema de Reducción de Riesgos de Desastres en la curricula de la educación formal a nivel nacional, ya que la institución rectora (Secretaría de Emergencia Nacional) a firmado convenios con el Ministerio de Educación y Cultura (institucion rectora de la educación nacional) y la Universidad Nacional de Asunción para que en trabajo conjunto de las anteriores instituciones se lleve a la confección y ejecución de planes educativos a nivel nacional sobre atención de la Gestión de Riesgo en las comunidades Educativas.

**Context & Constraints:**

se han firmado los siguientes convenios y se implementado en parte una política nacional de gestión de riesgo.

Convenios:

- 1) Convenio de cooperación técnica y financiera entre el Ministerio de Educación y Cultura, la Secretaría de Emergencia Nacional y la Oficina de Asistencia a Desastres en el Exterior de la Agencia del Gobierno de los Estados Unidos de America para el Desarrollo Internacional - año 2006.
- 2) Convenio entre el Comité de Emergencia Nacional, la Dirección de Beneficencia y Ayuda Social, la Junta Nacional de Bomberos Voluntarios del Paraguay, Fuerzas Armadas de la Nación, Gobernación de Boquerón, Agrupación de Bomberos de la Policia Nacional, Municipalidad de Asunción, el Fondo de las Naciones Unidas para la Infancia y la Universidad Privada Columbia del Paraguay, la Federación Paraguaya de Escultismo, Sobre la Implementación de una Red de Capasitación en emergencias y Desastres en el Paraguay.

Así mismo la institución rectora de la educación en Paraguay, el Ministerio de Educación y Cultura a Expedido la Resolución Nº 18.757, Por la cual se conforma el Consejo de Emergencia del Ministerio de Educación y Cultura, se establecen sus funciones, atribuciones y se designa coordinador.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

En base a lo expreso por la LEY N° 2615/2005

"Que crea la Secretaría de Emergencia Nacinal (SEN)" se crea un recurso del Tesoro Nacional determinado en el Presupuesto General de la Nación y un Fondo Naciona de Emergencia para la respuesta, mitigación, prevención, ect. de situaciones adversas de todo tipo que afectena la población nacional y a sus bienes.

En muestras de una politica de prevención y reducción de riesgos,la Secretaría de Emergencia Nacional ha puesto en fucionamiento el primer Complejo sustentable de investigación en la obtención de Agua Segura, en la Región que se caracteriza por ser declarada constantemente en Situación de Emergencia por Sequias.

**Context & Constraints:**

Si bien se cuenta con el marco legal para la atención de Emergencias y Reducción de Riesgo, los recursos destinados para tales menesteres son insuficientes y es necesaria una colaboración mayor colaboración de los actores del concierto internacional, no solo en lo tocante a la contribución economica, sino ademas a la contibución en la creación de políticas que se ajusten a las exigencias actuales y la realidad de nuestro país.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Con el cambio de autoridades nacionales, en especial del Poder Ejecutivo, el Paraguay intentar dar un giro historico en la atención de sucesos adversos, de un estado en el cual, solo era importante la respuesta, una vez ocurrido un evento que afectaba a su población, a un estado en el cual se prioriza la Reducción

de Riesgo como eje fundamental en para la reducción de perdidas tanto económicas como de vidas humanas. existen muchas limitaciones, pero es interes del Gobierno Nacional la instalación de una cultura de recilencia de las comunides que integran el territorio nacional, lo que se demuestra con los varios avances alcanzados en tan poco tiempo.

### **Context & Constraints:**

Con la implementación de los Centros de Protección Civil en las comunidades del país, se intenta dar una nueva optica de autogestión de las comunidades pero con un acompañamiento constate del la administración central en la Reducción de Riesgo y en la atención de sucesos adversos, las limitaciones que se encuetran en el camino del ideal de la Reducción de Riesgo son varios y de todo tipo, desde la cultura de la población nacional que se centro siempre en la respuesta mas que en la prevención hasta limitaciones económicas que caracteriza a los paises de la región, pasando por la cituación política pasada donde primaron intereses personales antes que los de las mayorias.

---

## **Peru** (in Spanish)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

### **Is there a national disaster information system publicly available?**

Yes

### **Means of Verification:**

- \* Yes: Web page of national disaster information system
- \* Yes: Established mechanisms for accessing DRR information

### **Description:**

El monitoreo, registro y diseminación de información sobre daños ocasionados, se realiza a través de una aplicación informática denominada SINPAD en la cual los Gobiernos Regionales y Locales registran la información de ocurrencias de sus áreas jurisdiccionales, apoyándose en la información ingresada en el formato de Evaluación de Daños y Análisis de Necesidades – EDAN ( aprobado con Resolución Jefatural N° 263-2007), permitiendo generar una base de datos a nivel nacional para las consultas del público e instancias decisorias.

Existen otros recursos virtuales tales como:

- . Red BiVa PAD, el SINPAD: <http://sinpad.indeci.gob.pe/PortalSINPAD/>
- . Base de datos de desastres históricos (DesInventar) .
- . Biblioteca Virtual del Instituto Nacional de Defensa Civil:  
<http://bvpad.indeci.gob.pe/html/es/home.html>.
- . GEOIDEP
- . Base de datos de centros poblados del CCIDEP

INGEMMET IGP reporte:

. [http://geo.igp.gob.pe/boletines/boletines\\_sismicos/web\\_boletines.htm](http://geo.igp.gob.pe/boletines/boletines_sismicos/web_boletines.htm)

. REDHUM: [www.Redesdegestionderiesgos.com](http://www.Redesdegestionderiesgos.com)

Actualmente el IMARPE cuenta a través de su página de Internet, con un sistema de difusión de posibles desastres que en el campo oceanográfico se pueda presentar en la costa peruana para uso de los trabajadores del IMARPE. Vía correo electrónico a todos los trabajadores del IMARPE se realiza la difusión de posibles amenazas o peligros océanos atmosféricos que se presentes a nivel nacional. La PCM a través de la Oficina Nacional de Gobierno Electrónico viene desarrollando un repositorio de información territorial denominado GEOIDEP, en el marco de la R.M.No. 325-2007-PCM, la cual tiene como objetivo promover y coordinar el desarrollo, intercambio y el uso de datos y servicios de información espacial entre todos los niveles de gobierno, sector privado, organizaciones sin fines de lucro, instituciones académicas y de investigación.

### **Context & Constraints:**

El reto de mayor relevancia, es obtener información en tiempo real a fin de que se dispongan acciones para la adecuada atención oportuna; en ese sentido las limitaciones actuales identificadas se evidenciarán en la disponibilidad de recursos técnicos y permanencia de recursos humano capacitado, así como la correcta evaluación de daños.

En este aspecto es importante establecer lineamientos generales para la implementación tecnológica y permanencia del recurso humano capacitado; para que facilite el acopio y diseminación de información sobre daños a consecuencia de emergencias o desastres.

Falta mejorar la difusión de esta página entre la población, los medios de difusión y los tomadores de decisiones, para su uso inmediato en la gestión del riesgo de desastres.

La generación de una ley que obligue a los medios de difusión a comunicar las emergencias provenientes del SINPAD podría apoyar en la difusión de esta información.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Is DRR included in the national educational curriculum?**

Yes

### **Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* No: University curriculum

\* Yes: Professional DRR education programmes

### **Description:**

El Diseño Curricular Nacional de Educación Básica Regular considera el aspecto de Gestión del Riesgo, en el cual se incluye la reducción de riesgo al consumo de drogas, violencia familiar, seguridad vial entre otros, no desarrollando puntualmente Reducción de Riesgo de Desastres.

El Instituto Nacional de Defensa Civil capacita a los docentes de Educación Primaria y Secundaria en el

Programa Aprendiendo a Prevenir, para que los contenidos de aprendizaje de reducción del riesgo de desastres se desarrollen en sus programaciones de aula. A la fecha existen 10,000 maestros que conforman la Red Nacional de Docentes en Aprendiendo a Prevenir.

En el ámbito de la Educación Superior, se desarrolla el Programa de Educación Superior en Prevención y Atención de Desastres para llevar a cabo cursos de post grado y post título en Gestión del Riesgo de Desastres, existen 1800 graduados. Ejemplo de ello es: maestría en gerencia social con mención y prevención de desastres en la Pontificia Universidad Católica del Perú y en otras universidades del país y Gestión y ordenamiento ambiental del territorio, en la UNMSM.

Las organizaciones de la sociedad civil vienen desarrollando esfuerzos para colaborar con el Ministerio de Educación- MINEDU y otras instituciones del Estado en la consolidación de una cultura de gestión del riesgo de desastres en las escuelas.

### **Context & Constraints:**

Se requiere que el Ministerio de Educación considere en su política curricular el tema específico de Gestión del Riesgo de Desastres, de manera independiente de otras situaciones de riesgo a las que se ven expuestos los alumnos, lo que se facilitaría con la aplicación de la Ley del SINAGERD. Además, el currículo escolar contempla básicamente el riesgo de terremotos, pero no contempla simulacros en casos de otros eventos hidro meteorológicos.

Se requiere fortalecer las capacidades de las UGEL y gobiernos regionales y locales para que estas asuman un mayor protagonismo en el marco de la descentralización educativa.

El tema que se menciona en los currículos escolares es: ciencia y ambiente en el cual no necesariamente se menciona sobre la Gestión del Riesgo, pero se introduce al estudiante sobre temas naturales y ambientales. Sin embargo en algunos casos si consideran o dan mayor importancia al tema de riesgos, sobre todo orientados a realizar los simulacros ante sismos decretados por el estado.

El INGEMMET, viene desarrollando el tema de "Geología para Escolares", insertado en su página web, material didáctico que se puede considerar como un instrumento importante en el conocimiento de información geocientífica que puede ser aplicada en los planes de prevención ante desastres.

Falta transversalizar la RRD en las currícula universitarias

Existen programas a nivel de postgrado en algunas universidades del país.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

El IMARPE desarrolla programas de monitoreo y de investigación para posibles desastres como el Fenómeno El Niño y La Niña y sus resultados son publicados a nivel local y regional.

Productos o estudios de investigación: A nivel de Post-grado en las universidades si se contemplan; también en organismos científicos: CONCYTEC, IGP, IMARPE, SENAMHI, etc. Programas y proyectos de investigación con financiamiento de Agencias Cooperantes y ONG si se realizan programas y proyectos investigativos.

INGEMMET, por intermedio de Dirección de Geología Ambiental y Riesgo, considera los siguientes proyectos de investigación:

Glaciares en la Cordillera Blanca

Geotectónica y Peligro sísmico en los departamentos de Cusco, y Moquegua

Monitoreo de volcanes activos del sur del Perú

Estudios de Riesgos geológicos en la Región Loreto

Evaluación de peligros y geología del volcán Sabancaya

Peligros geológicos y comunicación con comunidades en el Sur Peruano.

#### **Context & Constraints:**

Se requiere una base de datos sobre las investigaciones realizadas y las que están en progreso.

Falta una mayor voluntad política por parte del Estado para incentivar la investigación sobre el tema.

Hace falta desarrollar mecanismos de investigación sobre la vulnerabilidad que permita implementar su proceso de reducción

#### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

#### **Description:**

Adhesión de Perú a las campañas mundiales de la EIRD (la prevención inicia en la escuela, hospitales seguros - con apoyo de OPS, entre otros) y los avances logrados con el apoyo del Proyecto PREDECAN sobre micro-programas radiales, la difusión de mensajes clave a través de la "Iniciativa de la Comunicación", la publicación y difusión de infografías.

La Ley N° 29664 ha creado la Radio Nacional de Defensa Civil y Medio Ambiente.

El Plan Nacional de Prevención sísmica que se ha impulsado en este año y que compromete a todos los actores, instituciones públicas y privadas y la comunidad en su conjunto.

El INDECI implementa regularmente el Plan de Educación Comunitaria en Gestión de Riesgos de Desastres, capacitando a Jefes de oficina y capacitadores regionales, para promover cursos a nivel de las comunidades vulnerables en sus respectivas regiones.

Existen trabajos puntuales, a nivel local se efectúan trabajos de prevención desarrollada sobre todo por instituciones privadas (PREDES, Huamán Poma de Ayala, etc.) y algunas instituciones públicas como el



INGEMMET con el proyecto de Comunicación con Comunidades y sus charlas programadas en las salidas de campo en todos sus proyectos. Realizando trabajos directos con la población involucrada a nivel de talleres, concursos de dibujo, capacitación de autoridades, como los que se trabajan actualmente en la ciudad de Arequipa con relación al peligro volcánico.

**Context & Constraints:**

La falta de institucionalización de la RRD en las instituciones del estado

Se evidencia un acceso desigual entre regiones al conocimiento adecuado sobre la RRD, por falta de compromiso político de autoridades locales y/o regionales, quienes en ciertos casos no toman la gestión del riesgo como una prioridad en sus presupuestos.

Falta una mayor articulación entre los distintos niveles de intervención (nacional, regional, local) de cara a desarrollar una gestión del riesgo adecuada.

Falta un mayor trabajo de coordinación y concertación para no duplicar esfuerzos por ejemplo en la producción de materiales de difusión o en el desarrollo de capacitaciones

---

## Saint Kitts and Nevis (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

There are established mechanisms for accessing DRR information. There is a functional Public Relations Office at the Disaster Management Office on each of the sister islands (on St Kitts and on Nevis) that produces a weekly radio programme. These radio programmes are supplemented by the availability of multi-hazard literature, the Nevis Disaster Management website ([www.nevisdm.com](http://www.nevisdm.com)), and Public Service Announcements that are aired for the Federation as a whole.

The disaster management agency on St Kitts is currently developing a Documentation Centre and the St Kitts website ([www.nema.kn](http://www.nema.kn)) is currently under construction.

**Context & Constraints:**

The further development of the disaster information system to produce television /electronic programmes and localized disaster management literature e.g fliers, brochures is restricted by limited finances



### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

#### **Description:**

At the primary level DRR is included in the Social Studies Curriculum, and is not as a stand alone subject. At the Secondary level, selected teachers have been sensitized to the subject matter via workshops. Aspects of DRR are taught and drills practised at the tertiary level. The Fire and Rescue Services Unit has implemented an annual Fire Safety Camp (non-residential) for students of primary school age during the summer vacation. Over 150 students attend from schools island-wide at different venues across St. Kitts and Nevis. The most recent event was held June/July, 2010. An initiative is being pursued to establish by the end of 2010 a multi-hazard Schools Safety Programme

#### **Context & Constraints:**

The current structure of the primary and secondary schools' Curriculum does not permit the inclusion of DRR and other non traditional subjects/themes as stand alone subjects. Regular drills and related exercises are not conducted. The cost to procure safety equipment for all schools is prohibitive

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

- \* No: Research outputs, products or studies
- \* No: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

**Description:**

There are no significant Research programmes and projects being undertaken, and hence there are no outputs, products or studies.

Limited studies on the economic costs and benefits of DRR are being carried out. Recently an Economic Impact Assessment was completed for Nevis post Hurricane Earl (August 29, 2010)

**Context & Constraints:**

A fledgling core of resource personnel is being developed as economic impact assessors.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Public education campaigns on DRR reach risk-prone communities. There are ongoing campaigns on an annual basis using flyers, media PSA, brochures, newspaper information items, website information. There is a full time Community outreach Officer for island wide programming on both islands. Such resources help with the availability of information on DRR practices at the community level. Although much has been accomplished, particularly via the establishment of the radio programmes during this reporting period, the programme needs to be expanded to address a growing non English speaking community/population.

Training is also carried out on both islands by the respective Disaster Management Agencies.

**Context & Constraints:**

A more extensive public education programme is constrained by limited funding and lack of appropriate equipment to produce various multi media programmes

---

**Saint Lucia** (in English)**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* Yes: Web page of national disaster information system

> Saint Lucia National Emergency Management Plan (2009) <http://www.stlucia.gov.lc/nemp>

\* No: Established mechanisms for accessing DRR information

**Description:**

Information is generally available and accessible as all forms of media is used to reach the target audiences. This includes TV, posters, newspapers, radio, internet, text messaging, libraries, town criers, loud hailers, fliers, etc. However being sensitized informed does not guarantee any change in attitudes and behavior.

**Context & Constraints:**

The actual challenge is how to derive behavioral change from the myriad attempts at public awareness and education. Continued use needs to be made of the formal education system and media practitioners need to see behavioral change as opposed to information sharing as the ultimate goal. Technological advances including web based information systems need to be utilised to ensure that not only is the information properly archived but the intended public need to be made aware of its existence and motivated to use it.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

A Safer Buildings Program is being taught at a tertiary level institution. With the support of USAID-Office of

Foreign Disaster Assistance (OFDA) a 'Safer Schools Program' is being introduced into the Saint Lucia Education System and a Safer Schools Policy is being developed.

**Context & Constraints:**

There is a need to incorporate DRR concepts and ideas into the primary, secondary and tertiary level schools beyond what has been achieved so far. These concepts may be made part of the Social Studies syllabus and DRR examples may be used to build content for subjects such as English Language and Mathematics.

Further, undergraduate and graduate scholars need to be encouraged to undertake research in DRR topics relevant to Saint Lucia.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

> Saint Lucia Wind Guidelines (2008) [http://www.preventionweb.net/files/13471\\_sluwind.guidelines.pdf](http://www.preventionweb.net/files/13471_sluwind.guidelines.pdf)  
[PDF ]

> Climate Change Technology Needs Assessment for Saint Lucia (2004) <http://unfccc.int/ttclear/pdf/TNA/Saint%20Lucia/Climate%20Change%20Technology%20Needs%20Assessment%20for%20Saint%20Lucia.pdf>

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

Studies have been undertaken (including modeling, mapping for sea level rise using various climate change scenarios) to improve the knowledge base with respect to disaster risk.

Coastal habitat mapping has also been completed and this can enhance knowledge of vulnerable areas.

Projects are on-going (Investment and Financial Flows for Climate Change) and on financial and economic costs of adapting to the impacts of climate change

**Context & Constraints:**

A number of initiatives are donor-driven and although of national value may not be synchronised with national priorities and available capacity.

There is need for some mechanism for transitioning from donor-driven projects to programs and sustainable activities in the area of DRR.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

### Description:

NEMO continues to provide Public Service Announcements (PSA's), both audio and video for all major hazards to all major media houses for public sensitization. Ad-hoc expert presentations are done for specific hazards via radio and TV; and NEMO staff and volunteers also engage in presentations to communities, public and private sector agencies and town hall meetings sensitizing citizens to DRR.

### Context & Constraints:

There is a need to engage in more educational activities where a change in people's behavior is the goal; and further these educational activities need to be organized and conducted in a structured and systematic way, with clear objectives, targets and goals. Thus, the development and execution of a DRR Public Awareness and Education program need to be pursued, with greater use being made of experts in the relevant fields

---

## Turks and Caicos Islands (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### Is there a national disaster information system publicly available?

No

### Means of Verification:

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

### Description:

Information is available on a request basis, in addition to a website which is under construction that will house DRR information. On occasion the website is use by some persons to gather information though it has not been officially launched. The logging of available information in DRR or Disaster Management within the DDME is a process set to begin in January, 2011.

**Context & Constraints:**

Limited personnel within the DDME to log available information from sketch can prove a very tedious task. The exercise will be carried out over a number of months and assistance will be sort by persons within the Computer unit to help with the development and maintenance of a information database

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* No: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

The full understanding of DRR is lacking in general within the education sector which presents an issue for stakeholder buy in. Attempts have been made for its integration into the curriculum but external factors sidetracked those efforts

**Context & Constraints:**

Given the full Curriculum administered within the TCI, the case has to be made to those within the Education sector that DRR integration is not an additional task to teach but can be smoothly incorporated within the existing curriculum.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national scientific applied-research agenda/budget?**

No

- \* No: Research outputs, products or studies
- \* No: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

**Description:**

There is currently no budget allocation for DRR research related activities within the TCI

**Context & Constraints:**

At a minimal a cost benefit analysis should be conducted to highlight DRR activities

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

The public education campaigns conducted are on a national level and are not targeted at specific communities, though community specific information can be found within them. In the TCI there is not what one might traditional call 'local government', persons that can be considered its equivalent are trained within national level authorities and plans are being carry out to conduct island specific training.

**Context & Constraints:**

Funding is a challenge on the Public Education and Training Fronts. Donor funding which is made available to the TCI has been used for training workshops. Additionally, the case has to be continued for the increased budget allocation for Public Education and Training, because offer donor funding are project specific and not necessarily link to the specific needs of the Country at the time it in being conducted.

**United States of America** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

The United States has made significant investments in improving public awareness of relevant hazards before disaster strikes as well as providing information on disasters where and when it is needed. Efforts exist at all levels of government. Launched in February 2003, Ready is a national public service advertising campaign designed to educate and empower Americans to prepare for and respond to emergencies including natural disasters. The goal of the campaign is to get the public involved and ultimately to increase the level of basic preparedness across the nation. For disaster victims, access to disaster assistance is available through the website [www.disasterassistance.gov](http://www.disasterassistance.gov).

Despite achievements made to date, however, findings from the report *Personal Preparedness In America: Findings From the 2009 Citizen Corps National Survey* (Revised December 2009), highlight the continued need for strengthened public knowledge of household emergency preparedness, community emergency procedures, and available resources for improving emergency awareness and remaining informed. Two of the Grand Challenges for Disaster Reduction identified by the NSTC Subcommittee on Disaster Reduction (SDR) specifically address the need for making relevant information available and accessible at all levels, one being to provide hazard and disaster information where and when it is needed, and the other being to promote risk-wise behavior.

To improve education and the flow of information at all levels of society, FEMA has initiated a "Whole Community" planning initiative to identify non-traditional resources and partnerships critical to stabilizing and recovering from catastrophic disasters. The approach to planning under the Whole Community initiative breaks the paradigm of 'nested plans' created for each level of government and enables planning for truly coordinated assistance to disaster survivors.

**Context & Constraints:**

See above.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum



\* No: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

As previously noted, Ready is a national public service advertising campaign designed to educate and empower Americans to prepare for and respond to emergencies including natural disasters. The goal of the campaign is to get the public involved and ultimately to increase the level of basic preparedness across the nation. The Ad Council has declared Ready one of the most successful campaigns in its more than 60-year history. Ready information is available in thirteen languages, and includes Ready Business and Ready Kids Campaigns.

Recent focus on educating youth and families about emergency preparedness has also led to the expansion of FEMA’s Student Tools for Emergency Planning (STEP) Program, which educates and energizes students in school to go home and act as leaders in implementing key preparedness strategies with their families. The program is currently in a pilot phase in several 4th Grade classes in each of the six New England states.

Professional training in disaster risk reduction is available to state, local, tribal, and federal government officials, volunteer organizations, and the public and private sectors through FEMA. FEMA’s Emergency Management Institute manages the Higher Education Program which, since 1994, has promoted college-based emergency management education, and the dissemination of hazard, disaster, and emergency management-related information in colleges and universities across the U.S.

Through participation in the Coalition of Organizations for Disaster Education (CODE), multiple federal agencies work with the American Red Cross and other governmental and non-governmental organizations to increase disaster preparedness, awareness and education.

**Context & Constraints:**

Materials have been developed for use in school curricula, but the devolved nature of public education in the United States, which is implemented at the local government level, makes it difficult to measure progress on this core indicator.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

The National Science Foundation and other federal agencies support research and development in a number of physical and social science fields to improve understanding and assessment of disaster risk reduction. For example, through its Turner Fairbank Highway Research Center, the Federal Highway Administration (FHWA) continues research and development of hazard mitigation methodologies and technologies to improve the national transportation system’s resilience against flooding and hydraulic events, hurricanes and extreme wind events, and earthquakes. Methodologies and guidelines have been produced under the FHWA’s Cooperative Research Programs to assist transportation owners in assessing risk, planning for disaster response, evacuation and recovery, and designing for extreme events. A guide to the research literature on facility vulnerability, risk assessment, loss estimation, and disaster resilience has been produced by the National Institute of Standards and Technology to inform planning at the local and regional levels. A tool for multi-hazard risk assessment available to government planners, GIS specialists, emergency managers, and others in the U.S. is the Hazards US – Multi-Hazard (HAZUS-MH) software package. HAZUS-MH is a nationally applicable, standardized methodology that contains models for estimating potential losses from earthquakes, floods, and wind hazards, such as hurricanes. HAZUS-MH uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters. All FEMA public assistance and hazard mitigation grant projects must meet certain eligibility requirements, such as a positive benefit/cost ratio, and be assessed for potential impacts the proposed project will have on the human and natural environment under the U.S. National Environmental Policy Act. Furthermore, the U.S. Environmental Protection Agency continues to research and develop science-based tools for communicating before, during, and after a crisis. Much of this research is directly applicable to strengthening community, local and state government capacity and resilience with respect to both natural and human-caused disasters.

**Context & Constraints:**

See above.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

- \* Yes: Public education campaigns.
- \* Yes: Training of local government
- \* No: Availability of information on DRR practices at the community level

**Description:**

Although much work remains in this core indicator, the US has made substantial investments in national public awareness campaigns to stimulate a culture of disaster resilience, with outreach to both urban and rural communities, primarily at the local level.

As a key part of its whole community approach, FEMA is conducting an outreach campaign with communities around the country to encourage sustained community participation and involvement in preparedness and resilience activities. This effort involves workshops and listening sessions in which discussions are focused on how communities are motivated and engaged, how they understand risk, and their experiences with resilience following a disaster. To date, FEMA has engaged a wide range of people and organizations from various geographic, ethnic and professional backgrounds through the National Youth Summit, FEMA's Disability Conference, the Center for Homeland Defense and Security, FEMA's Latino Leadership Conference, the National Emergency Management Association, and the International Association of Emergency Managers. Citizen Corps Councils also provide the public with a channel to build on community strengths to carry out local strategies involving government, community leaders, and citizens for all-hazards preparedness and resilience.

Also led by FEMA, the National Disaster Recovery Framework has been developed through an inclusive and participatory process. Over 1,000 people from civil society, non-profits, private sector, universities, advocacy groups, policy organizations, and all levels of government, shared their views on what a national disaster recovery system should include. Upon completion of the first draft, the U.S. public was officially invited to share its views on the framework. Over 6,000 comments were received and used to inform subsequent drafts.

The Great California ShakeOut has become an annual earthquake preparedness exercise with over 8 million participants in 2010. This approach is being implemented elsewhere in the US and around the world.

**Context & Constraints:**

See above.

---

## Venezuela, Bolivarian Rep of (in Spanish)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

En el marco del desarrollo del CENAPRAD, que tiene entre sus funciones informar oportuna y eficazmente a las instituciones, autoridades y a la población alrededor del tema de desastres, se han desarrollados dos herramientas para la difusión de información: DESINVENTAR, que permite mantener un registro de los eventos de origen natural y/o antrópico que ocurren en el país y BIVAPAD, que promueve el acceso equitativo, rápido y eficiente a los datos, con el fin de mejorar la reducción del riesgo de desastres.

Ha habido además un auge en el uso de los medios de comunicación alternativos, como es el caso de las redes sociales, para facilitar datos a la población sobre los eventos hidrometeorológicos y geológicos, como es el caso de FUNVISIS, INAMEH y algunas direcciones estatales y municipales de protección civil y administración de desastres.

**Context & Constraints:**

- Determinar las atribuciones de cada institución, en los procesos de comunicación.
- Optimizar el proceso de información.
- Visibilizar a los grupos vulnerables.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

El Ministerio del Poder Popular para la Educación Superior lidera la sistematización de los contenidos curriculares, referentes a gestión del riesgo, para ser incluidos en el currículo básico nacional de educación, a través de la formación de mesas de trabajo a nivel nacional, donde participan instituciones de diversos sectores, con el apoyo del Fondo de las Naciones Unidas para la Infancia (UNICEF).

En el marco de la Misión Sucre, la DNPCAD ha actualizado el diseño curricular del trayecto inicial, en el cuál se incluye la materia de “Protección Civil y Administración de Desastres”. Ésta institución, junto a sus direcciones estatales y municipales, dicta programas de capacitación comunitaria, que preparan a las personas en materia de primeros auxilios, autoprotección y plan local de emergencias, con el fin de que sus comunidades estén organizadas ante la ocurrencia de un evento adverso y respondan correctamente, incidiendo directamente en el aumento de su resiliencia.

Actualmente se desarrolla dentro de la Universidad de la Seguridad (UNES), la Escuela de Protección Civil y la Universidad Nacional de las Fuerzas Armadas (UNEFA) cuenta con la carrera de “Administración de Desastres”, espacios para impartir información relevante sobre reducción del riesgo de desastres y formar recursos humano especializado.

**Context & Constraints:**

- Involucrar la variable riesgo en el currículo básico nacional, actividad que se está encabezando el Ministerio del Poder Popular para la Educación.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

Existen instituciones de nivel universitario, como la Universidad de la Seguridad (UNES), la Universidad Experimental de la Fuerza Armada (UNEFA) y el Instituto Universitario que están desarrollando las líneas de investigación en riesgos múltiples, elementos socioeconómicos y su aplicación en el entorno ambiental y social.

#### **Context & Constraints:**

- Fortalecer las capacidades técnicas y científicas nacionales orientadas desarrollar métodos y herramientas de investigación para las evaluaciones de amenazas múltiples y los análisis de costo - beneficio.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

La ONPCAD, a través de su plan de capacitación comunitaria, ha sensibilizado a la población en materia de riesgos y desastres y los ha preparado para una correcta respuesta ante un evento adverso, a través de los programas de autoprotección, primeros auxilios y plan local de emergencias. Ésta práctica alcanza

actualmente el 60% de los municipios del país. Para el período 2010-2011, en alianza con UNICEF, se incorporaron contenidos referidos al lavado de manos, información valiosa dadas las afectaciones por lluvias que se produjeron en la zona norte-costera del país, durante noviembre y diciembre de 2010.

**Context & Constraints:**

- Construcción de una política nacional sobre el tema, cuyas directrices sean cónsonas con el Plan Nacional de Prevención y Atención de Desastres.

---

# Asia

---

## Bangladesh (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### Description:

A network of experts named Bangladesh Disaster Management Education Research and Training (BDMERT) has been established and made functional. The country has a culture of sharing of disaster related knowledge and lessons through various means, including print and electronic media and public discussion. There have been functional networks and forums exist on DRR at various levels that include civil society, NGOs, CBOs and other development partners. Increased use of information technology further strengthened the process. For example, key government ministries, research institutions and civil society organizations have established websites. DMIC of DMB providing information services, which has established network with 64 districts and 235 upazila headquarters (HQs) and planned to expand to remaining 248 upazila HQs by the year 2012. The early warning information, particularly flood and cyclone warning information is available through email and websites, reaching across agencies and stakeholders. DMB, BMD, CPP and FFWC have been contributing significantly in dissemination of early warning and disaster messages. Bangladesh Telephone Regulatory Council (BTRC) through its mobile network, Bangladesh Betar (Radio Bangladesh) has also been taking part disaster information sharing. In early warning dissemination Bangladesh television also provide information. Print and electronic medias are also taking part in disaster knowledge sharing. And prepare community preparedness through information in the community and country and abroad throughout.

#### Context & Constraints:

Though DMIC is established some years back, it was tested and found effective in cyclone and flood in 2007. Using internet has been very useful in enhancing access to information. Accessibility and availability still constrained for the professionals and agencies outside Dhaka by physical location and infrastructural facilities such as access to internet. There is also lack of effective coordination in created reliable information at various levels. The major area of challenge remains with availability of earthquake related information. There is prerequisite to develop regional cooperation in terms of information dissemination regarding the weather forecast within SAARC countries and other forum. At the same time, local level awareness and warning mechanism need to be enhanced at an optimum level.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Disaster and climate risk information are included in text books from elementary to secondary level (from Class III-XII) besides supplementary learning materials. Degree programme at tertiary level education has been introduced in a number of public and private Universities i.e Patuakhali Science and Technology University, University of Dhaka, BUET, Chittagong University of Engineering and Technology, Shahjalal University of Science and Technology, BRAC University and planned to introduce in Begum Rokeya University, Rangpur, Bangladesh University of Professionals, Dhaka. Following GoB decision in 1997, initiatives have been taken to introduce of DRR in various training institutions, universities, research institutions and public services training centres. The draft Disaster Management Act also included a plan to establish an independent institute for DM training and research. Disaster management sessions have been included in all 29 Bangladesh Civil Service Cadres (BCS) and Armed Forces Division (AFD), all their foundation training courses and professional degree programmes. Bangladesh Public Administration Training Centre (BPATC), National Academy for Educational Management (NAEM), Bangladesh Academy for Rural Development (BARD), Rural Development Academy (RDA) and BCS Administration Academy has introduced specialized course on disaster management for various civil service people, public representatives and local government bodies. Pilot initiatives were ongoing throughout the reporting period by a number of NGOs to make schooling safer. Also IEC materials developed for the planners in education to continue education during and after disaster. Ministry of Primary and Mass Education (MoPME) and Ministry of Education (MoE) of GoB decided to make a large number of school-cum-flood shelters in the flood-prone areas. MoPME and MOE included the disaster and climate change related training and developed IEC materials with support from UNICEF and other development partners. Based on climate and hazards variation school building are being redesigned and new building are being constructed using GIS mapping under the MoE.

**Context & Constraints:**

While disaster and climate related issues are introduced in the school curriculum, limitations exist in availability of material on disaster and climate risk for training of the teachers. Though initiatives have been taken by DMB and CDMP to develop resource materials and train some of teachers, but considering the sector size, the resources are inadequate. Sharing of indigenous and local survival coping mechanism need to be institutionalize in education system both formal and non-formal ways to address the disaster risks and hazards. Adolescents, early married women and people with disability who never entered in formal education system or dropped out early from schooling should be reached through different forms of



IEC system, to be given specialized education on disaster risks reduction, survival and safety measures.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

Community Risk Assessment (CRA) tools have been developed and practicing in Bangladesh before the reporting period. Risk assessment mechanism is also being practicing by different development organizations in their respective working areas based on their own research methodology. During the reporting period, similar research methodology and tools are under developed for earthquake and tsunami risk assessment. An awareness raising orientation and training programme is going on for the teachers and students in the selected schools of Dhaka, Sylhet and Chittagong city (through MoE). Sector specific risk assessment and risk reduction guidelines are being developed under CDMP Programme of DMRD. Under the MoPME, DRR issues have been incorporated in the sub cluster training modules for primary teachers. A guideline for constructing disaster resilient educational institutes is being developed during the reporting period.

#### **Context & Constraints:**

While the country has generated substantial knowledge on disaster management by promoting diversity in use of research methods and tools, there is absence of central knowledge hub to preserve the findings. DMRD has planned to establish a Library at Disaster Management and Relief Bhaban. The continuity of research initiatives is also a big challenge because most of the researches are done under various projects. There has been increasing recognition to have uniform methodology in assessing common risks. Proposed institute on disaster Management Research and Training is expected to address some of these challenges. Research methods and tools that have been developed in assessing risks need to be applied in a coordinated way and comprehensive training is needed for conducting action research on risks. A central Data Bank also needs to be developed for sharing the available information and mapping for DRR inclusive sustainable development mechanism in all sectors.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

### Description:

National Disaster Management Plan (2010-2015) included an element of public awareness on different hazards. Print and electronic media have been identified as key drivers in public awareness. DMB, GoB has established Annual Media Award provision to encourage media personnel in disaster related reporting. Considering high earthquake risk, substantial investment has been made on public awareness through developing IEC materials by GoB and NGOs. Annual calendar of DMB included disaster messages that continued throughout the reporting period. National debate on disaster issues has been organized each year in the television channels. Following cyclone in 2007 (Sidr) and 2009 (Aila) and a number of earthquakes with lower magnitude, media has been producing significant number of discussion, talk shows on earthquake, climate change risk and risk resilient infrastructure issues. Bangladesh Television has introduced a regular programme since April 2008 on Disaster Risk Reduction. Observation of NDPD and IDDR by the GoB and NGOs continued in the reporting period. Sectoral initiatives by the different GoB departments such DAE, DoE, DGHS expanded to community level.

### Context & Constraints:

Often awareness raising initiatives assume their audience as homogeneous group, thus do not lead to action by the users. Wide acknowledgement exists to place more systematic knowledge investment in developing and updating key disaster messages for various agro-ecological and settlement context. Improvement on systematic process to understand impact of and need for public awareness on various risks needs to be given more attention. Many community led initiatives introduced by the NGOs are in limited in scale. A national public awareness strategy is seen as a potential means to create synergy and accelerate dynamic public awareness activities which should consider social groups such as in terms of class, gender, age, sex, caste, religion, ethnic minority, old age population, people with disability and hard core poor so that heterogeneous groups can be able to grasp the knowledge and severity of risks.

---

## Brunei Darussalam (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### Level of Progress achieved:

2 - Some progress, but without systematic policy and/ or institutional commitment

### Is there a national disaster information system publicly available?

No

### Means of Verification:

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Relevant disaster information was shared only as needed. There is no existing data sharing mechanism.

**Context & Constraints:**

The need to establish a systematic data management is recognized, this includes historical data obtained from media or news reports. This would establish linkages with relevant stakeholders.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

DRR has yet to be incorporated in school curricula. However, outreach programme has been taken up seriously through other means such as the ASEAN Regional Drawing Competition among students is held to promote awareness on disaster resilience among students, teachers and parents.

NDMC with the collaboration of the Ministry of Education has been organizing this programme in conjunction with the ASEAN Day for Disaster Management (ADDM) and International Day for Disaster Reduction (IDDR) since 2008 .

The objective of the competition is to promote and raise awareness on the initiatives of disaster reduction, especially for students in the ASEAN region.

**Context & Constraints:**

-

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

-

**Context & Constraints:**

-

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

Community Based Disaster Risk Reduction programme was launched in March 2010 as NDMC's efforts to increase the readiness and preparedness of the community for disasters by identifying hazards and reducing risks associated with them. The objective is to create a disaster resilient community in Brunei Darussalam.

This programme is a collaboration of relevant government agencies including the Consultative Council (Majlis) of Mukims and Kampongs. Each council normally comprise of the village head, secretary, treasurer and committees on community concerns such as education; health and sanitation; and women.

**Context & Constraints:**

-

---

## Georgia (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* No: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### Description:

The Hydrometeorological Department of NEA provides hydrometeorological services, short and long-term recording, monitoring, and evaluation of meteorological processes in time and space, the recording of interactions between the atmosphere and other environmental spheres, the forecasting of meteorological processes, the operation of the necessary measuring and observation systems and the provision, storage, and documentation of meteorological data and products. The departments of Geological Hazards and Geological Environment Management geo-monitoring of NEA is carrying out in, the studies and assessment/estimation of man-made influence to the geological hazard and environment; of population and engineering objects. It issues and disseminates to the regional and national governmental bodies (Ministry of environment protection and natural resources; Emergency Management Department of the Ministry of Internal Affairs, military forces of Georgia, media and other interested end-users) the annual books on "Outcomes of Geological Disaster in Present Year and their Development Forecast for Next Year in Georgia. All these information circulate through the media and homepage [www.nea.gov.ge](http://www.nea.gov.ge).

In frame of international cooperation NEA is circulating relevant information about disasters through an international exchange of experiences through publications, conferences and workshops.

#### Context & Constraints:

To implement dangerous and disaster risks information availability mechanisms at all level is important in Georgia, as its complicated relief promote various scale natural disaster. The relevant information should include actors and institutions in disaster reduction, prevention, management and potential.

For the public awareness would be useful study programs extension of scientific experts with information and data on natural disasters, preventive measures, publications about all kinds of disasters by media and website.

Additionally, there is not established a centralized database for all disasters. To simplify communication and exchange of information between all DRR organizations the implementation of "Round Table" would be very helpful. Compose the school education programs on disaster risk management, preparedness and response planning in case of disaster will be useful to raise schoolchildren knowledge in disaster prone regions.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

#### **Description:**

Disaster Risk Reduction in Education Policies and National Curriculum: Components of disaster risk reduction are taught at all the three levels of education process (primary, basic and secondary) in a coordinated way, taking into account the age-related specific features and capabilities of a student.

Within the framework of Natural Science curriculum pupils are taught to identify safe and hazardous environments and rules of behavior in case of emergencies.

Within the framework of Social Science curriculum subject Geography assists students in acknowledging the linkage between the necessity to protect the environment and its significance for sustainable development of the society. The main emphasis is laid on the knowledge students should possess about natural and manmade hazards, their causes and effects, and developing the right attitude towards the environment. In addition, within the framework of an elective course "Geographic Research", students are able to conduct a research on disasters common to their surrounding environments.

"Civil Defense and Safety" is a newly introduced subject and is taught in the 4th, 8th, and 12th grades for one semester. For the 4th grade, the main direction is to learn how to behave in an unknown environment; in the 8th grade, to prepare for and respond to disasters, and in the 12th grade pupils learn about the evacuation rules in case of an emergency and provision of first aid.

Within the framework of "Supporting Disaster Risk Reduction amongst Vulnerable Communities and Institutions in Southern Caucasus" Project implemented jointly by the Ministry of Education and Science of Georgia (MES), the Emergency Management Department (EMD) of the Ministry of Internal Affairs and UNICEF, a specially established Technical Expert Group has initiated a review of National Curriculum with an aim to integrate disaster risk reduction into the "Head of Class Programme" for grades V - IX. The programme is currently being developed by the National Curriculum and Assessment Centre of the MES whereby total of 12 hours of DRR will be introduced per grade (V-IX) in schools countrywide from the next academic year. A special training programme and methodological guide for teachers (heads of classes) are being developed introducing interactive methodologies of teaching DRR. The programme will enable teachers to apply inter-active methodologies

in teaching disaster preparedness and risk reduction in schools. As part of this process school principals and administration will also receive training on DRR and importance of school disaster preparedness activities.

Simultaneously, the Technical Expert Group lead by the national expert on DRR in education is developing an action plan on incorporating DRR under different subject areas for the next curricula revision and other educational policies. This action plan will be finalized in February 2011 and further promoted within the MES.

The future plans are to incorporate DRR component into the educational process more intensively.

The staff scientists of NEA are associated professors in institutes of Georgia and are adopting disaster-related curricula into existing study programs, especially are reviewing international practice in disaster risk management, early warning systems and their importance.

NEA is involved in the scientific research/studies implemented in Georgia &#8211; Global Climate Change, Risk Management of Natural (geological, hydrometeorological, hydrodynamical) and Anthropogenic Hazards, Integrated Coastal zone management.

M. Nodia Institute of Geophysics together with Ministry of Environment Protection compiled the natural disaster database for 12 disasters (earthquakes, landslides, debris flows, avalanches, floods, several hydrometeorological disasters), which needs farther replenishment and GIS-based hazard maps of Georgia for 12 kinds of disasters and preliminary maps of risks for seismic hazard.

#### **Context & Constraints:**

To build a culture of safety and resilience at all levels is important to initiate relevant disaster protection/management study programs and its integration enough in the studies of spatial and land use planning, architecture, engineering, chemistry, economics and many others.

Development in reforming school curricula in accordance disaster risk management and protection is very important for disaster prone community defense.

#### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

NEA carries out the relevant warnings of hydro meteorological and geological origin hazardous events, hydrodynamic and morpho-dynamic dangerous processes of shoreline and extremely high level of environment pollution. Based on the investigation of long time observation data in NEA is adopting relevant



recommendations for palliative and preventive measures.

Based on the practical studies in NEA is prepared special maps on diverse/hazardous hydro meteorological, geological processes and erosion in territory of Georgia, which are accessible on the web-page ([www.nea.gov.ge](http://www.nea.gov.ge)): Populated area and Urban Territories of Georgia, located in the Geological Hazardous Risk Region;

10. Landslide risk zones in Georgia and damage area;
11. Mudslide risk zones in Georgia and damaged area;
12. Areas at Risk of Flooding in Georgia;
13. Drought Prone Regions in Georgia;
14. Areas with High Wind Speeds in Georgia;
15. Risk of avalanches in Georgia;
16. Areas with intensive hail in Georgia;
17. Engineering Defense Master Plan of black sea coastline (2004); and etc.

NEA is involved in the different scientific research projects aiming disaster risk assessment and mitigation of damages, financed by the National Scientific and International fund.

**Context & Constraints:**

The practical studies of disaster risk assessment are carrying out in NEA, but there is a lack processing mechanisms of historical data (geo-morphological, shoreline hydro-morpho-dynamic, hydrometeorological) and their introduction in relevant software.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Do public education campaigns on DRR reach risk-prone communities?**

No

**Means of Verification:**

- \* No: Public education campaigns.
- \* No: Training of local government
- \* No: Availability of information on DRR practices at the community level

**Description:**

Many parts of this question have been addressed in the last three Core Indicators. However the NEA has the official mandate to observe, forecast and inform the governmental bodies and public, but in Georgia does not exist the coordinated system to build awareness for disaster reduction through campaigns, educational programs, events, informational brochures and much more.

**Context & Constraints:**

The development TV studio, public and even for educational campaigns, conferences or school visits for dissemination the mandated activities of NEA would be progressive steps for creating the disaster risk reduction flexible system of Georgia and public awareness building.



---

## India (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### Description:

Significant efforts have been made to make relevant informations hazards and disasters available at all levels.

Nodal agencies have been identified to provide and maintain key hazard data and informations.

Hazard Specific Mitigation Guidelines have been formulated, circulated and made available through web site (NDMA) for easy access.

India Disaster Knowledge Network is being developed for knowledge sharing and development among various stakeholders.

State specific web portal are being developed by the State Disaster Management Authorities for information sharing and knowledge Management.

Hazard Specific Centers for Excellence are being established to provide knowledge inputs and training.

#### Context & Constraints:

Although data has been made available in the public domain its accessibility and actual usage are the two key issues which need to be addressed.

There is a need to strengthen the mechanisms in place to reach out to the grassroots level with informations on hazard, risks and measures for preparedness.

Improving the coordination among various agencies handling with disaster database will help in increasing the accessibility of key hazard and disaster database at all levels.

Efforts are being continuously made to strengthen the existing mechanisms for information sharing and exchange.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* No: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Central Board of Secondary Education (CBSE) one of the widely recognized boards of school education in India as well various State Education Boards have included Disaster Management in the curriculum of secondary education.

Supplementary text books have been prepared and for effective curriculum transaction, Central Board has taken up extensive training programmes for their teachers.

CBSE has also issued a number of Circulars to address such issues like preparation of Standard Operating procedures in case of a terrorist attacks, mockdrills, safety in science laboratories.

University Grant Commission (UGC) has also issued circular to all the universities accredited by UGC to introduce courses on Disaster Management. Already Several Universities have started professional courses on Disaster Management.

A national School Safety Programme is proposed to be implemented by Government of India.

National Institute of Disaster Management has introduced online courses on disaster management for the various practitioners and academicians.

Indira Gandhi National Open University has designed a pilot project on capacity building in disaster management for Government Officials, representatives of the PRIs and ULBs at the district level with support from National Disaster Management Authority. This project is proposed to be undertaken in 12 most disaster prone states. A training capsule for this programme has been jointly developed in consultation with the state and district representatives and will be run over a period of two days. In all 12,375 PRI/ ULB representatives and 4,125 Government functionaries will be trained under this programme.

To harness the potentials of youth organizations, i.e., National Cadet Corps (NCC), National Service Scheme (NSS) and Nehru Yuvak Kendra Sangathan (NYKS) to support the community based initiatives for DM, a comprehensive programme has been launched for awareness, sensitization and training of each of these organizations. A total of 61,000 NCC cadets at their regular training camps and National Integration

Camps have been trained. Training has also been imparted to NSS and NYKS volunteers by several state governments.

Government of India has set up a Technical Committee to develop a strategy for inclusion of disaster management in higher education.

**Context & Constraints:**

Introduction of disaster management education in school curriculum, graduate and post graduate programmes is only the first step towards knowledge building and mainstreaming disaster management into education system.

There is a need to create domain experts in the country for which appropriate opportunities for skill development is required.

More investment is required on research and knowledge management.

Targeted intervention for children with special needs as well as those covered through non formal education system

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

No standardized research methodology or tool exists in the country for multi hazard risk assessments and cost benefit analysis.

However Department of Science and Technology, Government of India has developed a model for seismic microzonation with Indian perspective and piloted it in selected cities of India. The model was designed to assess earthquake hazard risks and evolve suitable mitigation strategies.

Geological Survey of India is also conducting a study on landslide risk assessment which includes landslide hazard zonation mapping, site specific study to understand the causative factors and suggest ameliorative measures to prevent further sliding.

Few state governments have also taken up initiatives to design methodologies/tools for hazard risk and vulnerability assessment .

For assessing drought risk National Agricultural Drought Assessment and Monitoring system has been developed for in-season assessment and monitoring of drought through application of satellite imageries

and geo spatial technologies.

Large number of nongovernmental organizations have carried out community level hazard risks and vulnerability assessments in different parts of the country

**Context & Constraints:**

There is a strong need for basic and applied research to understand various hazard risks and associated vulnerabilities. This issue has been acknowledged by Government of India and efforts are being made to build human resource capacity and strengthen research institutions/organizations in the country.

A core group of experts from scientific and technical institutions has already been set up by NDMA to identify the broad research needs and establish linkages and effective collaborations between various knowledge/resource Institutes. The real challenge lies in applying the scientific knowledge and research findings into policy planning and practice.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

The level of awareness about disaster preparedness has increased considerable at all levels and continuous efforts are being made to reach out to the vulnerable communities with disaster preparedness informations through print and electronic media.

National Disaster Management Authority and the State Disaster Management Authorities organise various public awareness campaigns and mockdrills.

**Context & Constraints:**

No such contextual challenge.

---

**Indonesia** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through*

*networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Indonesia has developed disaster information system at the national level, through the DIBI system in BNPB, earthquake and tsunami information in BMKG, volcanic eruption and land mass movement information in PVMBG/ESDM, LAPAN has developed forest fire EWS that will soon be connected to the BNPB, and the Ministry of Communication and Information has developed information dissemination system through the media such as radio and TV. In cooperation with several mass media agencies, the ministry has piloted disaster risk information for several hazard prone areas.

Several local governments, together with non-government partners such as the university and local NGOs, have developed disaster information systems that are specific to their local needs, although such effort has not been widely distributed throughout the country.

**Context & Constraints:**

One of the constraints faced in the provision of disaster information that is relevant and accessible is the geographical condition of the country, particularly if we consider that Indonesia is a vast archipelagic country with thousands of islands that are scattered along the equator. Information dissemination is also hampered by internet connectivity and communication network that are still relatively limited and centered in the major islands only. The cultural obstacle of the people that is not proactive to seek disaster-related information they need also become a big challenge.

It is felt that mass media that understand the issue of disaster and disaster risk reduction needs to play a more active role. Also, the data currently available have not met the criteria for disaster risk mapping.

In future Indonesia will maximize the use of popular media as an instrument for information dissemination to the public, such as the radio, television, Hand Phone and the print media. The institutional capacity of BPBDs in the regions will also be increased to provide disaster-related information that is accessible for the public, with support from civil society organizations, religious and community leaders, and local NGOs. Disaster information will also be packaged in such a way that it will be in line with each specific community context. BNPB will serve as a “hub” for website links of organizations that have developed web-based disaster database. It is expected that the capacity of media in disaster-related issues will also be improved.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

The Ministry of National Education of Indonesia has issued a circular letter that encourages the mainstreaming of disaster risk reduction into schools through school curriculums that contain preparedness education for elementary, junior high and senior high schools for six major hazards. The education materials will include disaster risk reduction as a local content, school program, or the existing extra curricular programs. Many universities have developed centers for disaster research and disaster study as a major, and some universities; together with the BNPB, have developed DRR-based field exposure programs. The School Preparedness Programs, Village Preparedness Programs and many other disaster simulations have been implemented throughout all over Indonesia.

The Ministry of National Education will further cooperate with the BNPB to develop sustainable DRR programs and budget for this has been allocated in the national budget for DRR capacity building. Many non-government institutions have also developed various different capacity building training programs, including training for volunteers.

**Context & Constraints:**

One of the challenges faced is the need to build commitment in the regions to develop curriculum that contains disaster risk reduction aspects and skills to convey such materials. The government needs to facilitate and coordinate disaster risk reduction initiatives implemented by the different stakeholders, including by promoting community-based disaster risk reduction programs. Another challenging constraint is the overemphasis on development that is more geared towards physical development.

In future there needs to be a strong advocacy program in the regions to mobilize commitment. The recent One Million Safe Schools and Hospitals campaign could serve as a momentum to build commitment and cooperation. The stakeholders will also encourage the set-up of a team to accelerate the mainstreaming of DRR into schools.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

- \* No: Research outputs, products or studies
- \* No: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

**Description:**

Government ministries/agencies at the national level have developed research methods to conduct multi-hazard risk analysis in line with their key duties and responsibilities, for example BMKG has developed tsunami Early Warning System and analysis of climate, forest fire, extreme weather, extreme wave, earthquake and flood risks; ESDM through its Geological Agency (PVMBG) has developed volcanic eruption and land mass movement Early Warning System; PU has developed flood risk analysis and so forth. The Indonesian National Science Institute (LIPI), with support from other agencies, has developed Preparedness Analysis that has been applied in several regions. BNPB has developed multi-hazard risk analysis approach and mechanism. Although there are many institutions that have conducted multi-hazard risk analysis, the coverage of these studies needs to be expanded to cover the entire Indonesia.

**Context & Constraints:**

The constraint in the development of methods and tools for multi-risk assessment is the absent of political commitment towards the use of science and technology and the lack of inter-agency coordination. Due to this weak coordination, it is difficult to know exactly how many relevant research initiatives have been undertaken. Also, such initiatives are usually under-funded. The cost-benefit analysis of these initiatives has never been conducted as the awareness and understanding of such efforts have not been widespread.

In future Indonesia needs to increase and enhance its disaster research, including the relevant cost-benefit analysis. It is expected that in the near future a journal that contains disaster research could be published. BNPB will become a center for the collection and dissemination of disaster research and will enhance coordination with the relevant ministries/agencies at the national level for this purpose. The result of these research endeavors will be directly used for the benefit of the wider communities. It is expected that BNPB will also advocate to the legislature (DPR) to mobilize support/political commitment and funding for disaster management and disaster risk reduction research efforts.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

- \* Yes: Public education campaigns.
- \* Yes: Training of local government
- \* No: Availability of information on DRR practices at the community level



**Description:**

Indonesia has developed a strategy to stimulate and strengthen the awareness of the community of the importance of disaster resilience, for example through the integration of disaster risk reduction into school education. Several regions, particularly those that have experienced major disasters, have developed socialization strategy to raise awareness about disaster resilience in line with the specific hazards they face, both at the provincial and district/city levels.

In general it could be said that the commitment has been there, but it has not been comprehensive and does not cover all hazard prone areas. Coordination among government agencies is particularly weak and there is no systematic strategy.

**Context & Constraints:**

The constraint encountered is the absent of a grand strategy to raise public awareness that is systematic and comprehensive, such as the strategy developed by the country in controlling the number of the population through family planning (Keluarga Berencana or KB in Indonesian). Disaster management strategy at the national level has already included the disaster preparedness aspect, but in many regions the strategy is focused more on disaster response. The shift of paradigm to disaster risk reduction and preparedness has not been widespread.

It is clear that in the future Indonesia needs to formulate a grand strategy to promote public awareness to strengthen disaster resilience. The government needs to collaborate with the stakeholders, for instance with the media or neighborhood women groups at the grassroots communities to implement the strategy. Advocacy of disaster risk reduction paradigm also needs to be enhanced and increased in all hazard prone areas. Besides, the capacity of policy makers at the national and local levels needs to be enhanced to transform the response approach into preparedness paradigm and formulate the strategy to mainstream disaster risk reduction.

---

## Japan (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

White Paper on Disaster Prevention (Annual Governmental Report on Disaster Prevention) has been prepared based on the provision of the Disaster Countermeasures Basic Act and submitted to National



Diet. The Report includes information on recent disaster situation in Japan, current progress of countermeasures for disasters, and future plan for improving disaster management system which is collected from all the relevant ministries and agencies. The Report is open to the public on the Internet and also available as publication. Furthermore, as mentioned in the section of priority action 2, Disaster Information Sharing Platform, a common information sharing system with a standardized information format for various disaster information provided by various stakeholders has been developing to be posted and freely accessed by all.

Local governments, especially the prefectures, cities and towns located in disaster prone areas, provide information on disaster risks in the areas and knowledge on how to protect themselves from the risks by various medium including internet and publications as well as conducting workshops targeting residents. Information for kids is also provided by many of local governments to be learned with pleasure. In addition, museums or learning centers where residents including students and kids can interactively learn disasters and disaster risk management have been set up by some local governments.

Furthermore, the utilization of the broadcasting system is effective for conveying disaster information to the public. Accordingly, the national and local governments have made agreements with the Japan Broadcasting Corporation and private broadcasters to cover relevant information on disaster risk by replacing the regular program or running on a telop at the time of looming or occurrence of disaster. Recently, in the light of the situation that the disasters caused by wind gust including tornado has frequently occurred, a review committee was established among relevant organizations. The committee published the result of the review of countermeasures in June 2007, and developed the brochure to introduce the characteristics of wind gust disasters and how to protect oneself in case of encountering tornado. Japan Meteorological Agency has started to provide tornado warning information since March 2008, and has started hazardous wind potential nowcast to provide more detailed information since May 2010.

**Context & Constraints:**

N.A.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

With a view to improving disaster risk reduction education at school, the Ministry of Education, Culture,

Sports, Science and Technology is implementing policies such as providing teachers with reference material to be used in safety guidance and planning evacuation drills, developing and distributing disaster risk reduction training materials focusing on how to prepare for and behave in the event of an earthquake or other disaster, and holding disaster risk reduction education training sessions.

Cabinet Office and Ministry of Land, Infrastructure and Transport and Tourism also has been making efforts to enhance disaster reduction education such as operating the websites dedicated to disaster reduction education, distributing educational materials, and conducting lectures on demand which the staff of the ministries directly visit and have talks with residents and students. Fire and Disaster Management Agency has been introducing the “disaster prevention & crisis management e-college” designed to provide people with opportunities to learn about disaster prevention and crisis management. It offers courses for general public, local government officials, fire brigade members, volunteer fire fighters, and kids. Furthermore, systematic training on disaster risk management for officials responsible for disaster management in local governments has been regularly provided by the Disaster Reduction and Human Renovation Institution.

To share and promote good practices and useful tools for disaster reduction education, a collaborative effort for providing subsidy to the selected educational plans which are designed and proposed as new initiatives by practitioners for enhancing disaster reduction education has been supported by various relevant organizations including Cabinet Office and Fire and Disaster Management Agency. The information of the activities conducted under the plans is also available on the internet for the reference to other practitioners.

In addition, the Ministry of Education, Culture, Sports, Science and Technology has recently made study on measures to support the efforts for disaster reduction education with the effective use of the result of the study of science and technology for disaster reduction. The Ministry has initiated a new program for supporting and promoting disaster reduction education since fiscal year 2008, and given assistance to the undertaking for enhancing disaster reduction education in the model areas.

#### **Context & Constraints:**

It is required to develop more systematized programs that fit to ages and areas and improve current official curriculum guidelines.

#### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

#### **Description:**

Scientific Technology Research in Disaster Reduction has been steadily addressed based on the Basic Plan for Research and Development in Disaster Reduction (revised in December 2003). On 6 March 2009, the decade policy for earthquake research “Towards Promotion of Innovative Research Study - the Comprehensive and Basic Policy on Promotion of Observation, Monitoring, Survey and Research on

Earthquake“ was compiled by the Headquarters of Promotion of Earthquake Research. The Fire and Disaster Management Agency has drawn up a procedure enabling local public bodies to make an objective assessment of their own disaster risk reduction and crisis-management systems. National Research Institute for Earth Science and Disaster Prevention has studied the methods for multi-risk assessments in conjunction with the development of disaster information sharing system among various stakeholders in collaboration with local communities.

**Context & Constraints:**

In the meanwhile, efforts for development of research methods and tools for multi-risk assessments which reflect social and environmental change and cost benefit analysis are currently on going by several actors including governments and academia.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

The national government has designated September 1st of each year as Disaster Reduction Day, and the period from August 30th to September 5th as Disaster Reduction Week. A variety of events such as the Disaster Reduction Fair, various seminars, disaster reduction drills and exercises, and disaster reduction poster contests are held throughout the country to disseminate disaster knowledge. These events are held by the central government, local government bodies, and other organizations (jointly, in some cases). In addition to publicity on TV, radio, in newspapers and leaflets, special features are presented by various press organizations. Schools participate by creating slogans and participating in disaster management poster contests and voluntary activities, among other things.

Furthermore, as mentioned in the section of priority for action 1, the Central Disaster Management Council published the “Basic Framework for Promoting a Nationwide Movement for Disaster Reduction - Actions with Added Value to Security and Safety.” to promote a nationwide movement where individuals, families, communities, corporations and other various groups and entities participate in continuous activities and investments for mitigating disaster damage in 2006.

As mentioned in the above section, the Cabinet Office and the relevant organizations have regularly organized the events to encourage the community participation, such as Disaster Reduction and Volunteer Meeting, Review Meeting for Volunteer Activities for Disaster Reduction, Disaster Reduction Fair, and “Community Development Forum. The Cabinet Office is improving the framework and contents, following the future directions of the nationwide movement summarized by a consultative meeting set up in 2009.

**Context & Constraints:**

N.A.

---

## **Lao People's Democratic Republic** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

No

#### **Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### **Description:**

ADPC have trained the NDMO who in turn will train PDMC staff for gathering and inputting of information to the data base thus allowing potentially for a comprehensive nation wide DRR/DRM information data base and will provide particularly useful for NDMO historical collections on information, such as flood data dating from 1966 held although the Lao government will need to dedicate resources to this project to ensure data is gathered and input in a timely manner to produce the maximum benefit. National and provincial training on incident reporting is being undertaken throughout 2011. The outputs of the training would be a guideline on incident reporting. The information system is also intended for public access (view only) access by June 2011 when the project ends.

Other stakeholders (International organisations, INGOs) within the country utilise organisational centric Information Management Systems on DRR/DRM and share information with other stakeholders in the country through the IASC and INGO Disaster Management Working Group while provision of DRR information to the public is undertaken via individual organisational websites.

A public access web based Disaster Risk Reduction (DRR) Portal for the Asia Pacific also exists (<http://www.drrprojects.net/drrp/drrpp/home> ) which aims to share information on DRR on a regional level, collectively identify gaps, improve planning and programming on DRR through improving cooperation on the implementation of DRR. Presently this web site is represented locally through the United Nations, IFRC, MRC, IUCN and ADPC regional offices and has the potential for utilization by all DRR organisational practitioners on a regional level to reflect ongoing initiatives and outcomes in Lao PDR thus allowing for ease of information sharing.

#### **Context & Constraints:**

##### **Constraints:**

Though the Disaster Information Management System project roll out is almost complete with training having been undertaken at NDMO level for ongoing training to PDMC/DDMC NDMO, the resources and funding required for technical and manpower to ensure the currency and continuation of the system are paramount to its success for use in DRR planning and preparedness.

The system is currently utilised for NDMO/government internal purposes solely.

## The Way Forward

With the provision of adequate resources the NDMO has the potential to access information nation wide through PDMC and DDMC collection and reporting efforts. NDMO could further collect and utilise information gathered from all DRR stakeholders in Laos to further their efforts in DRR planning and response utilising the DisInventar system as many INGOs currently utilise their own individual organisational collection methods within the provinces to enhance organisational DRR efforts. Furthermore, the Disaster Risk Reduction (DRR) Portal for the Asia Pacific could be utilised by all DRR organisational practitioners through their regional offices to ensure currency of information availability to all involved in the DRR process in Lao PDR. These initiatives could be introduced at the IASC and INGO Disaster Management Working Group and if adequate resources are allocated to ensure a collective input from the communities through to National level, adequate information collection, management and dissemination to all stakeholders and the public could be achieved.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

- \* Yes: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

#### **Description:**

As part of the Regional Consultative Committee on Mainstreaming Disaster Risk Reduction (RCC MDRD) program, Lao PDR expressed their interest to take up Priority Implementation Partnerships (PIP) to mainstream DRR in the education sector (MDRD Education) by integrating DRR modules into the education curriculum. The MDRD Education project consists of four main activities:

- 1) Initiating mainstreaming of DRR into secondary school curriculum
- 2) Study on impacts of disasters on education sector
- 3) Advocacy workshop on mainstreaming DRR into education sector
- 4) Stakeholder consultation as follow up to the advocacy workshop.

Initially DRR mainstreaming into school curricula has been done in 8 provinces namely: Vientiane Capital, Khammouan, Borikhamxay, Saravan, Attapue, Sekong and Xayaboury , to provide valuable national mainstreaming examples to build support for further mainstreaming of disaster risk reduction into development policy and planning. Government has planned to extend the mainstreaming of DRR in school curricula in rest of the province before the end of 2010. Teacher training and Training of Trainers (TOT) have been provided in 3 target provinces, such as Vientiane Capital, Khammouan and Borikhamxay, including the teaching of the module in selected schools and evaluations were made. In Attapue, Saravan and Sekong, TOT has been carried out but no evaluation has been made yet. Furthermore, teachers in

Borikhamxay, Xayaboury and Luang Prabang have been trained on basic knowledge related to disaster response.

ADPC and Save the Children Australia (SCA) entered into a consortium for the Laos Australia NGO Cooperation Agreement (LANGOCA) in the theme area, "Reduce the Impact of Natural Disasters". ADPC acted as the technical resource to support SCA in the implementation of DRR activities in their delivery of "Disaster Risk Education for Children" (DREC) in Sayaboury District from July 2007 until Dec 2009. The DREC was implemented to address the need for improving community awareness on disaster management and provide the mechanism for targeting some of the most vulnerable groups in Sayaboury District. Awareness raising activities on disasters and risks and child-led mitigation activities were conducted with children in schools such as a forming of Disaster Risk Reduction (DRR) child clubs and conducting a range of community-level DRR campaigns and advocacy activities led by children to reduce the children's and their families' vulnerability to disaster impacts and hazards. The DREC project was implemented in conjunction with national, provincial and district DoE staff, to ensure that all of IEC materials on DRR and DRR modules are incorporated into the formal education curriculums and replicate DRR education into other schools once the project was completed.

### **Context & Constraints:**

#### **Constraints:**

The requirement for the new DRR education curriculum, developed prior to and within the reporting period, to be delivered to all schools nationally requires serious commitment to funding, manpower and resources. The School Construction Guidelines approved by the Minister of Education also requires dedicated DRR funding to be built into the budgets for new schools built and the enhancement of existing schools. While a portion of the nations elementary schools are now involved in DRR education practices, there have been no initiatives to mainstream DRR into Higher Education levels throughout the reporting period and no information pertaining to any proposed initiatives in this area.

#### **The Way Forward**

DRR education projects delivered over the reporting period make clear recommendations for the Lao Government for continued movement in the positive direction commenced (see reports and recommendations in HFA Monitor attachments). Dedicated budget funds, resources and manpower need to be allocated to the MoE for the ongoing delivery and enhancement of DRR education within the national curriculum through the POE's. New school constructions must factor in the approved School Construction Guidelines and efforts should be made to improve the present structural shortcomings of existing schools within Laos.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Although a comprehensive national Multi Hazard Risk & Hazard Assessment has now been completed in Lao PDR that will assist not only the NDMO but also all DRR stakeholders in Lao PDR, no known cost benefit analysis are available for inclusion in this report. While various organisations stress the importance of cost benefit analysis undertaking, no major national undertaking pertaining to CBA is available. Organisations conducting DRR assessments tend to do so on an organisation centric basis to assist with programme planning.

A post Typhoon Ketsana joint assessment and full recovery report was undertaken by the Lao government in consultation with DRR stakeholders that produced a series of medium and long term sectoral impacts on housing, health, education, agriculture, commerce, tourism, transport, telecommunications, power and water and sanitation within the affected areas and concluded that the Government considers the further development and scaling up of the disaster preparedness programme to strengthen national and local capacity to manage and cope with future natural disasters as all-important.

A Global Fund for Disaster Risk Reduction supported project through the World Bank, entitled “ Strengthening in-country capacity for post-disaster reconstruction and recovery planning in Lao PDR” was undertaken from October 2009 to December 2010 by the Ministry of Planning and Investment (MPI) with technical assistance from ADPC. The project aim is

- 1) to development of a national methodology and strengthen the capacity of the Lao Government to conduct damage, loss and needs assessments
  - 2) to formulate recovery and reconstruction plans within the MPI, NDMO and other sectoral Ministries.
- The activities included the development of standard methodology on post disaster needs assessment for Lao PDR and capacity building of government officials from various sectors and various levels on how to undertake post disaster needs assessment.

A Lao PDR IASC forum meeting held in March 2011 the NDMO advised stakeholders that a Rapid Assessment Taskforce has been established to review and revise all currently utilised Risk Assessment tools and questionnaires within Lao PDR, with the view of formulating a common approach assessment tool. IASC members will share their existing Rapid Assessment tools and questionnaires to allow the taskforce to consolidate the tools and questionnaires and share with IASC members at future IASC meetings.

Laos is considered to be a least preparedness country, but has high exposure to disasters. As a result of disaster preparedness being difficult to monitor and report to the national government, an IASC Contingency Plan is presently being discussed the IASC through assistance of OCHA Bangkok make disaster preparedness measurable, accountable and practical.

While various Ministries within the Lao government have likely conducted provincial or nation wide research efforts to improve the DRR capacity within their own ministries, these reports are not available for purposes of this report and it would prove beneficial to the DRR community if reports were collected and collated by NDMO for sharing amongst all DRR stakeholders.

**Context & Constraints:****Constraints**

Limited capacity of NDMO and availability of research institutes in the country result in the lack of cooperative research being undertaken at government level. Whilst the IASC initiatives are commendable it would be most beneficial to see tangible results prior to the onset of the 2010 wet season when the country is most vulnerable to flood disaster.

The sharing of DRR research to assist DRR as a collective amongst the Lao government and DRR stakeholders is pertinent for the future of DRR in the country.

Cost benefit analysis at this point, while considered as a priority overall in DRR programmes, is likely not



overly deliberated as a priority given that Laos is considered as a least preparedness country with high exposure to disasters and also ranked within the UN's least developed country index.

#### The Way Forward

The Lao government with cooperation from International/INGO DRR stakeholders could work towards achieving a National Disaster Research Institute, which could facilitate and collate all DRR research initiatives within Lao PDR. Furthermore, collection and collation of DRR research undertaken within the government of Laos could be made available via the IASC forum or similar to assist the DRR community in their ongoing efforts in Laos

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

Although the NDMO and International Organisations/INGOs operating in the country undertake regular awareness campaigns on DRR/DRM at all levels (National, Provincial, District and community levels) through a variety of mass media such as radio, newspaper and television, and through exhibitions and sports events, there is currently no formal country wide public awareness strategy existing in Lao PDR

The NDMO is currently implementing a major public awareness raising campaign on the importance of DRM Preparations and Response among the Lao people under its Institutional Strengthening and Capacity Development on Disaster Risk Reduction programme with UNDP Lao PDR although further updated information was unavailable at the time of reporting. Similarly, the Fire Police department under the Ministry of Public Security also conduct Fire Risk Communication and risk awareness programmes.

Under the Mekong River Commission Flood Emergency Management System (MRC-FEMS), public awareness activities were conducted over the reporting period through the installation of flood information billboards in common communication route in the communities. Flood information booklets, teacher information kits and posters on household flood safety measures on what communities preparedness and reaction to flood and school flood safety were developed with assistance from the PDMC and DDMC and distributed to target districts and schools.

Many individual INGOs and NGOs (samples sighted - OXFAM, Care International and Save the Children) are involved in several ongoing DRR awareness raising programs throughout the country. The Lao Australian NGO Cooperative Agreement (LANGOCA) conducted a school flood safety project undertaken



by SCA and ADPC in Xayabouly, Khammoun and Savannakhet. CARE is currently in the process of writing a public communication strategy to mainstream DRR in the Lao PDR development agenda. This strategy will aim at providing a communication framework for DRR at all levels of Government and will be “field tested” within ongoing CARE projects in Sekong until August 2011.

#### **Context & Constraints:**

##### Constraints

Many public awareness raising programs are underway through individual International Organizations/NGOs in the country, but due to limited financial and human resources at NDMO, these programs lack a coordinated effort for effective awareness raising on DRR / DRM in the country.

##### The Way Forward

The CARE public communication strategy to mainstream DRR in the Lao PDR development agenda aims at providing a communication framework for DRR at all levels of Government and if the trial in Sekong proves positive this will serve to enhance the capacity of the Government and all DRR Stakeholders in Lao PDR and in turn benefit the local population.

---

## **Lebanon** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

No

#### **Means of Verification:**

\* No: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### **Description:**

A website that aims to provide information about risks and issues regarding public warning is currently under construction. This website will also provide access to an e-library which includes all the studies and research conducted on natural disasters, in addition to the DesInventar.

#### **Context & Constraints:**

There are currently individual public warning systems for some type of disasters (storms and forest fires), and they are not centralized within one overarching warning system.

Recommendations include:

- Finalizing the website
- Effectively publishing public warnings for each type of disaster

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery*

*concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

It is critical to provide training at all levels in order to enhance the Lebanese society's ability to enact coordinated capacity responses to accidents and crises. Several institutions including the Lebanese Army, the Lebanese Civil Defense, the Lebanese Red Cross, and the Lebanese Fire Brigade regularly conduct drills and simulations in some schools and universities regarding issues including first aid and search and rescue.

A training strategy on Disaster Risk Reduction is in the process of being developed.

There are currently no policies or regulations that require Disaster Risk Reduction programs to be included in the school curricula. However, there are specific examples of some universities and other higher education institutions individually tackling these issues.

**Context & Constraints:**

Disaster Risk Reduction has yet to be identified as a main priority in training programs and education. The main challenges identified across all levels of training include:

- Employing the appropriate tools to conduct a needs assessment
- Targeting the correct audience
- Establishing measures that ensure that quality training is delivered

Recommendations include:

- Introducing Disaster Risk Reduction into the national education curriculum

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

National authorities including CNRS, LARI, LIBNOR, and the Industrial Research Institute currently exist. In addition, there are several universities and research institutes that are involved and/or have research expertise in the area of natural disasters.

It is notable to mention that the studies conducted on earthquakes, tsunamis, floods, and forest fires are advanced in nature, analysis, and content.

As such, studies on the economic costs and benefits of Disaster Risk reduction exist for some hazards.

**Context & Constraints:**

The most noticeable constraint is that such studies have not been conducted on all levels and for different sectors. In addition, it is difficult to obtain information about all ongoing research throughout the country.

Recommendations include:

- Finalizing the National Risk Assessment
- Finalizing Hazard Mapping
- Developing a National Strategy for each hazard
- Collecting data and efficiently sharing it among stakeholders

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

A National Strategy for raising awareness regarding Disaster Risk Reduction has recently been developed and is currently in the process of being implemented. This communication strategy for raising awareness and building a culture of prevention is part of an ongoing national effort towards building and establishing a resilient society in Lebanon. This strategy includes a website which will communicate messages of public warning and preventative measures, in addition to conducting training workshops and television and radio shows on Disaster Risk Reduction.

The objectives of the communication strategy are:

- Enlightening the Lebanese public regarding Disaster Risk Reduction and Disaster Mitigation
- Raising awareness regarding practical actions that individuals and communities can take to avoid and/or

reduce disaster losses

- Building and cultivating a culture of prevention
- Incorporating Disaster Risk Reduction into policy making and into people's daily lives

It is worthy to note that for many hazards, including storms and forest fires, there is currently a public warnings system in place.

**Context & Constraints:**

The communication strategy requires a minimum of five years to be in full operation.

---

## Malaysia (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

The National Security Council, in collaboration with other agencies, regularly organises events and activities to disseminate relevant information on DRR. The Disaster Awareness Day is organised every year since 2005 to raise public awareness on disaster risks as well as promote commitment among country leaders, decision makers and local authorities towards government efforts in disaster management and DRR. The Disaster Awareness Day 2011 gathered more than 700 participants, mainly from government agencies, state and local authorities throughout the country. As a result of the programme, the “Melaka Declaration on Disaster Risk Reduction in Malaysia 2011” was adopted that calls upon national, state and local stakeholders to advocate, lead and champion actions on national mechanism for disaster management, role of local authorities for DRR, mainstreaming of DRR in education and keeping schools and hospitals safe from disasters. Integration of climate change adaptation, including in implementing the National Policy on Climate Change, is recognised in order to address changing nature of disaster risk brought about by climate variability and change.

**Context & Constraints:**

Through the Working Committee on Adaptation under the National Council on Green Technology and Climate Change, activities will be formulated to coordinate and expand the national data repository on natural disasters and extreme weather events.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery*

*concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Several programs have been implemented to improve the resilience of schools and hospitals against disasters. The Ministry of Education in collaboration with civil societies and UNICEF has derived initiatives such as the Smart Support Team and School Watching Program in schools. The Ministry of Health celebrated National Health Day by adopting the theme of the World Health Day: "Save Lives - Make Hospitals Safe in Emergencies". To commemorate the day, the Southeast Asia Disaster Prevention Research Institute (SEADPRI-UKM), Universiti Kebangsaan Malaysia held a national forum on "Hospitals Safe from Disaster" in 2009.

In conjunction with the Disaster Awareness Day 2011, Malaysia launched the national level campaign on 'One Million Safe Schools and Hospitals' and organised the ASEAN Knowledge Sharing Workshop on Mainstreaming DRR in Education. The Workshop provided the platform for capacity building in mainstreaming DRR in the education sector, particularly in the primary and secondary school curriculum by, inter alia, sharing sound practices and lessons acquired by ASEAN Member States, assessing the state of the art of mainstreaming DRR in education in the ASEAN region and determining performance areas of DRR mainstreaming in curriculum and standards that may be adaptable in the region.

The Southeast Asia Disaster Prevention Research Institute, Universiti Kebangsaan Malaysia (SEADPRI-UKM) had developed post-graduate programmes on disaster risk management at the Ph.D. and Masters levels. The programmes provide a platform for research and training in an integrated manner, covering issues on climatic, geological and technological hazards.

**Context & Constraints:**

The national level campaign on School and Hospitals Safe from Disaster had just been launched. Further efforts are needed to disseminate the concept for wider implementation throughout the country. Commitment from key agencies has been attained, which will be capitalised in subsequent efforts. There is also the lack of trained teachers that can handle emergency situations such as floods, earthquake, tsunami, etc. Funding is also lacking for training programmes.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Researches and studies have been undertaken by respective agencies on specific hazards. On landslide, the National Slope Master Plan by Public Works Department is compiling and evaluating information on economic impacts of landslides as well as developing a predictive understanding of landslide processes, threshold and triggering mechanisms. Through its Public Awareness Program on Landslides and Slope Safety, the Department conducted market research to gather baseline and follow-up data for program design and measurement purposes. The Department is also currently producing alternative design of high pillar building concept for implementation on school block at flood prone area through its High Pillar School Building Concept Project. On earthquake and tsunami hazards, studies are continuously being implemented by the Malaysia Meteorological Department assessment of potential risks.

Through the Science Fund Programme under the Ministry of Science, Technology and Innovation, research projects on risk assessment of hazards are funded and cover flood risk assessment and flood risk map and decision support system for management of severe flood; new methods to detect landslides and land movement as indicator for landslide occurrence; development of a model to investigate the stability of Malaysian slopes; and investigation of earthquake disruptions on the present adopted vertical reference system for Peninsular Malaysia and its implications.

**Context & Constraints:**

Efforts are underway through the Working Committee on Adaptation under the National Council on Green Technology and Climate Change to encourage knowledge-based decision-making in support of climate resilient growth strategies. Several key DRR players, including the National Security Council, Drainage and Irrigation Department, and Southeast Asia Disaster Prevention Research Institute (SEADPRI-UKM) are also the main members in the Working Committee, relevant DRR elements will be promoted and are expected to be integrated while it pursues R&D agenda on climate change adaptation enhances the understanding on costs and benefits associated with adaptation responses.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Numerous awareness programs on landslides, tsunami, and floods have been carried out by key agencies, including the Public Works Department, Malaysian Meteorological Department, Ministry of Education and Southeast Asia Disaster Prevention Research Institute (SEADPRI-UKM), Universiti Kebangsaan Malaysia. Safety Guidelines in Disaster and Crisis Situation has been developed and distributed to schools and community leaders (Jawatankuasa Kemajuan dan Keselamatan Kampung – JKKK) to enable the public to respond accordingly to disasters and crises.

Several programmes have been implemented to improve the resilience of schools and hospitals against disasters. The Ministry of Education in collaboration with civil societies and UNICEF has come up with initiatives such as the Smart Support Team and School Watching Program in schools. The Ministry of Health celebrated National Health Day by adopting the theme of the World Health Day: "Save Lives - Make Hospitals Safe in Emergencies". To commemorate the day, the Southeast Asia Disaster Prevention Institute of the National University of Malaysia held a national forum on "Hospitals Safe from Disaster".

Trainings, seminars and drills are constantly organised by Government agencies to both enhance their skills and expertise in disaster management as well as improve communal resilience. In our effort to establish a sustainable and resilient environment for local communities, the Government has encouraged the participation and involvement of non-governmental organizations (NGO) in disaster risk reduction programs.

**Context & Constraints:**

Awareness campaigns were mainly done on small scales basis due to budget constraints and difficulty in reaching the public in masses. There is also needs for closer cooperation with national TV networks, information and education ministries for the outreach programmes to reach greater mass of public and school children in order to build greater awareness and response capability towards building a more resilient community.

**Maldives** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system



> Guidelines and Lessons Learnt for Establishing and Institutionalizing Disaster Loss Database (2009)  
[http://www.preventionweb.net/files/15495\\_guidelinesandlessonsforestablishing.docx](http://www.preventionweb.net/files/15495_guidelinesandlessonsforestablishing.docx) [DOCX ]

\* No: Established mechanisms for accessing DRR information

### **Description:**

"Developing a Disaster Risk Profile for the Maldives" and the Cost Benefit Analysis of Risk Mitigation measures in 3 islands in the Maldives has been published which provides information on Disaster Risks in the country.

An information hub (ISLES) on Maldivian communities and community developmental projects has been developed.

A national campaign on DRR, early warning and response actions in the Maldives named 'Rakkaavethibiyya Dhivehiraajje (be aware | be prepared)' has been started. Three books on disaster preparedness aimed at children have been published by Care Society.

### **Context & Constraints:**

1st Nationwide Disaster Risk Assessment "Developing a Disaster Risk Profile for the Maldives" is available on the website while the hard copies were distributed to relevant stakeholders. "DesInventor", a disaster loss database, was also established in 2006. Staffing to support implementation of the database has been a challenge. "Detailed Island Risk Assessment of the Maldives (DIRAM)" is being finalised to provide detailed disaster risk analysis (physical and socio-economic) of the most vulnerable 10 islands identified in "Developing a Disaster Risk Profile for the Maldives". The draft version is available in Department of National Planning Website. Furthermore, "Cost Benefit Study of Disaster Risk Mitigation Measures in Three Islands in the Maldives" was prepared in 2009 to provide policy makers with cost-effectiveness of 3 mitigation measures (Safe Island Protection, Selected Safe Island Protection, Limited Protection). The report is available in the website. With a view to change the behavior of the public with more digested information on disaster risk, early warning and response actions, a number of awareness materials have been developed and utilized under the public awareness campaign 'Rakkaavethibiyya Dhivehiraajje (be aware | be prepared)' including campaign website, poster, desktop calender, ical feed, song, newspaper and website advertisement, TV and radio programme featuring DRR etc.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

### **Is DRR included in the national educational curriculum?**

Yes

### **Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes



**Description:**

In a project to incorporate DRR into school curricula DRR, as part of curriculum revision process, DRR textbooks have also been developed, but is yet to be published. Guide for 'School Emergency Operation Plan (SEOP)' has been published and schools are implementing the plans. School level SOPs are being drafted, with staff being trained on emergency preparedness and decentralized management, regular mock drills are also being conducted within the school and activities are being carried out for community awareness with the involvement of parents in DRR. Care Society in its DRR project carried out first aid and emergency preparedness in schools and has developed three books aimed at creating DRR awareness among young children. SOPs for H1N1 has been developed by MoE and implemented.

**Context & Constraints:**

Student book and teachers guide for grade 1-9 were drafted in 2009. Financial resources will be required to publish the book and guide for all schools in order to fully launch and incorporate DRR to school curriculum. Trainings of trainers for SEOP is successfully on-going to roll out regular mock drills in all the primary and secondary schools in the Maldives.

MoHF in collaboration with WHO has developed a diploma level course on DRR for teachers aimed at school health issues.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

UNDP Maldives has conducted a cost benefit analysis on sea walls with the report being published. With the utilization of methodology and tools a disaster risk profile of Maldives and a disaster risk assessment has been published.

In addition to this MRC and Care Society have developed multi risk assessment tools that can be used in VCA.

**Context & Constraints:**

1st Nationwide Disaster Risk Assessment was presented by "Developing a Disaster Risk Profile for the Maldives" in 2006. "Detailed Island Risk Assessment of the Maldives (DIRAM)" is being drafted to provide detailed disaster risk analysis (physical and socio-economic) of the most vulnerable 10 islands identified in "Developing a Disaster Risk Profile for the Maldives". Furthermore, "Cost Benefit Study of Disaster Risk Mitigation Measures in Three Islands in the Maldives" was prepared in 2009 to provide policy makers with

cost-effectiveness of 3 mitigation measures (Safe Island Protection, Selected Safe Island Protection, Limited Protection).

A National Climate Change Research Strategy has been formulated by MHE.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

Community based disaster preparedness plans have been developed in 37 islands , CBDRR plans have been developed by Care Society 4 islands , and MRC has conducted CBDM plans in 25 islands. Under these programs emergency drills have been carried out in the island communities and Schools. Public awareness messages by Ministry of Health and Family on communicable diseases and possible risks such as during H1N1 pandemic has been given out. Maldives Meteorological Services (MMS) conducted weather, earthquake and tsunami awareness in Laamu, Seenu, Foahmulah, Haa Dhaalu, Haa Alifu and Male'. Outreach activities have also improved due to a set up of a better transport system between provinces, atolls and islands.

#### **Context & Constraints:**

Ad-hoc awareness exists, however there is no country wide strategy for developing awareness, although recently an awareness campaign on DRR named Rakkaave thibiyya dhivehiraajje has been launched.

Under the nation-wide public awareness campaign on DRR, early warning and response actions "be aware | be prepared", long-term social marketing plan for people's behaviour change on DRR, early warning and response action has been developed.

---

## **Mongolia** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

## Is there a national disaster information system publicly available?

No

### Means of Verification:

\* Yes: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

### Description:

As a step towards disaster risk reduction, NEMA has developed the fundamental policy documents titled "State Policy on Disaster Protection" and "National Program for Strengthening the Disaster Resilience of Mongolia".

The above mentioned program focuses on community-based disaster risk management to enhance the resilience of herders who represent one of the most vulnerable groups that are exposed to many types of disasters.

For instance, in case local people who reside in areas with high risk of disaster have lost their means of livelihood or suffered a certain amount of loss due to hydro-meteorological hazards or contagious livestock diseases, the government makes financial compensation for the lost livestock.

In addition, NEMA delivers weekly reports on the disaster/hazard situation of the country to certain officials and stakeholders. The public has access to disaster related information through [www.nema.mn](http://www.nema.mn) website.

Procedures for delivering disaster related information to international organizations and diplomatic offices have been articulated through the order no. 2009/312 of the Head of NEMA. As a result, a total of 61 reports on disaster conditions have been delivered to the members of the National Security Council and 12 reports have been delivered to the international organizations.

Twenty-one warning messages have been delivered to the national and local level emergency management units via fax.

Based on the consolidated disaster data of the past 5 years prepared by the researchers of the Disaster Research Institute, the micro risk-mapping of Ulaanbaatar has been completed.

The 9 districts of Ulaanbaatar city have been mapped with 1:5000 scale based on photos taken by the EOA satellite in 2010.

### Context & Constraints:

Establishment of a national disaster database is also hampered and delayed by the lack of financial resources. Resolution of the financial problem lies in either relying on foreign aid and support or delaying action until the constraints of the state budget are alleviated to some degree. In addition, lack of professional human resources will become a hindrance.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

### Level of Progress achieved:

2 - Some progress, but without systematic policy and/ or institutional commitment

## **Is DRR included in the national educational curriculum?**

No

### **Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

### **Description:**

In cooperation with the UNDP project “Strengthening the Disaster Management and Mitigation System in Mongolia”, NEMA has organized a regional level seminar on the “Implementation of the Climate Change Induced Risk Management Strategy” in 4 regions of the country except the central region. The events were attended by 92 representatives of the province level Development Policy Divisions, Food, Agriculture and SME Divisions, Environment and Tourism Departments, Health Departments, Hydro-Meteorological and Environmental Inspection Offices, Emergency Management Units, Transportation and Road Departments of 16 provinces.

In 2009, disaster response drills have been organized for the Disaster Response Headquarters and Squads of Tuv and Dundgobi provinces with participation of 195 government officers and people in Tuv province and 283 participants in Dundgobi province. In October 2009, a comprehensive disaster protection training and drill took place in Gobi-Altai province including over 200 participants representing the government and people.

In 2010, comprehensive disaster protection trainings and drills have taken place in Darhan-Uul, Gobisumber, and Selenge provinces with participation of 520, 380, and 590 government officers and people respective provinces. Disaster response drills have been organized in Ovorhangai and Hovd provinces and have engaged 447 government officers and people in the former and 400 participants in the latter.

These disaster protection trainings and drills that are organized in 5-6 provinces annually are of utmost importance because they render knowledge and practice to the provincial government and people on their respective roles and responsibilities in case of possible emergency situations.

Subjects named “Disaster management” and “Basic concepts of disaster” are included in the curricula of undergraduate education.

Within the framework of the goal to raise public awareness on disaster risk reduction, a television training program series named “Wisdom of safe livelihood” was broadcast through local mass media based on contracts, and the consequent costs have been settled by the Provincial Governor’s Office. Within the framework of the policy to prevent disasters in the medium term, “Disaster Preparedness Inspection” has been organized with 2-phases in all provinces by the provincial emergency management units. In result of the inspections that covered 1,048 business entities and organizations and in comparison to the average figures of the past 3 years, the incidence of disasters and accidents at the provincial level has decreased by 16 percent and the amount of total losses decreased by 22 percent.

### **Context & Constraints:**

We have developed disaster and disaster risk reduction education standards and curriculum intended at the primary and secondary levels of education, and submitted to the Ministry of Education, Culture, and Science.

However, the process to adopt the standards and the curriculum has been suspended in relation to the reform of the secondary education standards underway at the ministry.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

#### **Description:**

The implementation of the project “Methodology to establish a disaster risk assessment and risk reduction system”, which was commissioned by the Government Office, is underway. The current project is under implementation in 2010-2011 with funding from the Science and Technology Fund based on a tripartite agreement signed by the Deputy Prime Minister, Director of the Science and Technology Fund, and Director of the Disaster Research Institute.

Within the framework of this project NEMA has developed methodologies to assess the risks of flood, earthquake, fire, contagious diseases, radioactive accidents, and chemical accidents in cooperation with professional organizations including the Institute of Hydrology and Meteorology, Public Health Institute, Natural Disaster and Transmittable Disease Research Center, and the Nuclear Research Center at the National University of Mongolia.

In result of the research project, the following documents have been developed and are being applied in real life situations. These documents are “Urbanization and comprehensive assessment of various disasters”, “Difficulties faced in conducting disaster risk assessment and ways to overcome them”, “Methodology to assess the fire risk of public and industrial constructions”, “Methodology to assess the risks of contagious diseases that may cause severe damage to the public health (bubonic plague and avian influenza etc.)”, “Flood risk assessment methodology”, “Earthquake risk assessment methodology”, “Methodology to assess vulnerability to and risk of possible radioactive accidents”, and “Methodology to assess the risk of accidents related to poisonous and hazardous chemical substances”.

The laboratory of the Fire Research and Analysis Center has become an accredited laboratory with the Order No. 268 of 26 October 2009 issued by the Head of the Standardization and Measurement Agency after successfully passing the examinations and inspections conducted by the commission assigned by the Standardization and Measurement Agency. The accreditation has been achieved in result of methodical preparation works including development of over 10 procedures and documents, and Quality Guidelines.

In addition, a research conference under the topic “Using geographic information in coping with urban disasters” has been held.

**Context & Constraints:**

We are facing financial constraints in purchasing an x-ray equipment to be used in major firefighting operations in Mongolia.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

- \* Yes: Public education campaigns.
- \* Yes: Training of local government
- \* Yes: Availability of information on DRR practices at the community level

**Description:**

Measures to improve public education on disaster risk reduction are being conducted at the province, soum, and bagh levels aiming to maximize outreach based on their respective internal capacities. We regard that the public has acquired a certain level of understanding about risk reduction.

There are two types of emergency trainings and drills: 1) Comprehensive Disaster Protection Training for the public and 2) Drills for the Disaster Protection Headquarters and Squad. These are conducted annually at the province, city, and district levels. In the same province a Comprehensive Disaster Protection Training is conducted every 3 years engaging the local government officials, business entities and people. During these drills, a hypothetical emergency that has a high probability of occurring in the province in question is assumed to have taken place. The local government officials are expected to make appropriate emergency decisions, which are tested for feasibility in reality by having the emergency squads composed of rescuers and civilians implement the decisions in drill practices.

The training and drills are held in 5-6 provinces every year. During the dry season of the spring when the number of outbreaks of forest and steppe fire is on the rise, the staffs of the special protected areas are trained in fire extinguishing, fire containing, and emergency decision-making techniques.

In addition, work is underway to establish training centers in all provinces and districts, which will serve as the bases for future disaster protection trainings. We expect the training centers to be very useful in improving public.

According to the Law of Mongolia on Disaster Protection, disaster protection trainings are conducted in 5 types for 5 different audiences that are “disaster managers”, “search and rescue squads and professional squads”, “students”, and “other civilians”.

Besides the trainings, in order to improve the disaster preparedness and response capacities of the soum level Professional Disaster Protection Squads, a contest named “Rescuer” has been held among the squads of 17 soums. Various events to raise public awareness of the emergency management system and disaster prevention methods have been organized on the “open door day of the emergency management system” and on other anniversaries and commemorative days. In public implementing awareness raising measures, we cooperate with mass media and related professional organizations.

**Context & Constraints:**

Due to budgetary constraints, the outreach and effectiveness of disaster risk reduction trainings remain limited.

---

## Nepal (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

There is system to collect disaster incidents, death, no of affected people and property loss through government channels mobilized by Ministry of Home Affairs. Nepal Red Cross Society and few other I/NGOs collect and disseminate disaster information. However, relevant and updated information on disasters in the country are scattered and scanty. As of now, through the support of UNDP, and technical services of NSET database of historical disasters ( period covering 1971 afterwards) has been prepared in DesInventar system. The databases is being continuously updated by NSET. Similarly, the Department of Water Induced Disaster Prevention (DWIDP), Nepal Red Cross Society and few other I/NGOs have been collecting and disseminating the national level information on disasters annually or occasionally.

Most of the information available in the country level are accessible; however, information are not readily available and accessible by grass-root local level. Additionally, there is no comprehensive information sharing system to communities at risk.

For example, activities of some agencies include production of disaster related materials for different target groups and disseminating them. Action Aid has prepared eight different types of IEC materials (posters on flood/earthquake and HFA, calendars, flip charts, disaster knowledge series....etc) . These materials have been distributed to DMC/REFLECT centers and schools. Four different films on flood preparedness, earthquake safety, fire preparedness and rights of the disaster affected people were prepared and broadcasted in national television. Other examples include, production of participatory video on DRR and Climate change adaption and orientation training to journalists.



**Context & Constraints:**

Although “Desinventar” can be used effectively to collect, analyze and disseminate disaster information, the data collection mechanism is not systematic. Similarly, there is no any established mechanism to share such available information. Likewise, in many instances, the available information are not utilized for new programs/ activities design and implementation.

Recently, Government of Nepal has established National Emergency Operations Center (EOC) with support from AusAID and UNDP. EOC is collecting, collating, analyzing and disseminating information regularly on disasters and coordination of emergency response.

In order to utilize the information for disaster risk reduction initiatives at local level, institutional mechanism at district and village level need to be strengthened through disaster plans.

**Recommendations**

- Develop infrastructure and capacity in the EOC for collecting, analyzing disseminating disaster information
- Establish network of communication in EOCs at five regions (first stage) and all disctrict headquarter (Second stage) with the EOC at central level
- Implement DesInventar at local level
- Integrate disaster information system from NRCS, Nepal Army, Nepal Police, Armed Police Force and other agencies with the EOC
- Develop a system of allocating certain fund of VDCs for regularly updating and disseminating hazard and risk information

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

The current textbooks include disaster risk reduction related content and there is continuous ongoing process at Curriculum Development Centre (CDC). With the support of UNDP, CDC has completed DRR curriculum review and content identification for Lower Secondary Level. The exercise will be instrumental in revising the existing curriculum at Lower Secondary level (Grade 6-8) and the curriculum is expected to be revised very soon. A DRR reference Material has been prepared for the use of students of Grade 6-8. Teacher’s orientation package to support teaching DRR material is ready.



Although disaster risk reduction is included in text books at all levels, there is serious gap in capacity building of school teachers. The current effort to orient the teachers to the new content is very limited and scarce. In addition to the regular class work exercise, the schools need to develop school DRR plan and conduct regular drills. Twelve schools in Chitwan district have exercised WASH activities and training materials have been developed for teachers' training on CBDRM in 17 schools from Kailali and 4 schools from Doti district.

Incorporating DRR in school curriculum has begun and new module in higher education with comprehensive coverage in terms as geographic coverage and materials need to be incorporated in the future.

School disaster preparedness program is being implemented in some schools. School disaster library and school disaster committee have been established in those schools.

### **Context & Constraints:**

Schools are one of the most important community centers in rural areas. They are most revered and trusted institution in the communities. Developing a safer school not only protects lives of children but will also be an effective medium to create awareness and disseminate the know-how to the communities. Another asset of working with the schools is their existence throughout the country including in very remote areas.

As the concept of DRR is relatively new to teachers and school administrators, schools have not been able to play substantial role in DRR. The schools are already facing shortage of resources, there is lack of adequate teachers, the school buildings themselves are vulnerable to different hazards and the school teachers lack training and orientation in DRR.

Further, the curriculum designed at central level are sometimes unable to reflect the realities of the disaster prone area as same content is delivered throughout the country. The country faces different hazards in different parts and they have diverse resources to cope with disasters. In order to contextualize the DRR content in school education, the teachers need substantial orientation, training and hands-on experience which can be materialized through regular drills.

All the government officers need to go through rigorous trainings which are designed for fresh officers to senior executives and offered by Nepal Administrative Staff College. The trainings can be effective forum as entry point for the government officials to develop their understanding about DRR. However, the opportunity has not been effectively used so far.

Another challenge in DRR education is inadequate linkages between formal and non-formal education sectors.

### **Recommendations**

Review the existing school curricula from Primary to Higher Secondary level and include DRR content in a systematic way. This has already been completed for Lower Secondary Level (Grade 6-8) and the process needs to be continued for other grades as well.

Train teachers both at school and college levels in the field DRR.  
Conduct orientation training to teachers at National and Regional level and develop Trainers of Training. The trainers should be used to carry out similar training to all teachers throughout the country. Additionally, up-scaling the training activities to cover ranges of hazards and geographic area are essential. Informal education and training should also be a part of the DRR initiatives in schools.  
Incentives to School in terms of their initiative to implement comprehensive disaster risk reduction initiatives in school

Develop practical training materials for teachers and provide training not only to enhance their understanding of DRR issues but also to contextualize the content to local risks and needs.

Design and organize exposure trips, modular training and internship for concerned government officials on neighboring country where school and college curricula offers DRR and learn from them.

Establish information management mechanisms and network to share good practices on DRR related curricula and teaching materials.

Along with DRR education, carry out regular drills in schools involving teacher, administrators and students at least once a year in each of the schools.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

Some research activities on DRR and Climate Change Adaptation are carried out by academic institutes, individual organizations and individual researchers. However, the research activities are sporadic and have not contributed significantly as research agenda are not implementation oriented nor the part of a comprehensive framework for DRR.

Economic and financial analyses are hardly used in decision making to mainstream DRR into development planning. Recently, MoHA and UNDP have completed a study on Economic and Financial Decision Making in DRR which seeks to develop, for the first time, an evidence-based strategic approach to mainstreaming DRR into development in Nepal, based on sound economic and financial analysis.

Risk assessment methodology available around the world have been used for couple of Hazards at limited geographical areas. Study on cost/benefit analysis of DRR in Kailali has been done and impact of Cash for Work as a crisis mitigation measure in Kailali, Dadeldhura and Baitadi district has been evaluated as a pilot case.

#### **Context & Constraints:**

'Actionable' research is lacking in Nepal. The research activities are scanty, sporadic and seldom originate from need based issues. This is mainly due to lack of institutional dialogue among academic institutes, professionals and practitioners. In order to scale up implementation oriented research, multi-stakeholder forums such as National Platform will be effective. The Platform needs to ensure active participation of academic institutes as one of the major stakeholders. The institutional dialogue can also be strengthened by providing graduate level course in disaster risk management.

There has been relatively little macro-economic and financial analysis of the impact of disasters in Nepal, which is one of the hindrances for cost-benefit analysis of investment in DRR. Central government has yet to internalize the importance of local level planning and implementation of DRR.

#### Recommendations

Involve academic institutes in the National Platform as one of the stakeholders and ensure that there is enough discussion on policy and implementation which needs research intervention.

Include DRM as one of the core or elective subjects in related ongoing graduate/undergraduate programs of different universities.

Allocate budget to carry out research through students. For this purpose, the universities should take the lead.

Tool for financial analysis of large projects should be developed in order to carry out Disaster Impact Assessment. Such tools should also facilitate decision making by accounting for the contribution made by such projects in building resilience of communities.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

There are many public level events which contribute significantly to raise awareness of the public, sensitize politicians and advocate policy makers. Earthquake day is observed in February commemorating the 1934 earthquake and it has now been extended to many districts. UN ISDR day is also observed each year at national level.

Local radio stations and FMs are covering wide areas to circulate general information about disaster risk reduction and specific emergency incidents.

Few other activities carried out by different organization:

- WASH awareness campaign and counseling program at community level
- Community radios, different IEC materials and observation of days in collaboration with other stakeholders including Government agencies
- Community awareness on DRR

- Earthquake Day and ISDR Day activities and awareness-raising events
- Organizing workshops/meetings to prepare communities to respond to disasters (district and sub-district level)
- Public awareness improved in 13 VDCs and 3 Municipalities in 4 districts
- Collaborative activities on awareness raising activities at local and national

### **Context & Constraints:**

The awareness campaign has gained momentum recently after few fateful events in the new millennium: the 2004 tsunami in Indian Ocean, 2001 earthquake in Gujarat India, 2005 earthquake in Pakistan, 2008 earthquake in China and 2010 earthquake in Haiti. The awareness campaigning is spearheaded by Local NGOs/ CBOs working in the area of DRR with enthusiastic support from the government.

The substantial progress made in awareness raising and sensitizing has resulted in attracting attention of the parliamentarians also. More than 100 parliamentarians (out of 600) have been approached and advocated the disaster risk reduction mainstreaming agenda. A DRR toolkit has also been developed with focus to sensitize the policy makers and parliamentarians.

Most of the awareness activities, however, are focused in urban areas. The activities are neither institutionalized nor internalized within the governance mechanism.

Building culture of safety among communities and sustaining the level of awareness created by public events are some of the challenges.

### **Recommendation**

Disaster preparedness planning at national/regional/district and VDC level should have a major thrust to raise awareness, disseminate information and advocate measures for building resiliency of the communities. The activities should extend their outreach to rural area and should target the communities at risk.

All the Schools throughout the country must have at least one disaster drill each year. Schools can play vital role in developing a sustainable mechanism for sustainability of DRR initiatives and it should be a part of formal and non-formal education.

Training and capacity building of local authority on the issue of DRR should be an integral part of any disaster preparedness plan.

Use of innovative methods for information dissemination and awareness raising can be effective. Street drama and making use of cultural activities can be effective and sustainable way for knowledge and education in DRR.

## **Pakistan** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* Yes: Web page of national disaster information system  
> National Disaster Management Authority (2010) <http://www.ndma.gov.pk>
- \* No: Established mechanisms for accessing DRR information

**Description:**

With the establishment of dedicated disaster management institutions at the federal and provincial levels, the provision of information on disasters and disaster risk management has been institutionalised. The NDMA at the federal level and the PDMAs at the provincial level have been made responsible at the respective levels to make necessary arrangements for effective dissemination of information to general public on disaster risks and their management. The NDMA maintains a website where all information related to National DRM Framework, National Disaster Management Act, Training Manuals, Damage and Loss Assessment Reports, Guidelines on preparation of provincial and district level disaster risk management plans and other important documents/information are accessible. Likewise, the PDMAs of Punjab and Khyber Pukhtoonwa also maintain their own websites with all disaster management related information and links accessible to general public. Other institutions including Earthquake Reconstruction and Rehabilitation Authority (ERRA), Federal Flood Commission, Pakistan Meteorological Department etc also make disaster management related information available to general public through their respective websites. Disaster Management related information is also available to general public through websites of the related UN Agencies, INGOs and NGOs. Information is also shared between these stakeholders through email groups.

**Context & Constraints:**

Although different DM entities at respective levels employ individual mechanisms to disseminate information to all stakeholders, yet there is a need for more formal and integrated mechanism for information sharing among all stakeholders. The present arrangements do not effectively cover two important stakeholders i.e district administrations and communities. Effective dissemination of information requires supportive IT infrastructure at all levels. The development of country wide IT infrastructure encompassing the rural areas, where majority of the most vulnerable population lives, requires huge allocation of resources. The existing resource crunch and lack of accessibility of the most vulnerable to the internet facility impedes the usage of IT as the most effective tool of information dissemination.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

The Government is committed to integrate DRR education in the school, college and university curriculum. The NDMA in close coordination with the Ministry of Education is developing a comprehensive strategy to integrate DRR into education. The curriculum wing of the Ministry of education has finalized the DRR related curricula from class 1 to 12, which covers all hazards and gradually improves the technical level of understanding hazard and preparedness for students at different levels. The DRR concepts are in the languages Urdu and English for children from class 1 to 5 (primary), whereas for the students from class 6-12 this information has been included into the curricula of Geography and Social studies.

At the university level, some public as well as private universities have started to offer specialised courses in disaster management. The University of Peshawar has established the Disaster Preparedness Center which offers specialised courses in disaster management. The Princeton University Islamabad has introduced MBA in disaster management while other universities including Hazara University, Karakorum International University offer research courses related to disaster management.

The NDMA is working on integration of DRR education into the training academies of the civil servants of Pakistan; e.g. the National School of Public Policy (NSPP), the lead civil services training institution where majority of government servants entering into various sectors are trained at the entrance level as well as at mid-career stage.

Training curriculum for training of district officials and communities have been prepared.

**Context & Constraints:**

DRR in its modern form is relatively a new concept in Pakistan. Therefore, lack of awareness, being the major challenge, exists in Government Departments including the ones dealing with education. The lack of awareness coupled with lack of expertise in the relevant government departments impede implementation of National Plan and Strategy for integrating DRR into education curricula within the defined timelines as envisaged in the Framework. To overcome this problem, the NDMA is extending technical assistance to the Ministry of Education for development of required curricula.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

Pakistan has yet to go a long way to develop its own tools and research methods for multi-risk

assessments and for cost benefit analysis. In terms of provisions of the Ordinance, the National Institute of Disaster Management (NIDM) is to be established as the national centre of excellence in the field of Disaster Management. The NIDM will provide state of the art facilities for planning and promoting training and research and developing core competencies in the area of disaster management. It will also be responsible for documentation and development of national level information base relating to disaster management policies, prevention mechanisms and mitigation measures. The Government has shown its commitment for the establishment of NIDM through allocation of land and funds. Basic infrastructure design and funds utilization plan have been finalized. The infrastructural development is planned to be undertaken with donors support for which commitment has been secured from JICA.

A research exercise has been undertaken under the auspices of NDMA to highlight cost benefit analysis of Disaster Risk Management. The research output made a comparative analysis of response and relief cost against investments made in terms of prevention, mitigation and preparedness.

At the university level, the University of Peshawar, NED University of Engineering and Technology, Karachi, University of Engineering and Technology, Lahore, Karakorum International University, Princeton University, Quaid-e-Azam University offer research courses in disaster risk management, safer structural engineering, climate change, environment etc. The University of Karachi has developed a risk assessment model for Karachi City.

### **Context & Constraints:**

As discussed earlier, the DRR, being relatively a new concept in Pakistan, is yet to be institutionalized as a core subject in public as well as private research institutions. These institutions lack the knowledge, expert human resources and technical and scientific facilities to carry out objective research, aimed at developing and applying methodologies, studies and models to assess vulnerabilities and impacts of hazards, including the improvement of regional monitoring capacities and assessments.

Institutional commitment is due on the part of the public as well as private research institutions to treat DRR as one of the core research subjects through allocation of substantial resources and provision of research facilities. The Federal and Provincial Governments are also required to ensure adoption of DRR research as integral part of the institutional competencies in the research and educational institutions under their respective control.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

### **Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

### **Description:**

Institutional commitment has been attained through inclusion of education, training and public awareness



raising in the field of disaster risk management as one of the priority areas in the National disaster Risk Management Framework. The Government has already declared 08th October as the National Disaster Awareness Day which is being observed on annual basis. Special awareness events are organised at the federal as well as provincial levels including the Disaster Management Conference and Exhibition (DMEC). Search and Rescue drills are also organised for public awareness on the occasion of National awareness day.

The NDMA has conducted community awareness programmes in the coastal areas of Sindh and Balochistan which included mock evacuation drills during Tsunami. Likewise special community awareness raising programmes have been implemented under the Earthquake Risk Reduction and Preparedness Project in the earthquake prone areas of Mansehra, Muzafarabad, Murree, Chitral and Quetta.

The NDMA has also organised special awareness raising workshops for Parliamentarians, Provincial Legislators, women legislators, media persons, officials of various federal ministries, district officials and private sector stakeholders.

The NDMA is also working on developing different media productions including documentaries, radio programmes and docu-dramas for raising public awareness about disasters and their management. At the provincial level, the Rescue 1122 of Government of Punjab implements a comprehensive public awareness campaign through its Community Safety Officers in each district. All other stakeholders including the INGOs and NGOs involved in disaster risk management programmes supplement the efforts of the government agencies in raising public awareness especially at the community levels.

#### **Context & Constraints:**

Public Awareness plans and strategies are to be implemented by the public institutions. However, most of the institutions themselves suffer from lack of awareness about DRR. Thus the NDMA is facing a two staged challenge. At the first stage it has to overcome the challenge of lack of awareness amongst the implementing partners through a comprehensive awareness raising programme for Government Institutions who will then be able to complement the efforts of the NDMA for implementing awareness raising programmes in the general public.

---

## **Sri Lanka** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

Yes

#### **Means of Verification:**

- \* Yes: Web page of national disaster information system
- > National Disaster Relief Services Centre <http://www.ndmc.gov.lk/>
- > National Building Research Organisation <http://www.nbro.gov.lk/>
- > Department of Meteorology <http://www.meteo.gov.lk/>
- > Ministry of Disaster Management <http://www.disastermin.gov.lk/>
- > Disaster Management Centre <http://http://www.dmc.gov.lk/>
- > Sri Lanka Disaster Information Database (2009) <http://www.desinventar.lk>

\* Yes: Established mechanisms for accessing DRR information



**Description:**

The DMC has established a website <http://www.dmc.gov.lk/>, where data regarding disaster risk is published. The web site is linked to websites maintained by other agencies engaged in DRR activities.

The Resource Centre was established to share knowledge on disasters and refer published research material. The DMC is proposing to expand the Resource Centre to a web based facility to enable students and others interested in disaster studies to obtain material electronically.

The DMC published a quarterly newsletter on disaster management activities in Sri Lanka.

Sri Lanka is supporting the SAARC Disaster Management Centre to establish a web portal linking all institutions, public and private, to publish best practices and published research material in the SAARC region.

The Integrated Strategic Environment Assessment (ISEA) for the Northern Province Maps are made available to any agency on <http://www.north-isea.lk/>

A "one stop shop" web portal on Climate Change Adaptation in Sri Lanka is being developed in collaboration with the ministry of Environment (Climate Change Secretariat), Ministry of Disaster Management, the DMC and many other stakeholders with the assistance of the UNDP Sri Lanka in line with the Asia Pacific Climate Change Adaptation Forum.

**Context & Constraints:**

Government procedure to recruit a qualified person to manage the Resource Centre is causing a delay in properly establishing the centre. Limited space at present prevents the expansion of services.

Access to information databases at district and local levels is limited. Government initiative to popularise the use of IT through ICTA may improve the situation.

**Priority 3: Core indicator 2**

*School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* No: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

DRR concepts are included in the school curricula from grade 6 upward, as well as in all pre service and in-service teacher training syllabus.

Supplementary reading materials on natural hazards that affects Sri Lanka, first aid and disaster prevention and preparedness have being developed by the ministry of education and relevant stakeholders .

Mine risk education programmes is implemented focusing the north and eastern provinces.

School disaster safety has also being included in the Post Graduate Diploma in Education Managements (PGDEM) as the centre for educational leadership development.

The education sector group under the ministry of education is the coordinating structure for emergency education, DRR education and emergency preparedness and presence plan.

National guidelines on disaster safety education has been developed, and are being implemented by the ministry of education with the support of the DMC and the other stakeholders.

DRR concepts are also included in the University curricula especially in engineering and town planning earth science etc.

Kalaniya university have commenced diploma programmes on Disaster Management and the Eastern university and the University of Colombo have approved the certificate coarse to produce specialist in the field.

Post Graduate Master Degree programme in Disaster Management commenced by Peradeniya university in 2006.

Mainstreaming DRR in to housing sector has been launched with the assistance of Asian Disaster Preparedness Centre. Agencies involved agreed to use recommendation of the technical committee in planning and construction of future housing projects.

Training of Technical Officers in the eastern Province for the use of DRR guidelines in housing construction is now completed.

A curriculum of Technical Training Colleges in the eastern province was developed to be included together with DRR concepts. Training of Trainers(ToT) was conducted for instructors in Training Colleges in Ampara and Baticaloa districts on pilot basis.

**Context & Constraints:**

More awareness programmes and practical DRR activities should be conducted at School level but resources are limited.

Coordination between several agencies and donor community engaged in post disaster housing projects needs a great effort.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

The Disaster Management Centre and universities organises an annual Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) Symposium.

The Department of Agriculture is conducting research to produce drought, flood, and salinity tolerant crop varieties, especially focussing on paddy.

Research is also conducted on integrated pest management practices. In agriculture, researches are also conducted in cost and benefit analysis of DRR.

The NBRO, CCD, Ministry of Power and Energy, and universities are conducting research on prevention, adaptation, and mitigation of climate change.

Many researches are conducted in the area of health (i.e. chronic kidney failure), in collaboration with many relevant stakeholder agencies.

Multi-risk assessment methodology was developed and agreed upon by all agencies. Hazard and Vulnerability Maps need to be completed to develop Risk Profiles.

**Context & Constraints:**

Due to limited resources available, development of Vulnerability Maps are time consuming. However, Hazard Maps are being used in the development planning process in some areas.

There is a lack of dissemination and communication of research results and lack of accessibility to the general public.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

The Government has declared the 26th December as National Safety Day. Religious activities were conducted to make the public aware of disasters and commemorate lost lives as a consequence. Disaster awareness programmes were conducted in Ministries and State agencies as a public awareness raising campaign. The commemoration function was held in a vulnerable district with the participation of Government agencies, NGOs, and school children.

The DMC takes part in national and local level exhibitions to carry the message of disaster resilience to public.

Disaster management is included as a subject in the curricula to train Sri Lanka Administrative Service and Police officers.

National and local level early warning and evacuation drills were conducted periodically, especially in areas prone to tsunamis, landslides, and floods.

Posters, leaflets, booklets, and videos were produced as public awareness material and disseminated among relevant communities.

Respective technical agencies disseminated information through mass media. Additionally, emergency notices are disseminated through cell phones and other early warning dissemination methods.

**Context & Constraints:**

People in the Northern and Eastern Provinces have started settling in their homes and need time establish their livelihoods prior to conducting any public awareness programme on disaster resilience.

---

## Syrian Arab Republic (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* No: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

There is a national disaster information system that can be obtained upon request.  
As for the availability of information on disaster risk reduction there is a website that provides information about awareness towards disaster risk, and the how to prevent, prepare & respond to disasters.

**Context & Constraints:**

-

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

Disaster awareness concepts have been included in the new curricula in elementary & secondary levels, also disaster management projects executed in cooperation with United Nations development programme provided and distributed some awareness materials in schools such as cartoon and digital games, earthquake booklet, and poster on prevention from different risks. Recently work is going on in preparing training courses for schools as a part of integral training strategy.

In addition to that the Syrian Arab Red Crescent continues its first aid public training courses, and different programmes in the disaster management, and establishing a team of trainers and trainees on the local level.

Moreover Work is undergoing on preparing a master degree in the field of disaster & risk management in cooperation with Damascus University which aims to prepare specialized team in disaster prevention & response.

**Context & Constraints:**

-

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

## Is DRR included in the national scientific applied-research agenda/budget?

No

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

### Description:

Progress is being accomplished through projects and research studies that some disaster management concerned parties implement, in addition to execute some technical workshops that aim on reducing risks and exchange information, also some researchers participate in different seminars and workshops through presenting work papers and research in the field of disaster assessment and reduction.

### Context & Constraints:

There is still a need to establish plans for institutional commitments and provide budgets needed for implementing scientific research projects and programmes that lead to disaster risk reduction.

### Priority 3: Core indicator 4

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

## Do public education campaigns on DRR reach risk-prone communities?

Yes

### Means of Verification:

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

### Description:

A noticeable progress has been achieved in disaster awareness through integrate the concepts of disaster reduction in the school curricula, in addition to distributing awareness materials such as posters & booklets, and implementing training studies that concentrate on the importance of providing awareness in local communities plus the participation in global campaign for urban risk reduction.

### Context & Constraints:

There is a need to allocate sufficient budgets for carrying out awareness campaigns that includes producing and distributing awareness materials through the media, in addition to use Specialized expertise to deliver the subject to all levels of the local community including the far rural areas & more institutional commitment to pay this subject enough attention.

---

## Thailand (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### Is there a national disaster information system publicly available?

-- Nothing reported within this timeframe. --

#### Means of Verification:

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### Description:

National information management on disaster risk is available in forms of 1) weather forecasting 2) Geo-Hazard Mapping 3) Daily/Weekly/Monthly disaster situation update 4) disaster education through various types of communication in all levels. For national level, mass media, warning towers, short message warning via mobile phones and web-site are the major means of information dissemination. For local level, community radio towers, mobile units and sirens are the major means. Moreover, Mr. Warning and Civil Defence Volunteers trained by DDPM are key players in relaying disaster information to the community

#### Context & Constraints:

Most of the information is available through networks and arrangement among agencies concerned. Not all people can access and make use of such information, especially at the local level.

### Priority 3: Core indicator 2

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### Is DRR included in the national educational curriculum?

-- Nothing reported within this timeframe. --

#### Means of Verification:

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

School curricula, education material and trainings are not promoted widely. For universities, disasters are included in many courses such as natural disasters, earthquake, so as to enable university student to be aware of hazards in Thailand and properly handle with disasters. Thai universities in collaboration with government and private sectors regularly conduct research and academic activities on disasters preparedness.

**Context & Constraints:**

There are 3 key factors that cause ineffective disaster education;

First, policy makers of the Ministry of Education do not take disaster education a priority in education development framework. As a result, respective organizations at departmental level and schools do not take disaster education into account. They usually focus on post disaster activities.

Second, education practitioners do not promote DRR into school curriculum/training on a sustainable basis due to limited budget and competent personnel.

Third, education system has divided schools into two types; one is developing schools which are usually situated in urban area, and the other is underdeveloped schools which are situated in the rural areas. These two types of schools differs from one another in that the first type are not interested in disaster education in school, while the later sees the importance of disaster risk reduction education. This is because most of the rural schools are in disaster risk prone areas.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Research methods have embraced variety of methodology and technology such as geophysics, multi-disciplinary approach, so that research studies are more accurate and comprehensive. Besides, national agency in disaster management also applies automatic electronic devices for conducting research and data collection with high consistency and relevancy. The results of the study are published and updated through internet which local offices can get access to the results.



**Context & Constraints:**

Thailand still has insufficient high/advanced technology and experts for the on-going improvement of risk assessment and studies.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* No: Public education campaigns.
- \* No: Training of local government
- \* No: Availability of information on DRR practices at the community level

**Description:**

Safety awareness promotion strategy is exist but not implemented seriously on a sustainable basis. Disaster education programme and training are limited in certain areas. Though we have warning system at local levels, they do not cover all parts of the risk areas. Some risk areas do not undergo CBDRM training to have their awareness improved.

**Context & Constraints:**

Limitation of resources and competencies of key sectors in DRR is still the major hindrance for Thailand's DRR. To acculturate safety mind and disaster awareness into local context, we require budget and experts to create, monitor and evaluate disaster awareness raising programme at all levels.

**Yemen** (in English)**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

- \* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

### **Description:**

There is no website for national information system on disaster to accommodate all issues related to disasters except some of the information and figures deposited in some internet sites in forms of general information. Some disasters statistics in the country can be got as general and epitomized information in the formal and informal sites which are scattered information that can not be got benefited from directly .There is such information in some sectorial plans and national policies and public reports, but the mechanism of accessing to them is non-specific or not systematic.

Yemen has received a library in the field of DRR presented by the UN-ISDR for DRR in 2008. There is a plan to distribute a copy among universities and research institutes to provide sources for information.

Seismic information is distributed in bulletins as they occur daily, quarterly or annually (regularly) among the related sectors. But there are no mechanisms for their deployment. Most of information comes from national reports, and reports of the UN system and also from the periodic reports of the IFRC about disasters in Yemen.

The establishment of the GDEED by the MWE forms a core of coordination and work with various government agencies to their respective jurisdiction, to create previous, appropriate plans and strategies to the reduction of environmental emergencies and mobilizing resources to confront them and integrating the concepts of risk reduction within the general policy framework of state and to consider various risks reduction as the national priority through creating of appropriate mechanisms and working together .

As a regional initiative by UNDP and UN-ISDR to build a database to collect data disasters for last 30 years in Yemen in DesInventar program .

UNDP DMU website [www.dmu-yemen.org](http://www.dmu-yemen.org) is used to provide information about disasters for publicly.

### **Context & Constraints:**

- Lack of financial means to implement the collection, analysis and archiving of data and information, as well as an assessment of risk and vulnerability ...etc.
- Archiving systems are weak in all state agencies.
- The lack of information network specialized in this aspect.
- Absence of a unified program to serve all the relevant authorities.
- Deficiencies in the installations and equipment required for the implementation of what mentioned above.
- The absence of skills and experience.
- The absence of historical data

It is recommended to qualify national cadres, provide financial support, and the urgent need for international consultancy and technical assistance by friendly organizations ,countries and interested parties. As Yemen is still new in the experience of natural disasters, illiteracy rates in the community should be reduced .Solutions for lack of financial capabilities, technical equipment, skills and human resources represent priority because of the scarcity of providing the main needs. The continuing awareness strategy should be activated. A local training and awareness program has been implemented after the earthquake in Dhamar in 1982. But after the expiration of a period of 28 years these experiences or trained people are no longer present in the local communities .In addition to that, changing the ways of thinking and behavior in these communities about the seismic risks.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery*

*concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

Disaster reduction issues were included into the modified curriculum (2001), at both primary and secondary levels. In the framework of a strategy to develop education in general, and in the framework of (the National Strategy for Basic Education 20,012,015), the focus was on many of the concepts of natural, environmental, humanitarian disasters locally and internationally in all areas, such as health, hygiene and environmental pollution, earthquakes and volcanoes, traffic accidents, wars, and phenomena of revenge and chewing Qat, illiteracy and lack of water resources, food..etc. The focus on these concepts from a school subject to another is varied depending on the nature of the subject and its objectives. This came as a reflection of the development of the objectives of the educational system in Yemen and the objectives of the subjects starting from the cope with the contemporary global problems and trends. They are appropriate doses of awareness. The Ministry of Education of Yemen plans to develop a new educational platform after the current one had been for ten years (2001- 2010) taking into account the outcomes of the present and future variables in a world fraught with new developments.

UNDP says a national strategy for awareness, targeting school children specifically and the public more generally, is being developed by the National Disaster Management Unit. The literature that is being developed for the awareness campaign includes advice on 'what to do during emergency'. Also included are interactive games for children.

The University of Sana'a is leading the development of a curriculum for a disaster risk management and climate change adaptation academic program, for schools as well as for institutions of higher learning.

**Context & Constraints:**

Integrating such concepts faces difficulty even in coordination and implementation by the authorities concerned with the curriculum of national education. The Yemeni government had early directed integrating awareness curricula that are specific to each sector into the educational curriculum, especially of primary and secondary schools. Curricula have become political, environmental and healthy concepts which made integrating of new concepts to be unacceptable by the Ministry of Education. School textbook designing is put into specific criteria that can not be overcome. One of the most important criteria is to achieve balance in all aspects of the variables so as not to overshadow the other side. This challenge can be overcome by correspondence and holding consultative meetings between the concerned sectors. In addition to that, spreading detailed awareness in this aspect and then considering the inclusion of brief concepts within curricula that are based primarily on earlier information in the minds of the community. The issue of disasters at the state level is a new topic needs to details that may not be absorbed by the

educational curriculum.

To overcome these challenges requires strengthening of awareness at all levels in order to make the concept of disaster reduction be supported and applauded from all levels

UNDP confirms that lack of awareness at all school curriculum levels is consider the main constraint.

The institution's perception and understanding of risk is still very limited in the country, thus making provision of forma DRR education and the dissemination of risk reduction information not a priority.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

#### **Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

#### **Description:**

The initiative between the MWE and Research Organization (Disaster Vulnerability and Emergency Management, Asia) UK, University of Northympreia that states to establish a master's degree program in Yemen in cooperation with the Center of Water and Environment, Sana'a University in the field of disaster management and reduction, but has not yet seen light.

Due to the absence of a national budget for the applied national researches concerning disaster, the National Policy for the budgets allocated for the process of research in all fields are weak and may not exceed 5% of the overall budget as the general statistics provide indicators of a lack of support for scientific research.

There are a number of centers and institutions related to the production and dissemination of technologies , technical information and scientific knowledge as ISAs research, studies centers, universities and a number of other similar institutions. These sectors have plans, programs and activities to discuss and study aspects related to the environment, but they are done without a link or a unified vision or in accordance with unified national policies and platforms. But It is differs from one side to anther on this matter. Many of these entities have results of research, studies and surveys that include a lot of information about the different aspects of environment, but there is no clear mechanism for information exchange and dissemination. Efforts flowing in the direction of scientific research are great, but without clear policies. There is inertia in the process of dissemination of data and in making it available.

Multi-risk assessments and cost benefit analysis are being completed and strengthened through the three risk assessment studies financed y the World Bank.

#### **Context & Constraints:**

- Lack of awareness at the level of decision-makers.
  - Scarcity of the governmental financial resources.
  - Lack of confidence to support research, especially in this aspect as if it is considered pointless and redundant.
  - The absence or lack of presence of staff that is interested and active in the disaster field.
  - The absence of binding legislations and laws.
  - The lack of appropriate, effective and coordinated information systems based on united standards.
  - Most of the outputs of research institutions' information are directed for different purposes, too. And often they are not regularly available, appropriate and sufficient.
  - Acquisition of agricultural research on the outcomes of scientific research and scientific disciplines are available up to (85%) in different regions.
  - Inadequate or in some cases the absence of institutional forms of the organized and active communication among the stakeholders to promote cooperation and integration of resources and capabilities.
- Lack of cooperation between national partners is limiting the performance of cost benefit analysis and of the systematic assessment, evaluation and communication of risks.

Recommendations needed here are focused on raising awareness and availability of financial resources and technical training and rehabilitation of existing capacities to reach their demands to decision makers in reasonable and logic ways.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Do public education campaigns on DRR reach risk-prone communities?**

No

#### **Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

#### **Description:**

In early 2009 the GDEED inaugurated the National Campaign for The Safe Transport, Storage and Use of Chlorine substance which targeted all the local foundations of Water and Sanitation in Yemen. It aimed to raise the social awareness and contribute in enhancing the safety systems in facilities and local communities and how to use the Chlorine substance in drinking and sanitation water. The outcomes of this campaign were a bundle of decisions, recommendations about the standards of Chlorine and its rate in drinking water or sanitation water and the safety conditions for transporting this substance .The Ministry directed these foundations to commit by the required standards.

Despite the national efforts to create ecosystem media to the public but still the outputs of these efforts are below the level required for many overlapping factors: The expertise and technology play a big role and prevent to reach into achieving the active results, lack of specialized staff in environmental media. It should

reach to specialized and qualitative media as it is commonly recognized by (developmental Specialized media) like (Environmental / healthy / agricultural / tourism media ... etc .As it is followed in many of the developing countries.

Public awareness should be promoted through media policy and a long-term strategy to integrate the process of awareness in the daily programs of official media, in the light of adequate financial resources and political commitment.

According to UNDP, a national strategy for conducting awareness raising events and campaigns and Disseminate awareness raising materials to targeted groups and governments exposed to disasters , is being developed by the NDMU.

**Context & Constraints:**

- Non-availability of financial allocations to the authority concerned with issues of disasters represented by the National Focal Point and the national team for implementing the tasks of publishing and awareness.
- The lack of an independent Institution on this matter as the national focal point and the formed National Team did not reach to all of their powers. All governmental apparatuses see that they are not all concerned by this role except for the performance of its obligations regarding the disaster during its occurrence and to tackle situations at that time.
- Not determining roles (up to now), which is supposed to be developed within the framework of a unified national plan, which will be conducted by the National Focal Point and the relevant authorities.
- High rates of illiteracy in the community.
- The presence of the media and environmental awareness could be focused primarily on print media such as newspapers, periodicals and magazines. These publishes are attributed that they are occasion-present and periodic. They are non-attendant, as well as changing of their names and limited distribution, and in some cases the total disappearance for these publications after a few number of issues.
- Lack of financial means and technical equipment, skills and human resources.

Therefore, it is a must to find an international expert to assist those involved in Yemen to determine the roles and complete the national plan, as well as providing financial and technical capabilities that enhance this role.

---

# Europe

---

## Armenia (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### Description:

Use of knowledge, innovation and education required to develop and implement a culture of safety and sustainability of the natural-technical system (PTS), the main indicators of activation of the population and all sectors of society to a culture of disaster prevention:

- Access to information about hazards at all levels, through regional and community-based exercises, through media and television (a periodic publication of the special newspaper "Artakarg Tert " ("Emergency" weekly") and a weekly television program "Emergency Channel ");
- The introduction of all institutions of higher learning rate for the relevant departments, security issues and prevent emergencies;
- Training of specialists in higher education (Institute for Crisis Management) at the rate of population and territory from emergency situations of natural and anthropogenic origin;
- The introduction into school curricula of training courses on disaster risk reduction and appropriate behavior confront dangers;
- Development and implementation of mechanisms for integrated risk assessment of adequate and effective preventive measures in all ministries and departments, as well as municipal authorities;
- The issuance of a special cognitive popular literature intended for the general population in the area of human behavior and human adaptation to a particular emergency;
- a number of NGOs functions in Armenia dealing with environmental safety and human life; IAELS AO (Armenian branch of the International Academy of Ecology and Life), Armenian Branch of the REC Caucasus "and more than 60 public departments of environmental and economic territorial security, annual debate and find solutions to controversial issues of environmental safety. AO IAELS periodically publishes two issues a year, a special magazine "Herald" IAELS, reflecting the management arrangements for any risks in Armenia. The Internet site of the RA Ministry of Emergency Situations is functioning.

#### Context & Constraints:

Lack of organizational effort on making it difficult for all main and partner organizations in the security environment and humans.

Lack of funds for the organization of work in the field and communities for the development of mechanisms for DRR.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

#### **Description:**

Since 1993, Crisis Management State Academy was created within MES of RA which operates till today and plays a central role in the preparation of the population, leading cadres of different levels and experts.

#### **Context & Constraints:**

Lack of funds for the organization of outreach trainings in the field.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

- \* Yes: Research outputs, products or studies
- \* Yes: Research programmes and projects
- \* No: Studies on the economic costs and benefits of DRR

#### **Description:**

The main indicator Authorities, scientific-research companies ("Georisk", "Geocom", "Iris") and non-governmental organizations (AO International Academy of Ecology and Life, Armenian Technological Academy) play a key coordinating role in the development and implementation of research, modeling, with the goal to



assess vulnerability and risk of natural and man-made disasters and ecological and biological processes realizing due to budgetary and investment tools as well as consultative assistance to international organizations (the Armenian branch of the United Nations, Department of the OSCE, the Coordination Council of CIS countries on prevention and liquidation of consequences of emergency situations).

#### Results and derivatives of researches

Studies to reduce the risk and consequences of possible disasters in Armenia increase awareness and preparedness for the adoption of administrative decisions:

1. The introduction of an integrated approach to the assessment of natural hazards and man-made impacts on the environment as an example of Yerevan, NICK "Geocom, 2003 (investing financing UNDG)
2. Geodynamic and geological engineering aspects of risk assessment from the manifestation of the exogenous production of RA, NICK "Geo", 2002-2003, UNDP funding
3. Assessment of vulnerability and reliability of areas and the aquatic environment from the manifestation of man-made objects and natural processes in mining objects of Syunik marz. 2003, "Iris" (PROON financing)
4. Geophysical model and expert system evaluation of seismic activity for Earthquake Risk Management, 2003-2007, Department of Emergency Nssp RA (Government funding)
5. Improving the information base of natural and man-made disaster in the territory of Armenia and the establishment of a common information base on actual damages for various emergencies for risk assessment. PAS MES RA - 2007 (Budget financing)
6. Evaluation of landslide hazard and risk from the manifestation of landslide genesis and activity in the territory of Armenia. Studies evaluating risk factors for activation of landslides and erosion, development of control mechanisms and engineering activities of seysmization, landslide sites in Armenia. Ministry of Urban Development, NIC "Geo" 2004-2006. (Funding for the project under contract with Georgia LSAI)
7. Improvement and implementation of integrated risk assessment:
  - From heavy metal pollution in urban areas (2005)
  - From natural and man-made radioactivity (2005)
  - From biogeochemical mineral elements in the ecosystem (2005, 2006).UENI NAS (Government funding).

#### Research programs and projects

1. Engineering studies of the complex in the Tavush region. Identify factors that contribute to enhancing the stability of landslide sites in the architectural complex. Engineering measures to prevent the activation of landslides and erosion, protection of territories and agricultural territory. (Order ARM/02/011 UN program - "Partnership in the implementation of development programs at the community level" - 2005. NICK Geo)
2. A joint partnership program of the South Caucasus (Commonwealth of Armenia, Azerbaijan, Georgia, Belgium, Norway, USA - 2005. Funding and support for the NATO / OSCE "Science for Peace) 2005. TSENI NAS.
3. Development of scientific and methodological basis of forecasting of dangerous hydrometeorological processes, provoked by the spring and autumn flood for example, river basin Aghstev in Tavush marz and development of activities to advance the protection of the population and territory. (PAS MES RA Ministry of Nature Protection) - 2010-2012. Organizational support and funding for the OSCE.

#### Study of economic effectiveness of DRR

Any program of research and evaluation of geo-ecological and economic security is ensured by economic and operational efficiency, which is evaluated by engineering protection of territories and objects in the area of hazardous processes. The project provides monitoring control of effectiveness.

#### **Context & Constraints:**

The absence of overriding responsible for planning, analysis, methodological and organizational activities, coordinating the full range of assessment and vulnerability of DRR.

Lack of information partnerships of monitoring of the various professional synergistically linked by the

common purpose, provision of ecological and sociological public safety and reducing the vulnerability of areas and natural and man-made objects.

Significant negative role in the development of DRR is the lack of financial provision.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

With taking into consideration that the strategy of informing the population about the risk of disasters and the ability to reduce exposure to hazards is a responsible, long-term and necessary task in the instruction of DRR, the level of progress can be assessed as some progress, but without a systematic strategic institutional commitment.

#### **Key issues and means of verification**

Public information companies exist, but their activity is not correlated on necessary level and depends on the actions of territorial administrations, simulating basically only occurring disaster of any scale.

Trainings of local authorities carried out regularly by special exercises for leading municipal authorities' actions with the involvement of the communities.

In particular, from 11 to 17 September in the country a multinational exercise on organizational mechanisms of action during emergency situations of natural and anthropogenic origin in the territories of Kotayk and Yerevan communities is planned.

Naturally, all activities aimed at improving the culture of adequate DRR activities.

#### **Context & Constraints:**

There is no centralized management for actions in the national structures system due to absence of national system of monitoring, analysis and early warning of population.

---

## **Bulgaria** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Regular information campaigns for awareness of the population about the main rules for reaction and protection in case of disasters;

Open doors days and events for celebrating the International Disaster Risk Reduction Day have been organized to promote the DRR efforts in the country

**Context & Constraints:**

Developing of closer cooperation between institutions related to disaster risk reduction is needed

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* No: Professional DRR education programmes

**Description:**

Teacher's book containing the methodology for effective modern methods for education on the disaster protection. The methodology includes 3 Teacher's books for every stage of education – elementary, secondary and high school.

2. out-of-school training activities for disasters protection:

- Republican school competition "Disaster and accidents protection", aiming at verifying the knowledge and skills acquired in the basic course, as well as encouraging the participants to continue their

preparation for emergency reaction.

- National competition for children's drawings MISSION RESCUER, held together with the Ministry of Education and Science, National Palace of Children and the International competition MISSION RESCUER, hold under the auspices of EUR-OPA Major Hazards Agreement.

3. educational materials:

- for children in the kindergartens - a coloring book "About the disasters – main rules for kids", containing 10 rules for reaction in case of different disasters as well as boards and maps with educational aim.

- for children for secondary school educational boards and posters are created.

**Context & Constraints:**

Limited financial resources

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Currently Mol works together with universities, Bulgarian Academy of Science, National Institute of Meteorology and Hydrology on the DRR related topics.

**Context & Constraints:**

n.a.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Strategy for training activities for the population in the area of disaster protection. Training programs for number of target groups are drawn. At national level voluntary teams are established. Chief Directorate Fire safety and Civil Protection creates and fills the list of the voluntary teams for disaster protection and list of the instructors of the volunteers.

**Context & Constraints:**

After the incorporation of DG Civil Protection and DG Fire Safety and rescue, the voluntary formations will be also integrated so that to mitigate the duplication of functions and activities.

The migration of the working population from the small towns and villages to the big cities complicates the formation of voluntary units in territories remote from the regional services with professional firefighters and rescuers.

## Czech Republic (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

Several web pages exist like the web page of the Czech Hydrometeorological Institute (<http://portal.chmi.cz>) , Fire and Rescue Service, River Catchment Authorities. Also the Czech Flood Commission under the Ministry of Environment has special web pages for floods and flood warnings ([www.mzp.cz/AIS/web-pkomise.nsf](http://www.mzp.cz/AIS/web-pkomise.nsf))

**Context & Constraints:**

The above mentioned web pages work quite well. However, complex pages for all disasters have been planned but not realized yet.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

The curriculum has been used in some schools and areas but curriculum for the whole state needs to be developed and approved for the state level. Special care to such a curriculum has recently been devoted by the Regional platform in Moravian-Silesian region.

**Context & Constraints:**

School plans have been under recent reform coming with a new government - it is necessary to include DRR in school curriculums.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Some institutions like the Czech Hydrometeorological Institute, Institute for Atmospheric Physics or Water Research Institute of TGM and River Catchment Authorities participate in various projects devoted to flood and disaster reduction. Also some universities participate in such projects and programs.

**Context & Constraints:**

They are many research projects but a systematic and coordinated approach needs to be improved.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

#### **Description:**

Educations and campaigns have been done especially in flood prone communities but usually in connection with some recent flood event. Mayors and members of local crisis management staffs have been trained. The Czech Association for Flood Protection, Fire and Rescue Service and the Czech Hydrometeorological Institute often help with such trainings.

#### **Context & Constraints:**

The main problem is involving of NGOs at community level. There have been just a few of such organizations. The best organizations existing practically in all communities are Voluntary Firebrigades and they should be more involved in such activities.

---

## **Finland** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

No

#### **Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

The National Platform has identified the need for a web site for natural hazards ([www.luonnononnettomuus.fi](http://www.luonnononnettomuus.fi)). As per the preliminary discussions, the site would present the DRR network in Finland, describe the various natural hazards and what is being done to reduce the risks in Finland. It would allow easy access to further information from the network, from UN and other sources. Prime Minister's Office is developing a system (so called crisis portal) which can be used during the crisis to disseminate information to the public.

**Context & Constraints:**

The need for easily accessible and relevant information on disasters, including disasters related to climate change, is recognized and this will be addressed by the National Platform.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

Every year over 400 schools and 40 000 pupils participate to a Nou Hätä -campaign for 8th grade pupils. The campaign aims at improving readiness to function in accident situations. Campaign is executed together with schools and fire brigades.

Natural hazards are not systematically included in the national educational curriculum. The different types of hazards are covered in primary and secondary school curriculum, but the focus is on the mechanism of how these hazards are created, not so much on what could be done to prevent and reduce the losses.

Depending on the University degree, the natural hazards may be covered quite profoundly, or not at all. There is a culture of safety and resilience what comes to prevention of traffic accidents or fires, but not on natural hazards. Again, this has to do with the fact that Finland is not prone to natural hazards.

**Context & Constraints:**

Considering the low prevalence of natural hazards in Finland, the current education does cover the basic needs. However, realizing that families travel to disaster prone countries and that there have been more severe storms in Finland, there might be a need to consider the inclusion of more DRR related education material to school curricula.



### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

#### **Description:**

Climate Change Adaptation Research Programme ISTO. The financing of the five-year research programme (2006-2010) comes from various sources. Studies are carried out under the performance guidance of various institutes and by means of project funding from different ministries and other research and development funding. In 2006-2009 a total of 0.5 million euros was allocated to altogether 28 research projects. The main financiers are the Ministry of Agriculture and Forestry and the Finnish Environmental Cluster Research Programme of the Ministry of the Environment.

Academy of Finland has also launched a multidisciplinary research programme on climate change (FICCA). The programme is approx. 12 million euros in 2011 - 2014.

#### **Context & Constraints:**

Limited budget.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

More emphasis is needed on public education. The awareness among the general public is mostly related to recent major emergencies abroad, such as earthquakes, and the humanitarian needs, or domestic emergencies, such as the storms, not on disaster risk reduction efforts.

In the Rescue Act there is the obligation on self preparedness. The aim is to make people recognise their own responsibility for developing and maintaining a safe environment.

Owners and occupants of buildings, business entrepreneurs, government offices and agencies, and other organisations are obliged to prevent adverse incidents. The obligation to prevent accidents and adverse incidents applies to both the care of buildings and operations conducted in them. Readiness must also be maintained for protecting persons, property and the environment and undertaking rescue operations in the event of an adverse incident.

Households are required to make provision for various types of adverse incidents and for rescue operations for which they are independently capable. The aim is that people know how to take precautions and act at home and work in the event of a protracted disorder affecting society, such as a failure in the power, heating or water supply, or storm devastation. Homes should be stocked with several days' supply of food, any medication taken regularly, and other daily necessities. It is also a good idea to keep batteries readily available for use in the event of a power failure.

Each person should act responsibly in situations where there is a risk of fire or other accident. The Rescue Act specifically mentions open fires, prescribed burning, fire safety in peat production areas, and the risk of forest fires. Each individual is obliged to take part in rescue operations in the event of a fire or other accident. Persons in danger should be warned and an emergency call made, and everyone should undertake rescue operations to the best of his or her ability. Smoke detectors are compulsory for each dwelling. Each occupant should install a smoke detector in the home. A smoke detector will detect a fire that is starting, at the earliest possible moment, and alert those in the living space. The exits and access routes of buildings must be kept serviceable and free of obstructions. Rescue routes intended for emergency vehicles must be usable, free of obstructions, and appropriately indicated.

**Context & Constraints:**

People are highly vulnerable to cuts of electrical power. Rural areas are slightly more prepared than urban areas, but in general there is a huge need to increase people's awareness of what can be done in advance to ensure that they will survive without electricity at least for a few days.

---

## Germany (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

> Denis 2 plus (2009) [http://www.bbk.bund.de/cln\\_007/nn\\_401154/DE/02\\_\\_Themen/05\\_\\_Krisenmanagement/01\\_\\_deNIS/02\\_\\_deNISII/deNISII\\_\\_node.html\\_\\_nnn=true](http://www.bbk.bund.de/cln_007/nn_401154/DE/02__Themen/05__Krisenmanagement/01__deNIS/02__deNISII/deNISII__node.html__nnn=true)

\* No: Established mechanisms for accessing DRR information

### **Description:**

The "Federal Office for Civil Protection and Disaster Assistance" (BBK: see the links below) provides in its "German Emergency Planning Information System" (deNIS IIplus) an extensive collection of Internet links for all relevant information, including actors and institutions in disaster reduction, prevention, management and potential. The "Federal Office of Civil Protection and Disaster Assistance" (BBK) has chosen this means of distributing information to the public because it does not entail data creation, rather the compilation, organisation, and centralisation of exhaustive, official, pre-existing information in a manner that can be navigated more readily. For additional information on climate change, the "Federal Environment Agency" (UBA: see link) and other public authorities cooperate extensively to provide information to all stakeholders.

On the Federal States level, the "Crisis Management and Disaster Relief Centre" of the BBK operates the "German Joint Information and Situation Centre of the Federal Government and Laender" (GMLZ: see link), which provides information for the Federal States (Laender) and Government as well as organisations in large-area damage situations or other circumstances of national importance. By order of the Ministry of the Interior, the GMLZ is also involved in the EU collective procedure on intensified cooperation in international disaster control (see Priority 2).

The "German Meteorological Service" (DWD: see link) provides meteorological services, short and long-term recording, monitoring, and evaluation of meteorological processes in the atmosphere as well as its structure and composition, the recording of interactions between the atmosphere and other environmental spheres, the forecasting of meteorological processes, the operation of the necessary measuring and observation systems and the provision, storage, and documentation of meteorological data and products. It circulates this information through the media, its own homepage or others such as [unwetter.de](http://www.unwetter.de) (see link).

The "Helmholtz Research Network" provides scientific experts with information and data on natural disasters through its network in its "Natural Disasters Networking Platform" (NaDiNe: see link) for the press and the public. The website "metapage" (see link) makes comprehensive data about flood protection/management available and the insurance industry has the systems and publications such as the yearly review of the Munich Re Group and its NatCat Service (see link). The "German Committee for Disaster Reduction" (DKKV) provides extensive information about all kinds of disasters in its publications and on its website (see link).

The "Federal Ministry of Education and Research" (BMBF) finances research for civil security. Moreover 2009 a "Research Forum on Public Safety and Security" (RFPSS) was established, which aims at the cooperation and synergies of the interdisciplinary cooperation regarding public safety. Inter- and transdisciplinary evaluations of the subject will be developed, which will generate recommended procedures for policy, economy and science.

One of the objectives of the High-Tech Strategy of the Federal Government seeks to strengthen the social and technical infrastructures against man-made and natural disasters using innovative technologies. It is a platform for strategic cooperation between economy, administration, science and the end-users. This initiative facilitates the networking of the different fields of research but also the exchange between research and the users and the operators of critical infrastructures and the providers of security solutions.

The Climate Service Center (CSC) has been established within the framework of the High-Tech Strategy. It supports the climate change projects KLIMZUG (see link & Priority 4.a) and the closed project klimazwei (see link & Priority 4.a). Knowledge about the climate system, data, regional climate projections and long-term series of measurement are provided by CSC. Thus it is utilising existing knowledge about climate change. The service of CSC goes beyond the provision of information and includes also the analysis and interpretation of climate projections and consulting services.

In the context of climate change four regional Climate Agencies (see link) are active of which two are relevant in the context of DRR. Each of them focuses on different aspects of climate change and bundle the research results about regional climate change. The Southern German agency provides expertise on extreme events like torrential rains and floods. In contrast, the Northern German climate agency focuses on storms and storm surges amongst others. Information about regional climate change are provided on the homepages of the climate agencies and are accessible interactively. Different climate projections for different parameters are available by these KLIMAATLAS (see links).

In the framework of The International Climate Initiative (Internationale Klimaschutzinitiative IKI) international adaptation projects like the "Global and Regional Adaptation Support Platform (CI: GRASP) are implemented. The project aims at improving availability of information for developing and newly industrializing countries in the context of climate change. Data about sea level rising, intense rain and implications of climate change are accessible through a web-based application.

RELKIM (see link) - a consortium of eight Helmholtz research centers conducts research activities in seven different topics for the time period 2009-2013. One of the subjects seeks to answer the question how climate change will affect the intensity and character of extreme weather events in future. For the research activity about 32 € million are available. In the course of these activities past and future climate scenarios are investigated including the future trends from storms, intense rain, heat waves, floods and droughts.

The county and community/municipality authorities as well as the emergency services and fire brigades have institutionalised a network of preparedness on the local level, which exchanges information but not in a systematic or centralised manner. The flood forecasting, management centres and different national authorities (see overview in the link "Hochwasserzentralen") offer information on water levels and flood risk (see the example).

In the case of international cooperation by German actors, providing advice and assistance in circulating relevant information about disasters at all levels has been implemented, for example, through country profiles with information about disaster risks (see link). It contributes to an international exchange of experiences through publications, events, conferences and dialogue boards.

### **Context & Constraints:**

The DKKV attempts to tighten the links and networks of its members (from all areas of disaster reduction and management) through its daily work, activities and events. The "Federal Office of Civil Protection and Disaster Assistance" (BBK) and the "Permanent Conference on Disaster Preparedness and Civil Protection" (SKK: see link) also pursue the goal of distributing information to all levels of actors and the public. But altogether there is an urgent need for an exhaustive database on all types of disasters.

In the opinion of most German actors in disaster reduction/management, there is not a lack in the range of available information but challenges of common understanding, awareness of responsibility/probabilities/possibilities by (potential) actors and not enough sophisticated networking, which must be improved at all levels through sensitisation and education (see the next Core Indicator). Additionally, a central database for all disasters is simply not yet available.

Related links:

Related links:

unwetter.de <http://www.unwetter.de/index.php>  
DWD [http://www.dwd.de/bvbw/appmanager/bvbw/dwdwwwDesktop?\\_nfpb=true&\\_windowLabel=dwdwww\\_main\\_book&switchLang=en&\\_pageLabel=dwdwww\\_start](http://www.dwd.de/bvbw/appmanager/bvbw/dwdwwwDesktop?_nfpb=true&_windowLabel=dwdwww_main_book&switchLang=en&_pageLabel=dwdwww_start)  
Flood Early Warning Baden-Wuerttemberg <http://www.hvz.baden-wuerttemberg.de/>  
Hochwasserzentralen <http://www.hochwasserzentralen.de/>  
NatCat Service [http://www.munichre.com/en/ts/geo\\_risks/natcatservice/default.aspx](http://www.munichre.com/en/ts/geo_risks/natcatservice/default.aspx)  
metapage <http://www.metapage.de/katastrophe/hochwasser/hochwasser.htm>  
SKK <http://www.katastrophenvorsorge.de/>  
InWEnt - Disaster Prevention and Management  
[http://www.inwent.org/themen\\_reg/themen/krisenpraev/katastrophen/index.en.shtml](http://www.inwent.org/themen_reg/themen/krisenpraev/katastrophen/index.en.shtml)  
DKKV <http://www.dkkv.org/>  
Publications of the Munich Re Group <http://www.munichre.com/en/publications/default.aspx>  
GMLZ [http://www.bbk.bund.de/nn\\_401590/DE/02\\_\\_Themen/05\\_\\_Krisenmanagement/03\\_\\_GMLZ/GMLZ\\_\\_node.html\\_\\_nnn=true](http://www.bbk.bund.de/nn_401590/DE/02__Themen/05__Krisenmanagement/03__GMLZ/GMLZ__node.html__nnn=true)  
NaDiNe [http://nadine.helmholtz-eos.de/intro\\_de.html](http://nadine.helmholtz-eos.de/intro_de.html)  
Umweltbundesamt (UBA) - English <http://www.umweltbundesamt.de/index-e.htm>  
deNIS <http://www.denis.bund.de/>  
BBK [http://www.bbk.bund.de/cln\\_027/DE/00\\_\\_Home/homepage\\_\\_node.html\\_\\_nnn=true](http://www.bbk.bund.de/cln_027/DE/00__Home/homepage__node.html__nnn=true)  
Hich-Tech Strategy <http://www.hightech-strategie.de/de/167.php>  
KLIMZUG <http://www.klimzug.de/>  
Klimazwei <http://www.klimazwei.de/>  
Climate Agencies (Klimabüros) <http://www.klimabuero.de/>  
KLIMAATLAS <http://www.norddeutscher-klimaatlas.de/> and <http://www.regionaler-klimaatlas.de/>  
RELKIM <http://www.reklim.de/de/startseite/>

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

The German scientific and university landscape offers a wide range of relevant study programs (BSc, MSc and PhD) and is at the moment especially developing its number of Master's Degree programs, such as the Master's in "Security and Danger Prevention" in Magdeburg, "Rescue Engineering" in Cologne or the old-established "European Master of Humanitarian Assistance" in Bochum as part of the "NOHA

International Association of Universities" (see links). On the academy for human sciences - AKKON (see link) the bachelor course "Emergency Practitioner" started 2009, with focus on disaster prevention and management. The "Federal Office of Civil Protection and Disaster Assistance" (BBK) and the University of Bonn established a Master's program in "Disaster Prevention & Management" (KaVoMa) in 2006 (see link). The program is designed as an on-the-job correspondence course while the monthly attendance takes place in the "Academy for Crisis Management, Emergency Planning and Civil Protection" (Akademie für Krisenmanagement, Notfallplanung und Zivilschutz (AKNZ): see link) of the BBK. The AKNZ also releases publications and provides learning/study programs in various forms to the public. Altogether there has recently been a strengthening in higher education programs on all levels. The DKKV provides a collection of all relevant study programs in Germany (see link).

Together with Siemens Business Services, the "Federal Office of Civil Protection and Disaster Assistance" (BBK) develops the "European Virtual Academy 4 Civil Protection" (EVA4CP: see links) on behalf of the EU. The Virtual Academy aims to implement an Internet-based platform and content management system for target groups, work on areas of common interest and exchange of experience, knowledge and best practice by the schools and training centres for Civil Protection, as well as develop the pedagogical and methodological concept for an e-learning module. There is also a number of appropriate school material from different actors such as the insurance industry, the "Federal Agency for Civic Education" (BpB: see link) and the DKKV (see link).

In addition, with the conscious inclusion and involvement of citizens, especially young citizens, in disaster protection and management (such as in the "Federal Agency for Technical Relief" (THW: see link) or the voluntary fire brigades), the German state is actively working to cultivate an existing partnership between the state, its organs, and its citizens. This partnership continuously demands the awareness of the reasonable and feasible responsibility of citizens for themselves and others.

The German international development cooperation considers the education sector as one of the most important tools for integrated Disaster Risk Reduction. As a result, it supports the integration of DRR in school curricula, education material and training for the employees of development cooperation themselves in various partner countries. In advanced trainings adjusted to the needs of actors in DRR, the concept of disaster risk reduction is elucidated, showing starting points for the integration of DRR into the respective field of work. InWEnt's flagship program in disaster prevention is mainly in the field of education, advanced training and emergency exercises. To provide another example, the German Red Cross has especially had success with training sessions in schools with teachers as multipliers as well as practical drills in disaster response with students, the effect of which raises the level of knowledge, awareness and commitment substantially.

### **Context & Constraints:**

Although there are many relevant study programs, there are challenges in three areas: (1) There is still no exclusive study program for disaster medicine, (2) disaster protection/management is not integrated enough in the studies of spatial and land use planning, (3) there is no systematic approach to incorporate relevant, disaster-related curricula into existing study programs. For example, courses of study such as architecture, engineering, chemistry, economics and many others do not generally discuss the elements of the respective field relevant to disasters. This has been initiated, but by far not yet accomplished. Developments in reforming school education in this regard is slow, likely due to the current lack of necessity and equally slow systemic development. The DKKV acts here as reminder and supporter, for example, with school materials.

In most countries, the awareness of the importance of DRR on national level is not so obvious that it shows in national plans, legislation and/or activities. The school curricula often do not take into account the importance of DRR, natural hazards and climate change. The Ministries of Education have to be more targeted in DRR programming on national level.

#### Related links:

DKKV <http://www.dkkv.org/default.asp>

THW [http://www.thw.bund.de/cIn\\_035/nn\\_244766/EN/content/home/home\\_\\_en\\_\\_node.html\\_\\_nnn=true](http://www.thw.bund.de/cIn_035/nn_244766/EN/content/home/home__en__node.html__nnn=true)

BpB <http://www.bpb.de/themen/l1QOLV,0,Umweltpolitik.html>

EVA4CP - Website <http://www.eva4cp.org/static/bbk/en/startpage.ihtml?register2=1>

EVA4CP - Background [http://www.bbk.bund.de/nn\\_402296/SharedDocs/Publikationen/Brosch\\_C3\\_BCren\\_\\_und\\_\\_Faltbl\\_C3\\_A4tter\\_20Download/Flyer\\_\\_EVA4CP,templateId=raw,property=publicationFile.pdf/Flyer\\_\\_EVA4CP.pdf](http://www.bbk.bund.de/nn_402296/SharedDocs/Publikationen/Brosch_C3_BCren__und__Faltbl_C3_A4tter_20Download/Flyer__EVA4CP,templateId=raw,property=publicationFile.pdf/Flyer__EVA4CP.pdf)

AKNZ [http://www.bbk.bund.de/cIn\\_027/nn\\_398004/DE/02\\_\\_Themen/13\\_\\_Aus\\_\\_undWeiterbildung/Aus\\_\\_undWeiterbildung\\_\\_node.html\\_\\_nnn=true](http://www.bbk.bund.de/cIn_027/nn_398004/DE/02__Themen/13__Aus__undWeiterbildung/Aus__undWeiterbildung__node.html__nnn=true)

German study programs - DKKV <http://www.dkkv.org/DE/links/default.asp>

Master Disaster Prevention & Management <http://www.kavoma.de/index.html>

NOHA [http://www.nohanet.org/index.php?option=com\\_frontpage&Itemid=1](http://www.nohanet.org/index.php?option=com_frontpage&Itemid=1)

Humanitarian Assistance - Bochum <http://www.ruhr-uni-bochum.de/zsb/master/human/human-ma.htm>  
Rescue-Engineering - Cologne

[http://www.studium.fh-koeln.de/pruefung/ordnungen/infos\\_zum\\_studiengang/u/01346.php](http://www.studium.fh-koeln.de/pruefung/ordnungen/infos_zum_studiengang/u/01346.php)

Security and Danger Prevention - Magdeburg

<http://www.hs-magdeburg.de/fachbereiche/f-bauwesen/Studium/sga/ma/>

AKKON <http://www.akkon-hochschule.de/>

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

There is a sophisticated research structure in Germany and many research projects are granted by the different national and European authorities. One example, the "Center for Disaster Management and Risk Reduction Technology" (CEDIM: see link) has dealt for many years with the subject of multi-risk assessments and analysis. These efforts continue and are readily made available to users at all levels with increasing measurement tools. Its "Synopsis of Natural Hazards" involves the development of probability or scenario-based deterministic methods to compare different types of risks. Currently, the German Free State of Saxony, where flood, storm and earthquake hazards dominate, has been selected as a case study. Additionally, the "CEDIM RiskExplorer Germany" is a web-based map viewer that interactively presents the results of the CEDIM project "Riskmap Germany" and allows the user to retrieve maps of datasets including natural and man-made hazards, vulnerability and risk, as well as assets (elements at risk) (see links). This attempt has kicked off the establishment of a multi-risk-disaster-management-system at the local level (ORTIS). Some municipalities began to introduce multi-risk disaster management systems like ORTIS. Multi-risk assessments expand more and more as an important research activity in

the European Union. In this context the EU tries to use the approaches more effective and improve the acceptance of risk reduction.

Together with the UBA (its "Competence Centre on Global Warming and Adaptation" (KomPass) and its professional information system (see links)) the "Federal Office of Civil Protection and Disaster Assistance" (BBK) centrally generates data of federal agencies/departments, countries, institutes and international institutions, providing them in a revised form to users of deNIS IIplus. Contents of this data include not only information about personnel, material and infrastructural assistance potential, but also information on the locations of risk-afflicted facilities. In its LUEKEX (Länderübergreifendes Krisenmanagement Exercise) the "Federal Office of Civil Protection and Disaster Assistance" (BBK) trains different actors at all levels in various situations of disaster management, in particular the crisis squads of the upper administration levels. The concluded research and development of the "German Research Network on Natural Disasters" (2004) included cluster analyses for floods, storms, earthquakes and wildfires as well as decision-making support for early warning, monitoring, information management and simulation hazards (see link).

The German insurance industry has sophisticated methods such as the databases of the Munich Re Group, e.g., the MRNatCat or MRNathan (see link). MRNathan is an Internet-based tool that helps to develop risk profiles as a basis for risk assessments and rating of natural hazards. Even the direct insurers in Germany use local risk assessments such as ZÜRS to rate the risk for insured facilities.

The German development cooperation aims to enhance its approaches for multi-risk analyses through the promotion of research at all levels. The GTZ accomplishes these mainly in South America and combines this research with cost-benefit analyses. At the World Conference on Disaster Reduction in Kobe 2005 the GTZ presented a concept for "Cost-Benefit Analysis for Disaster Risk Management" (see page 16 in the annex).

German Red Cross (GRC) programming on DRR including risks assessments always involves the local authorities, but depending on the country some achievements are neither comprehensive nor substantial at the moment. In other regions substantial achievement has been attained.

### **Context & Constraints:**

Germany has sophisticated research tools for multi-risk assessments, however, there still remain some basic deficits, such as a lack of quality control/oversight mechanisms as well as publicly accessible disaster databases. Generally, with the exception of the insurance industry, cost-benefit analyses are not integrated in the assessments and parts of the research are frequently just research without enough practical application or implementation.

While automatic fire detection systems have been installed in the most fire-prone Federal States (Laender) and a fire-danger rating system with 1-day forecast capability has been implemented nationwide, an advanced fire spread modelling system as well as training/capacity building for utilizing this information is not yet in place. Starting in 2008, a joint initiative of the "Global Fire Monitoring Centre" (GFMC: see link), a professional fire service and forestry school, is building a model for capacity building (wildland fire training academy), inter-agency cooperation, and integrated fire management in the State of Hesse, to serve as model for the other 15 Federal States (Laender).

Taken together, Germany has the right components for a centralised national multi-risk assessment program, which must be addressed in the next years by properly utilising the extensive resources that exist.

The German development cooperation aims to integrate climate change risks into its risk analyses and sees challenges in terms of a global necessity of scientific research.



The local authorities are always integrated in GRCs programming and risks assessments, but the level of collaboration could be strengthened, especially in linking local DRR plans with governmental plans and in supporting local DRR initiatives.

Supporting document:

GTZ - Cost-Benefit Analysis [http://www.preventionweb.net/files/2967\\_DKKVKobe.pdf](http://www.preventionweb.net/files/2967_DKKVKobe.pdf) [PDF 3.78 MB]

Related links:

Global Fire Monitoring Center <http://www.fire.uni-freiburg.de/>

MRNathan <http://mrnathan.munichre.com/>

German Research Network on Natural Disasters <http://bib.gfz-potsdam.de/pub/str0401/0401.pdf>

UBA - KomPass [http://www.anpassung.net/clin\\_117/nn\\_702286/SharedDocs/UDK-Dokumente/InKA.html](http://www.anpassung.net/clin_117/nn_702286/SharedDocs/UDK-Dokumente/InKA.html)

CEDIM - Research <http://www.cedim.de/english/14.php>

CEDIM - Synopsis of Natural Hazards <http://www.cedim.de/english/1020.php>

CEDIM Risk Explorer <http://dc108.gfz-potsdam.de/website/riskexp/viewer.htm>

CEDIM <http://www.cedim.de/english/index.php>

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

Many parts of this question have been addressed in the last three Core Indicators. Additionally, however, the DKKV has the official mandate to inform the public and build awareness for disaster reduction through campaigns, educational programs, events, informational brochures and much more (see extensive information in the link below). Through its members from all areas of disaster reduction, management and education, the DKKV multiples its approaches at all levels. The "Federal Office of Civil Protection and Disaster Assistance" (BBK), the UBA, other national authorities, as well as the German insurers work in a similar way by distributing information to the public through publications. All of these actors, especially the DKKV, circulate flyers about natural hazards and possible disasters to inform and sensitise the public. The continuous activities of the DKKV, such as its yearly forum for disaster reduction, aim to inform the broader public.

Most of the research facilities have their own division for the press, public and even for educational campaigns, conferences or school visits. The German press landscape (even the mass media) has had a larger focus on natural disasters and the impacts of climate change, at the latest since the Elbe Flood in 2002 and the Tsunami in 2004.

The THW and other actors in disaster management such as the German Red Cross regularly participate in a variety of different activities to increase citizens' awareness of their focus and profile through exhibitions, dialogue with citizens, and outdoor activities in public places, among others.

The "Federal Foreign Office" (AA: see link) regularly finances practical international training courses, e.g., for seismologists from states particularly affected by earthquakes carried out by the GFZ Research Centre Potsdam (see link) and so-called „training for the trainer" courses for staff of UN organisations. It furthermore facilitates projects for international research cooperation in the context of earthquake early warning in central Asia.

The German development cooperation supports the improvement of public awareness in partner countries through campaigns and participative risk analyses at all levels. Through this work it also contributes to increased awareness in Germany. The improvement of resilience to disasters is one of the main approaches of the development cooperation agencies.

The German Red Cross and national Red Cross and Red Crescent Societies with a high profile in Disaster Reduction, Prevention and Management (such as those in Indonesia or Bangladesh) engage in national awareness campaigns and programs.

Public information on wildfire risk in generally is sufficiently broadcasted. A national wildfire prevention symbol exists since several decades and is used by State Forest Services and NGOs (e.g., German Forest Protection Association).

#### **Context & Constraints:**

Nonetheless, public awareness for DRR is developing slowly, likely because of the current lack of urgency. With the exception of the aforementioned incidents, such as the Elbe Flood in 2002 or Hurricane Kyrill in January 2008, the German public is seldom confronted with major natural hazards with far-reaching effects, therefore making permanent awareness more difficult. There is, however, disaster resilience, especially in rural communities, although this is more of a result of tradition than current strategies.

Related links:

GFZ Potsdam <http://www.gfz-potsdam.de/portal/>-

AA <http://www.auswaertiges-amt.de/diplo/en/Startseite.html>

DKKV <http://www.dkkv.org/>

---

## **Italy** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is there a national disaster information system publicly available?**

No

#### **Means of Verification:**

\* No: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

Information concerning disasters is gathered, treated and disseminated by the competent institutions and agencies of the National Civil Protection Service. The National Civil Protection Department has the responsibility to supervise the whole system, to identify lessons learnt and to draw guidelines concerning specific aspects. Internet news, monographs, DVDs, press releases and technical reports are regularly circulated both to the public and to the Civil Protection community in order to ensure dissemination of information.

**Context & Constraints:**

An intensive effort has been made in the last years to improve information sharing. All natural and man-made disasters requiring a National support have been managed according to a policy aiming at the maximum transparency and availability of information. Information availability is lower in relation to smaller events managed by municipalities, provinces and/or regions. While some regions have strong information policies in place, some others still experience difficulties related to information gathering, treatment and/or dissemination.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

Disaster Risk Reduction is currently not included into school curricula. However, in recent years several university courses and postgraduate specializations in Civil Protection, covering DRR as well as other related topics, have been introduced. All relevant subjects are also integrated into a number of training courses provided to a DRR professionals, practitioners, volunteers, mayors, etc.

**Context & Constraints:**

Introduction of DRR elements into standard school/university curricula has been often debated in the

Country. For the time being, only small results have been achieved in this field. On the other side, a wide range of generalist and specialist curricula are available for those that, for personal or professional reasons, want to concentrate on DRR issues.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

Regional and National authorities are in charge of mobilizing resources and capacities to develop methodologies and tools for assessing vulnerability and the impact of hazards. In this framework, a particular attention is given to multi-risk assessment tools and capabilities. A system of multi-risk “functional centres” is in place, composed by a Central Functional Centre hosted at the National Civil Protection Department and Regional Functional Centres arranged by regions. Functional centres are the core of the National warning system. Each centre performs forecasting, early warning and now-casting by pooling, analyzing, synthesizing and disseminating data and information produced by their own technologies (such as networks of remote sensors, etc.) and by systems belonging to other agencies. Cost-benefit analysis is an integral part of the procedures of identification, evaluation and acquisition of technologies and tools. Moreover, arrangements are in place aiming to ensure the full participation of the scientific and research community in all mentioned activities.

#### **Context & Constraints:**

The National warning system is being further improved through the development of stronger earthquake and volcanic networks. The only challenge identified in this field is the need for a more structured coordination of research policies and programmes.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

- \* Yes: Public education campaigns.
- \* Yes: Training of local government
- \* Yes: Availability of information on DRR practices at the community level

**Description:**

Several disaster awareness campaigns have been performed in recent years. Extensive campaigns have been carried out by using all available communication means and tools. General campaigns include earthquakes, floods, heat waves, severe storms and other risks. Additionally, tailored communication on earthquakes, volcanoes, tsunamis etc. has been brought to communities living in territories affected by specific risks.

Public information concerning disasters is performed by the Civil Protection Department at the National level, by Regional Administrations at the regional level and by Mayors at the local level. Other actors such as the National Fire Brigade, the National Forest Guard and volunteers' associations promote disaster awareness as well.

**Context & Constraints:**

Difficulties are still experienced in reaching small communities settled in remote and isolated areas

---

## Norway (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* No: Web page of national disaster information system
- \* No: Established mechanisms for accessing DRR information

**Description:**

Through different networks and other information sharing systems information on disaster risks and protection options for local authorities in high risk areas is easily available and understandable to enable for them to take actions to reduce risk, and build resilience. The national Emergency Planning College has the last couple of years developed new courses to teach citizens and local administration different aspects of disaster risk reduction. The college is organized under The Directorate for Civil Protection and Emergency Planning (DSB).

A new website for climate change adaptation was launched in 2009, including research results, examples

of good practices, guiding material, maps, etc. In 2010, a new website for crisis information was established. The website will present updated information from a number of relevant sources in case of serious crises.

**Context & Constraints:**

-

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

There are several initiatives for teaching children about disaster-risk related issues, both in school curricula and in the media. There is an ongoing work to coordinate and develop this further in a more coherent way. The Directorate for Civil Protection and Emergency Planning is currently working on a project to strengthen curricula in disaster risk reduction in schools, covering a wide range of hazards, The directorate is also engaged in an EU funded project which aims at developing a PC 'self help' game to be used in primary schools.

**Context & Constraints:**

-

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

A national risk assessment is carried out in 2010/2011. The aim is to create a cross sector approach to risk assessments enabling national authorities to compare different types of hazards and risks. The methodology is inspired by the Dutch and British approach, in which different types of events are measured according to their likelihood and consequences, and finally put into a matrix. A cross sector risk matrix will give Norwegian authorities a better understanding of national risks and vulnerabilities, and hence a better basis for prioritizing preparedness resources. The first national risk assessment will be published early 2011.

Through science programmes on disaster risk, authorities is playing a role in strenghtening the technical and scientific capacities to develop and apply methodologies, studies and models to assess vulnerabilities and impacts of hazards, including the improvement of regional monitoring capacities and assessments. The research is conducted in several scientific networks involving all the major univerisites and research establishments.

The research programme "Societal Security and Risks" - SAMRISK aims at increasing the knowledge about threats, dangers and vulnerability, about how unwanted events can be prevented and crises management be strengthened, whilst respecting basic human rights and privacy. To obtain this the programme will contribute to developing new knowledge, build networks and also qualify the research community to participate in the EU research programme "Security".

**Context & Constraints:**

-

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

There are several countrywide public awareness programmes with the aim to integrate disaster risk

reduction into every-day life. A new act on planning and building aims to decrease disasters through risk reduction in planning. A new civil protection act highlights the role of the municipality level in disaster risk reduction. Both acts impose the use of risk and vulnerability in connection with land-use planning and new area developments. According to the new act on civil protection, annual exercises have to be held at municipality level in order to strengthen emergency preparedness at local level.

**Context & Constraints:**

-

---

## **Poland** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Information on DRR is diffused. Works in this field are carried out. Good example of such works is web page dedicated to early warning established by Institute of Meteorology and Water Management

**Context & Constraints:**

Taking into account already existing information there is a need to improve disaster information system.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum



\* No: University curriculum

\* Yes: Professional DRR education programmes

### **Description:**

Despite of not comprehensive and only substantial achievements good examples of activities within the area of education already exist due to Institute of Meteorology and Water Management (IMGW) activities .

#### Education at schools

Preparation of the educational materials for teachers for use during lessons at school –with general objective – how to prepare for flood )-basic information and tests for children, title: How to cope with flood –didactic materials for teachers; IMGW 2003

#### Education for media

The handbook “Collaboration with media”- IMGW 2003 – publication for journalists entitled “Natural hazards”-general idea of this publication–how to use “user friendly” definitions in information provided to the public and general overview of IMGW activities as NMHS

#### Office for Local Government Collaboration in IMGW

Date of creation -2004

Main tasks:

- Improvement of collaboration between the Polish NMHS (IMGW) and local authorities on the flooding issues
- Organizing series of meetings between IMGW and local governments with the aim to exchanging experiences
- Collaborating with other IMGW organizational units in preparing informational materials as well as in line of Institute services and products attractive to local governments
- Local warning systems-example

#### Center for Hydrological and Meteorological Education in IMGW

Date of creation 2006

Main task: providing workshops an lectures for administration and other entities in hydrology, meteorology, water management issues, data base and GIS solutions( for example flood hazard and flood risk maps), crisis management and public participation.

SParticipation will be free of charge, financing provided by National Fund for Environment and Water Management

### **Context & Constraints:**

Good examples of education activities sholud be widely disseminate. There is a need of financial support of such activities specially within the area of "training of trainers".

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strenghtened.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

There are examples of research activities financed by EFRD as well as VIIth Framework Programme and also national research sources. One of the examples is project conducted by Institute of Meteorology and Water Management :“Impact of the climate change on environment, economy and society”(changes, impacts, ways of limitation, proposals for science, engineering in practice and economy planning)  
Source of financing: Operational Programme 2007-2013 -Innovative Economy (IE OP), financed from the EFRD.

Key tasks of the project:

- Climate change and its impact on environment in Poland and estimation of economical effects
- State of atmospheric pollution in Poland and its impact on the quality of life –possible solutions
- Sustainable management of water, natural and forest resources
- Natural disasters, civil protection, internal public safety
- Development of the new methods of forecasting, warning systems
- The Baltic Sea - element of the climatic system and its role in creation of risk conditions
- Determinants, risks and possibilities of realization of water supply program in view of climate change
- Preventing of degradation of the artificial reservoirs (technical aspects, sediments)
- The development plan of the Vistula basin

**Context & Constraints:**

The important for future success will be dissemination of results of already realized as well as next research projects focused on DRR.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Do public education campaigns on DRR reach risk-prone communities?**

No

**Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

**Description:**

The great importance of civil readiness to face extreme threats is clear. We consider civil readiness as pragmatic, legally normalized responsibility for realization of certain tasks and duties, beginning from the House of Parliament and finishing at individual inhabitants. In such case there is a great need to improve strategic approach regarding comprehensive action dedicated to the public awareness in Poland.

**Context & Constraints:**

The basis of any co-operation with the society is access to information, which can support every activity. In the civil readiness system, a media information policy must be included. In this field we still have much to do in our country.

---

## Romania (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

In 2005 a 3-year strategy for emergency situations public information and training was implemented in Romania. This strategy is part of the "Natural Disaster Risk Reduction and Management – consultancy for the development and the implementation of a national public awareness campaign" project.

In 2007 a national campaign for emergency situations public information and training, based on a study revealing public knowledge, perceptions and attitudes concerning emergency situations was conducted.

In the later years a higher involvement of the non-governmental sector in the development of school curricula concerning emergency situations training and in the development and dissemination of education material for public information and awareness became necessary.

The most important ways to inform the public are mass media and on-line monitoring systems (such as earthquakes monitoring system available on [www.infp.ro](http://www.infp.ro))

**Context & Constraints:**

Even if the public is well informed and possesses enough experience in emergency situations (especially floods), people are not aware that Romania is permanently a subject to disasters and that this situation should lead to a proper lifestyle and a rapid response culture. Thus the Romanian community coping capacity and resilience to disasters is diminished. Romanian public possesses general knowledge of

required attitude, behaviour and actions in case of emergency situations, but it lacks practical experience. There is little involvement of civil structures in emergency situations issues. The population is rather indifferent to disaster prevention and response, mostly due to the belief that it is the authorities' responsibility to react and reduce the effects of a disaster. Further constraints are related to required financial efforts in order to maintain and improve on-line monitoring and warning systems.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national educational curriculum?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

#### **Description:**

In 2007 the project "National strategy for emergency situations public information and training" was developed.

During 2007 - 2010, teachers and personnel working with public authorities involved in emergency situations prevention and response conducted an emergency situation training campaign from pupils to students. This training consists in knowing specific regulations, providing first aid, specific training, warning and evacuation applications.

Another project developed in 2007 consists in including the optional subject "Natural disasters" in the preschool and school curricula.

#### **Context & Constraints:**

In some cases, teachers are not aware about the importance of pupil's emergency training and thus they use the time dedicated for this training to teach other subjects. This shows how important it is to make "preparedness for natural disasters" an important subject in school curricula.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

### **Is DRR included in the national scientific applied-research agenda/budget?**

-- Nothing reported within this timeframe. --

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

There is a project upon developing an East-European Multi-Risk Management Center. This center will ensure the risk management for geological, hydrological, climate and technological events. The project takes into account the existing system upon which this center will be build.

#### **Context & Constraints:**

The mentioned project is almost complete, but it requires further funding and institutional support.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

### **Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

#### **Means of Verification:**

\* No: Public education campaigns.

\* No: Training of local government

\* No: Availability of information on DRR practices at the community level

#### **Description:**

The National Strategy for Emergency Situations Communication and Public Information was developed and implemented during 2008-2010.

Furthermore, the National Strategy for Emergency Situations Public Information and Education is been developed and partially implemented.

#### **Context & Constraints:**

Lack of required funds and human resources are the main constraints. In order to properly build up the public awareness, public authorities' activities must collaborate with mass media and NGOs. Mass media emphasizes touching stories and shocking images. Thus, mass media prefers to present the disaster's effects rather than the risk reduction measures and proper behavior in case of disaster.

## Sweden (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### Description:

A new Internet site has been developed by the MSB to provide information about risks that are caused by humans, mainly in the home and the leisure environment ([www.dinsakerhet.se](http://www.dinsakerhet.se)). The MSB's Internet site has a page about the individual's safety and security including DRR. Individuals can find out what they can do, where to turn for help, how to react to different events (before, during, after) and what areas in Sweden are most vulnerable or are at high risk.

Information that is developed by the Swedish Delegation for Landslides and the Government Network on Beach Erosion both led by the Swedish Geotechnical Institute is available to the public. The public can gain access to landslide or flood risk maps on MSB's web site.

The County Administrative Boards and the municipalities have the responsibility to keep both the public and media informed. The County Administrative Boards maintain a well-developed system of information called the WIS. This is a national, Internet-based information system, created to facilitate information sharing between entities working with one or more phases of emergency management.

The National Food Administration has for over ten years informed, practiced, and supported risk and vulnerability analysis, etc. to enhance local and regional knowledge, skills and abilities.

The Swedish Natural Hazards Information System provides historical data since 1950 for major natural disasters that have occurred in Sweden. Documents have been gathered by public authorities and organizations. MSB has made a compilation of data about the causes of accidents and events. Prevention measures, the impacts of the disaster and lessons learned are also incorporated where this information is available. The database is on the Internet and is updated annually. Some of the data is in English and can be accessed through UNISDR's PreventionWeb.

The Swedish Meteorological and Hydrological Institute (SMHI) issues public warnings and information about climate and weather on the website. MSB operates together with SMHI to produce and maintain the national forecast service for forest and vegetation fires.

Several agencies within the Swedish National Platform for DRR are working on climate issues, including the Swedish National Board of Housing, Building and Planning, the Swedish Civil Contingencies Agency (MSB), the Swedish Meteorological and Hydrological Institute (SMHI) and the Swedish Geotechnical

Institute (SGI). These provide a research and information base for climate adaptation work, such as climate analysis, flood risk mapping, slope stability mapping, beach erosion, as well as guidelines for risk and vulnerability assessments. They also decide on the information that will be added to the Swedish climate adaptation portal. The purpose of the portal is to disseminate knowledge and information on climate adaptation. The portal maintains information about how climate change affects different sectors of society and examples of adaptation measures.

The RIB - Integrated Decision Support System is a system, created and maintained by the MSB for prevention and emergency management, includes an extensive digital library, a chemical database with dispersion models, risk management tools and a command and control system. MSB received a government mandate to establish a crisis information web site [www.krisinformation.se](http://www.krisinformation.se) to coordinate national information and to link to all sectors of society in the field of crisis management. The Mapping, Cadastral and Land Registration Authority of Sweden maintains a geodata portal as a gateway to web-based geo-information and services. The portal is developed over a period of time and is now in its first version. The geodata portal contains metadata that makes it possible to search, find, view and download geographical data from different sources and are physically stored in different environments. The portal will also become the main node for Sweden's cooperation in Europe under the EU INSPIRE directive.

### **Context & Constraints:**

National and county authorities provide much information about risk, however this information should be coordinated in a better way to make it easier for the public to learn and understand what they can do. The level of useful information, facts, tools etc. for DRR for local planning vary a lot. Circumstances are not the same across Sweden, so it is important to note the special conditions that exist in different geographical areas. Information to the public needs to become much more detailed. It also should be easier to find, and the national and regional level should more actively assist the local level in balancing and weighing together the facts. It is often difficult to know how to make priorities and which level to plan for.

There are still many details that need to be worked out regarding the production and spread of disaster information including adequate engagement by decision-makers.

The Swedish Natural Hazards Information System can be improved. More Information should be made available and recorded in the system. Government authorities should help to strengthen the capacity to absorb information about risks and to act appropriately and timely.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Is DRR included in the national educational curriculum?**

No

### **Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

### **Description:**

Training at all levels, as indicated above, is a critical instrument in order to enhance a society's coordinated capacity to respond to accidents and crisis. The Swedish Civil Contingencies Agency (MSB) has received the task from the government to ensure that training for crisis/emergency/disaster preparedness is available to all relevant actors within the national crisis management system. The Mapping, Cadastral and Land Registration Authority of Sweden offers educational courses to define the need for geographic data during a crisis.

The MSB publishes and distributes basic educational materials about natural disasters for children from ages of 6-11 and more information for children between the ages of 12-19. For those children younger than 12 years old, it is the parents' responsibility to ensure that children have the correct information about large scale risks and disasters. There is no law or policy in Sweden that requires that disaster risk reduction issues should be included in the curriculum of all education at any level. However, there are specific university and higher education programs in which these issues are included. At universities in Sweden there are courses in risk management and a few programs at the master level. There is collaboration between Lund University in Sweden and the University of Copenhagen in Denmark whereby students can earn a Master's Degree in Disaster Risk Reduction. There is also a 2 year course at Karlstad University. In primary and secondary schools risks are occasionally discussed in geography classes, but the DRR is not generally part of the curriculum.

The Swedish National Platform for DRR has added an activity to its work plan to conduct an inventory of the courses and programs in the country related to DRR.

In addition to the national mandate, MSB has a broad international mandate and responds to calls for assistance within the fields of humanitarian operations, civilian crisis management, early recovery, disaster risk reduction, and mine action under the umbrellas of the EU, UN as well as other organisations. In this regard, MSB provides pre-deployment training courses from a basic level up to highly specialised level, within all of the fields listed above.

### **Context & Constraints:**

The main challenges for MSB within all fields of training at all levels, includes:

- 1) Strengthening the tools available to conduct needs assessments
- 2) Targeting the correct audience
- 3) Strengthening of the evaluation methods to ensure that quality training is delivered, whether conducted by MSB or by other actors.

An analysis of society's needs versus available training also should be undertaken, as there may be areas where Sweden needs to develop new course curricula to strengthen society's ability to respond to crises.

Education directed at younger ages has not been a priority for schools since the probability of life-threatening disasters in Sweden is low. However, it is increasingly common for Swedish families to travel to other countries on holiday. Therefore, there is a need to expand the teaching of DRR and including information about risk in other parts of the world.

Since it is not self-evident that disaster information is included in school curriculum, MSB will continue to develop and offer interesting teaching materials that can motivate teachers to introduce risk management issues.



### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

#### **Description:**

National authorities such as MSB, the Swedish Geotechnical Institute and the Swedish Transport Administration finance and decide on appropriate research projects related to natural disasters, climate adaptation and DRR. MSB partially finances the Center for Climate and Safety at the University of Karlstad. A decision has been made to establish the Centre for Natural Disaster Science in Uppsala, Sweden.

There are some universities and research institutes involved in research or at least have research expertise in the area of natural disasters, for example, the universities of Uppsala, Karlstad, Stockholm and Lund. Research is also conducted by scientists employed at the Swedish Geotechnical Institute, the Swedish Meteorological and Hydrological Institute and the Swedish Environmental Research Institute, IVL.

The Swedish International Development Cooperation Agency (Sida) funds research on natural disasters. Sida has also supported regional research cooperation for the prevention of natural disasters in Central America.

#### **Context & Constraints:**

More knowledge about ongoing research throughout the country is needed. The Swedish National Platform for DRR needs to identify areas within DRR where there are gaps in the knowledge base.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

The County Administrative Boards' responsibility towards the public with regards to awareness and resilience in case of emergency is regulated by law and regulations. The general population shall be given information on the ability of authorities to act in an emergency, and on the way that warnings and information will be given in case of serious accidents.

Several training courses and seminars occur on a regular basis including an annual coastal conference on erosion and flooding, seminars on landslide and erosion (2008) and floods (2010). Seminars on climate adaptation have been arranged by the Swedish Geotechnical Institute (SGI) and the Swedish Meteorological and Hydrological Institute (SMHI). The Geological Survey of Sweden and MSB collaborate with the training/education of local emergency services on groundwater vulnerability.

Seminars for officials at the municipal level on the effects of flooding were undertaken in the fall of 2010 by the Swedish National Platform for DRR.

**Context & Constraints:**

No constraints have been identified.

---

**Switzerland** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

A large amount of information is provided by specialist departments at Federal level (MeteoSwiss, FOEN, SLF, PLANAT) and is publicly available through websites and publications. The information reaches from professional know-how to practical advices for the population (e.g. [www.ch.ch/gefahren](http://www.ch.ch/gefahren)). Also private companies, specialised in meteorological forecasting, insurance and reinsurance companies or Cantons have developed websites, flyers, handbooks or electronic tools.

Major events are usually analysed and the findings published and disseminated broadly.

**Context & Constraints:**

Although many efforts have been made in relation with information dissemination, the provided information is dispersed and sometimes too technical. For the next years, PLANAT puts emphasis on a broad risk dialogue by clarifying responsibilities, compiling the existing material and providing practical tools.

### **Priority 3: Core indicator 2**

*School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

#### **Description:**

At university and university of applied science level, there is a broad offer of professional education related to natural hazards and DRR (bachelor, master and postgraduate studies). Training courses and know-how exchange events for professionals take place at regular basis.

Regarding civil protection and response to disasters, there are various offers for continuing vocational education and training courses directed to fire brigades, the protection and support service, the local and Cantonal emergency management authority. The Federal administration, especially the Federal Office for Civil Protection (FOCP) offers training units, which can be visited by Cantonal or local representatives. The intervention forces include specific training in their curricula.

With projects like "Seismo at School" or the earthquake simulator, efforts have been made to introduce DRR into primary and secondary school curricula.

#### **Context & Constraints:**

A more intense promotion of DRR related themes is still necessary at the school education level. PLANAT has started a project, which aims at the integration of DRR into school curricula of all levels.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

5 - Comprehensive achievement with sustained commitment and capacities at all levels

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

- \* Yes: Research outputs, products or studies
- \* Yes: Research programmes and projects
- \* Yes: Studies on the economic costs and benefits of DRR

**Description:**

DRR strategies of Federal and Cantonal authorities in Switzerland strongly base upon scientific findings. Earlier methods and tools for multi-risk assessments have been revised and further developed because the results of the risk analyses following the guidelines were not comparable to each other. The guideline “RIKO” provides a documentation of the theoretical background and a manual for the practical application of the risk concept.

“EconoMe” is a tool provided by FOEN to assess the cost-efficiency of protection measures. It supports the Federal administration to prioritise among mitigation projects in the frame of limited financial resources. FOCP and FOEN developed an e-learning platform and a calculation tool that allows for a simplified risk analysis (LearnRisk and RiskPlan).

In 2010, SDC assessed the effectiveness of DRR in their projects abroad by applying – among others – cost-benefit analyses.

**Context & Constraints:**

Tools exist and can still be improved.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

-- Nothing reported within this timeframe. --

**Means of Verification:**

- \* No: Public education campaigns.
- \* No: Training of local government
- \* No: Availability of information on DRR practices at the community level

**Description:**

Severe flood, storm and avalanche events of the past years served as “windows of opportunity” for the specialist departments to inform the public about natural hazards, mainly through the media. The flood event of 2005 received unprecedented media coverage. A fair public awareness therefore has been achieved regarding hydro-meteorological hazards. Although a campaign has taken place to raise awareness for earthquakes, deficits remain.

In 2008, a “prevention portal” has been established in all national languages and English. It is directed to

the population and covers information on natural hazards in Switzerland, gives advices on how to prevent damage and how to respond in emergencies.

**Context & Constraints:**

Several specialist departments at national and Cantonal level inform about natural hazards, thus there is not just one countrywide public awareness strategy.

Further efforts are made to raise public awareness: FOEN develops an internet-based platform with information on earthquake prevention; PLANAT has adopted an action-plan for a broad risk dialogue.

---

## The former Yugoslav Rep of Macedonia (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Within the Council of State Secretaries, working group on info-networking and resources register, as well as a working group on public relations and public awareness have been established.

Certain achievements have been attained and a legal and institutional framework exists.

The implementation of a national GIS network will enable spatial positioning and predicting possible hazard scenarios. Moreover, it is planned for GIS to be available online.

A National Laboratory network is launched that incorporates laboratories from universities, healthcare and other public and private institutions that will address diseases and epidemics related risks and hazards.

Also, there is progress on the implementation of E-112. Furthermore, there is a project on the introduction of a regional USWRN. The network will amplify the E-112 system and the EWS alarming system. It will also improve the coordination with all USW Radio systems in the country. The network of inspectorates will provide a coordinated and more efficient approach towards risk and disaster related issues.

**Context & Constraints:**

The information is partly available on the websites of the appropriate institutions. However, the hazard data is still not united and accessible from a united network.

Although many public and private institutions have the basic GIS software, they are not yet connected into a national GIS network that would enable rapid share and availability of data nationwide.

Supportive to E-112 is the concept of using media (TV and radio) and mobile phone operators by sending pre-fabricated messages providing pre-disaster warning, post-disaster announcement and messages containing information and guidelines for the citizens in the affected areas.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national educational curriculum?**

Yes

#### **Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* No: Professional DRR education programmes

#### **Description:**

The primary and high school curricula includes topics on risks and disasters, especially through the subject "Peace and tolerance".

Furthermore, as part of their program, CMC and RPD perform special training of teachers and members of the special task forces include DRR and recovery concepts and practices.

As part of the thematic working groups section of the NPDRR, it is planned for the Ministry of Education and Science to lead a multi-stakeholder thematic working group on prevention and disaster management in primary and secondary school curricula.

The Academic and expert council of the NPDRR brings together the highest decision-makers in the respective areas with top representatives of the academic and business communities and NGOs.

There is institutional framework for development of methods, techniques and standards, as well as training of professionals for reducing seismic and flooding risks (both M.A. and PhD) at the Institute of Seismological and Earthquake Engineering (IZIIS), the Seismological Observatory, Faculty of Natural Sciences and Mathematics (both part of the University of Ss. Cyril and Methodius-Skopje.) The present IZIIS Education Curricula is based on the actual needs in modern civil engineering, particularly in seismically active regions where the interest in structural engineering, earthquake engineering, engineering seismology and related scientific fields (static and seismic design, engineering seismology, static and seismic design of high-rises, static and seismic design of engineering structures, specific seismic problems in geotechnics, ecology in seismic regions) is increasing.

A process of setting up a national crisis management educational and training network has begun, including universities, vocational schools, and other educational institutions, such as the Military Academy and police training facilities by planning to interpolate crisis management modules in their

existing curriculums.

**Context & Constraints:**

Currently, there is no systematic education and training of personnel on prevention and early warning for risks and hazards due to institutional overlapping of competences. To overcome these issues, it is planned for NPDRR to launch a multi-stakeholder thematic working group on prevention and disaster management in primary and secondary school curricula.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

Under the NPDRR, the implementation of DRR policies, imply the development of methodologies based on which risk and threat assessments will be conducted and accident and disaster scenarios will be developed. Reliable assessments and scenarios are prerequisites for developing plans for preparedness, prevention and operations as well as standard operational procedures. The methodologies, assessments, scenarios, plans and procedures are to be frequently checked through a system of drills and simulations, which assist in the development of institutional and civil response capacity and the verification and improvement of operative solutions.

In order to produce reliable risk assessments, it is necessary to develop three types of methodologies:

1. Risk assessment and risk consequence assessment methodologies;
2. Risk mapping methodology;
3. Risk monitoring methodology;

These methodologies are basis for developing the following assessments:

1. Assessment of events implying risk and threat;
2. Communal resilience and vulnerability assessment;
3. Competent institutions' capacity assessment (both actual and required capacity);
4. Damage assessment, as well as additional vulnerability assessment;
5. Assessment of quality of overall respond to occurred accidents and disasters.

The assessments are basis for developing escalation scenario.

In November 2009 the European Center on Vulnerability of Industrial and Lifeline Systems (ECILS) developed and published "Guidelines for development of methodologies for assessment of risks and hazards and their implications." The guideline, which serves as instruction on how to develop risk assessment, risk consequence assessment, risk mapping and risk monitoring methodologies, was distributed to all NPDRR stakeholders.

Integration into European Meteorological Infrastructure (EUMETSAT, EUMETNET and ECMWF).



Furthermore, a formal proposal for the National Coordinator for Implementation of NPDRR to organize and coordinate the development of methodologies, assessments, scenarios, plans, procedures has been submitted to the Government.

**Context & Constraints:**

Despite the achievements, there is still need for substantial commitment in terms of research methods and tools for multi-risk assessments and cost benefit analysis.

In order to achieve harmonization and avoid overlapping, there is need for coordinated development of DRR related methodologies, assessments, scenarios, plans and procedures.

Furthermore, there is currently no study on economic costs and benefits of DRR.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

- \* Yes: Public education campaigns.
- \* Yes: Training of local government
- \* Yes: Availability of information on DRR practices at the community level

**Description:**

NPDRR stakeholders organize public education campaigns, training of local government in their domain of work and often post DRR related information, manuals and publications.

For instance, the Ministry of Health educates the public on climate change risks related to health through its “Protecting health from climate change” web portal (<http://www.toplotnibranovi.mk/en/>); the Institute for Public Health is educating the public through its “Early Warning System for Communicable Diseases Surveillance” (<http://www.alert.mk/en/index.asp>); CMC, in cooperation with the Macedonian Radio-Television (the public broadcasting service) produced a series of (38) TV debates “Hello, 195” covering DRR through various risks in the period 2009/2010.

Several publications and booklets on DRR were published and distributed to NPDRR stakeholders and the general public, including:

- Lazarevski, P., Gjorgon, N., Taleski M., (ed.) National Platform of the Republic of Macedonia for Disaster Risk Reduction, CMC, Skopje, 2010, (in Macedonian and English);
- Manual for citizens: crisis management system, UNDP, Skopje, 2009;

Following the adoption of NPDRR, Local Councils of NPDRR were established, and training and workshops for the Mayors and other members of the Local Councils were held. The purpose was to inform



them of the NPDRR, the obligations and competences of the Local and Regional Councils of the NPDRR.

Within the Council of State Secretaries, a working group on public relations and public awareness has been established. Furthermore, one of the thematic working groups that is planned to be created within NPDRR is a thematic working group on media and public awareness. In this regard, NPDRR implies the creation of a second working group on resilience of local communities, led by the Ministry of Local Self-government.

**Context & Constraints:**

Despite the achievements, there is need for sustained commitment and capacities at all levels. For this purpose, a public awareness strategy on DRR related issues is needed, that would be developed with involvement of all relevant stakeholders, especially the local communities.

The thematic working group on media and public awareness is yet to be established in accord with the Government adopted NPDRR.

---

# Oceania

---

## Australia (in English)

### Priority 3: Core indicator 1

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### Level of Progress achieved:

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### Is there a national disaster information system publicly available?

Yes

#### Means of Verification:

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### Description:

The Australian Government recognises that data collected in the response and recovery phases of disasters is fundamental to improving planning and preparedness for future disasters through an improved knowledge of risks. A range of data is collected by Australian Government agencies. Examples include:

- Geoscience Australia collects data on an ad-hoc basis, and has a range of capabilities that can be enabled in the risk and impact analysis, satellite imagery and mapping areas. These capabilities are undergoing continual development. Examples include:

- using its Rapid Inventory Capture System to gather data on damaged structures,
- providing satellite data to government, emergency managers, insurance companies, infrastructure providers, researchers and the public,
- providing a bushfire hotspots service through the Sentinel website,
- providing advice on macroeconomic impacts and recovery times for economic sectors affected by disasters; and
- providing advice on the numbers of people potentially exposed, by integrating the National Exposure Information System with analysis of satellite imagery.

The Attorney-General's Department publishes the Australian Emergency Management Manual series and has launched a flood specific manual. A tsunami series will be published during FY 10-11 and the extant Recovery Manual is being reviewed. The Department also publishes the Australian Journal of Emergency Management on a quarterly basis, see <http://www.ema.gov.au/AJEM>.

The Australasian Libraries in the Emergency Sector (ALIES) is the library network which collaborates to fulfil the information needs of the emergency and national security sector in Australia and New Zealand by exchanging and sharing knowledge, skills and resources; maintaining a distributed Australasian emergency management collection, and providing an expert information service.

#### Context & Constraints:

There are ongoing efforts across government to increase the amount of relevant information on disasters that is available and accessible to stakeholders. There are increasing community demands for timely and relevant information to be made available to the public before, during and after emergencies.

Throughout this report there are examples of enhancements to the amount of information provided to the public as well as information-sharing between stakeholder organisations in the disaster resilience arena.

One example is the Australian Safer Communities Awards (ASCA) that recognise best practice and innovation by organisations and individuals that have developed and successfully implemented an initiative to help build safer communities across Australia. ASCA covers all aspects of community safety in the context of emergency management – risk assessment, research, education and training, information and knowledge management, prevention, preparedness, response and recovery. It is sponsored by the Australian Government's Attorney-General's Department.

ASCA reflects the need to empower citizens and localities to build resilience, and to support local-level initiatives to do so.

However, there are a number of significant challenges to be dealt with before an optimum amount of information can be made available to all stakeholders in the disaster resilience arena.

They include: the large number of government, private sector, and not-for-profit sector organisations involved; the coordination of the information and knowledge generated through the various mitigation and other programs by the States and Territories to ensure that best practice approaches are being shared and lessons learnt; and achieving agreed standardised approaches to information gathering and publication.

The work currently underway to develop overarching strategies in the disaster resilience arena that bring together all governments and stakeholder organisations should reduce any unnecessary barriers or inhibitions that impede the flow of disaster related information.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national educational curriculum?**

No

#### **Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

#### **Description:**

Examples of school curricula and education materials including disaster risk reduction concepts are:

- in one State, 'Disaster Education Resources for Young People and Children' aims to develop age-appropriate resources on natural disasters that would provide young people, children and their families with knowledge of what to do before, during and after an event to enhance their individual and community safety. A DVD and a web-page was prepared, which contains a collection of fifteen, two-minute stories about cyclones, bushfires and severe storms and floods. Young people share their personal experiences with different disasters affecting their local areas.

- another involves a fun, interactive and self-directed educational resource which recognises the roles young children can play in raising disaster awareness and preparedness in their household. It is a package of computer games, quizzes and activities for children aged seven to eleven. It is available from a website and on CD ROM.

- in June 2010 the Australian Government launched new education materials for school students. The materials are an interactive media game, actual student experiences and lesson plans aimed at teaching kids how to be ready for an emergency. The materials have a strong focus on personal stories and experiences and include:

'Dingo Creek – The Recovery' raises awareness of local risks and impacts of disasters by introducing the recovery process through engagement with an affected community;

'Living with Disasters' includes ten digital stories from young people who experienced the events of the 2009 fires in the state of Victoria in order to learn how families and communities were affected; and

'People, Get Ready' comprises four activities to build student understanding and awareness of emergency issues prior to a natural disaster occurring.

The materials are available from the Australian Government Emergency Management Australia website at [www.ema.gov.au/schools](http://www.ema.gov.au/schools).

### **Context & Constraints:**

Disaster risk reduction (DRR) is not a feature of the national educational curriculum.

As the content of primary and secondary education curriculum is the responsibility of State and Territory governments, its inclusion in primary or secondary school curriculums is the responsibility of those governments.

Any inclusion in university curriculum would be the responsibility of the individual university and considered in the context of subject and degree requirements.

In regard to professional DRR education programmes the Australian Government's Emergency Management Institute is a centre of excellence for knowledge and skills development in the national emergency management sector. The Institute provides a range of education, training, professional development, information, research and community awareness services to the nation and our region. It offers courses including nationally accredited training courses and professional development programs.

The Institute continues to focus on improving knowledge and development in the emergency management sector. It supports broader national security capability development efforts to build community resilience to disaster. It plays a significant role in building the capacity and professionalism of the emergency management sector in Australia.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

The Australian Government supports a range of disaster resilience related research activities including:

- climate change science research activities through the \$US28m Australian Climate Change Science Program;
- the work of Geoscience Australia and the Bureau of Meteorology described elsewhere in this report; and
- bushfire research, by the Bushfire Cooperative Research Centre (CRC) ([www.bushfirecrc.com](http://www.bushfirecrc.com)), to undertake research tasks arising from the 2009 Victorian bushfires and to implement programs relating to safe prevention, preparation and suppression, fire management, community self-sufficiency, protection of people and property, education, training, communication and community outreach. The Bushfire CRC is a national research centre developed in partnership with fire and land management agencies and research institutions to reduce bushfire risk to the community.

Other Australian Government initiatives that invest in projects can also contribute to research methods and tools that indirectly assist with broader disaster resilience objectives.

One example is the 'digital regions initiative' which promotes projects to improve services and make sure that regional, rural and remote communities benefit from broadband and digital technologies and are not left behind ([www.dbcde.gov.au](http://www.dbcde.gov.au)). In 2009 several of the projects that successfully applied for funding will contribute to improved emergency management and broader disaster resilience objects, such as:

- bushfire spotting and response technologies in the north east region of the State of Victoria, to use remote cameras, telemetry and video conferencing to enhance fire detection, management and response capability; and
- bushfire prediction technology project in the State of Western Australia, to provide communities with bushfire alerts and access to simulation maps.

**Context & Constraints:**

The National Risk Assessment Framework is designed to improve collective knowledge about natural hazard risk in Australia so that support can be provided to emergency risk management and natural hazard mitigation. The natural hazards covered in the Framework are bushfires, earthquakes, floods, storms, tropical cyclones, storm surges, landslides, tsunamis, tornados and meteorite strikes.

The main objective for the National Risk Assessment Framework is to support the development of an evidence base which can be used for effective risk management decisions. Three other goals are linked to this main objective. They are:

- to increase the value of risk information acquired by improving methodologies for risk analysis and by employing minimum levels of acceptance for methods and deliverables;
- to support the objectives of risk management by developing tools, guidelines and databases which assist all stakeholders to conduct risk assessments; and
- to foster the development of systems for coordinating, sharing, aggregating, and making available consistent information on risk that is essential to support risk management decisions.

Australian, State and Territory Governments as well as local governments have endorsed and agreed to apply national guidelines for the preparation of risk assessments in a consistent way and with a focus on outcomes.

Another current priority is to reach an understanding of existing gaps in knowledge and develop strategies to prioritise and address these gaps so the understanding of natural hazard risk in Australia will be increased.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* No: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

All Australian governments have endorsed the need for and importance of a nationwide public awareness strategy to stimulate a culture of disaster resilience.

This was reinforced in February 2011, when all governments endorsed the National Strategy for Disaster Resilience that recognises that a national, coordinated and cooperative effort is needed to enhance Australia's capacity to withstand and recover from disasters. The Strategy aligns with the principle that disaster resilience is based on all sectors of society taking their share of responsibility for preventing, preparing for, responding to and recovering from disasters. They can do this by drawing on guidance, resources and policies of government and other sources such as community organisations. The Strategy recognises that influencing long term attitudinal and behavioural change will require continuous and consistent messaging and the development and availability of guidance and resources. It aims for information on disaster risk to be communicated in a manner appropriate to its audiences, and to consider

the different needs, interests and technologies used within communities. The Strategy's priority outcomes include that current information is available on websites and in other forms about disaster risk and mitigation; and that communities are supported through appropriately targeted training and awareness activities.

In endorsing the national Resilience Strategy, Australian governments agreed to a series of priority actions, including developing guidance, in a prioritised sector approach, to assist business, the non-government sector, governments, and communities in building disaster resilience through existing planning processes, wherever possible. A community engagement framework will be developed, aimed at assisting people to understand risks and use the information in making decisions. The framework will consider a range of sources of information and methods of dissemination (such as insurance companies, the education system, local networking) and give particular attention to the emerging role of social media. Core messages will be developed to reinforce this approach.

To promote the Resilience Strategy Australian governments will look to engage key stakeholder groups across government, business, academia and the not-for-profit sector in a prioritised sector approach, to promote the concept of disaster resilience amongst the broader Australian community. Existing communication channels will be utilised to promote core messages in the most cost effective manner; tailor messages to specific sectors, communities and organisations about the practical steps they can take to build disaster resilience; and adopt a long term sustainable approach to influence attitudinal and behavioural change. Core messages will be developed to reinforce this approach. A Disaster Resilience Strategic Communications Plan is to be developed by governments, in consultation with key stakeholders. The Plan will aim to work towards a countrywide public awareness strategy to stimulate and maintain a culture of disaster resilience, in both urban and rural communities.

All Australian governments conduct public awareness raising activities to stimulate and maintain effective emergency preparedness and response in the community, to both urban and rural communities.

Examples of effective public awareness raising include the correct use of the Triple Zero emergency assistance telephone service; household preparations for forthcoming fire and storm seasons; and on the commencement of operation of a national telephone-based emergency warning capability ('Emergency Alert') which sends warnings to fixed line telephones and mobile telephones based on the customer's registered service address.

Since it commenced operation in 2009, Emergency Alert has been used many times in the States and Territories ('States') for a wide range of emergencies. In the lead up to Emergency Alert's commencement, all Australian governments agreed on core messages to be promoted to the community about the capability, when people might receive a warning message by telephone, what they should do if they receive a warning message, and the wording to be used to convey the messages. With funding from the Australian Government the States developed the media (television, radio and print) advertisements to promote the new warning system. Even though the public-awareness raising involved a nationwide campaign, each State and Territory retained the ability to tailor the core message to fit local conditions, and the precise method by which the message would be communicated to their community. Periodic reminders about Emergency Alert to the community are publicised and promoted in each State, and reinforced more regularly in the lead up to the higher risk (fire, flood, storm) summer season.

State government authorities are responsible for coordinating and planning for the response to disasters and civil emergencies. Each has its own strategies to develop and maintain public awareness of disaster resilience with a particular focus on the role of the individual to be prepared to respond effectively in time of emergency. Community-based organisations also contribute to planning for the response to emergencies.

A culture of disaster resilience in the community is supported by public awareness projects and programs

tailored to the needs of the region/State. Examples include safety in storms ('StormSafe'), floods ('FloodSafe'), and fire safety in the context of kindergartens and primary schools etc. In 2011, the government of the State of Western Australia released a new DVD aimed at delivering vital home safety messages in twelve languages to assist recently arrived migrants to that State to stay safe this winter. The 16 minute DVD contains vital fire safety messages and reflects research in Western Australia that shows that 60 per cent of deaths from house fires in that State between 1992 and 2006 were of people from non-English speaking backgrounds. The DVD provides new arrivals to the State with information in their first language about the role of the fire service and also what to do if a fire starts in their home. In releasing the DVD, leaders of those communities with large proportion of people from non-English speaking backgrounds were encouraged to ensure the DVD is made widely available throughout their community.

The Australian Emergency Management Institute (AEMI) is a centre of excellence for knowledge and skills development in the national emergency management sector. In addition to its significant role in building the capacity and professionalism of the emergency management sector in Australia, the Institute provides a wide range of disaster resilience related community awareness services to the nation and our region. For example, in electronic form, the Emergency Management in Australia website – provides the key online access point for emergency management information from the Australian Government. The Institute prepares Australian Emergency Management Manuals and Handbooks that guide emergency management doctrine in Australia and are available to download from the website. AEMI produces numerous public awareness raising printed publications (i.e. natural hazards: what to do before, during and after), with emphasis on mitigation and preparedness and provided nationally to the States and Territories for dissemination as requested. The Institute publishes the Australian Journal of Emergency Management which is provided free of charge in print format to a subscriber base of over 3,000. It is also available electronically via the Emergency Management in Australia website and a number of externally hosted databases. All Institute community education and awareness material is developed for national applicability and accessibility.

The Institute also delivers training courses aimed at extending emergency management expertise to local government through its Emergency Management for Local Government and Business Continuity Management for Local Government courses. Places are available at other courses delivered by the Institute for local government representatives.

In the context of country-wide public awareness raising for disaster resilience, being able to communicate effectively with the community is a vital component of risk management, disaster mitigation, response and recovery. For over a decade, the Institute has worked to build emergency management capability to engage with multicultural communities to address their needs in relation to dealing with disasters and developed a range of programs and publications. Numerous information sessions, diversity forums and community events have been delivered collaboratively. Resources have also been developed and shared nationally as part of the following projects: a practical guidebook for emergency management organisations with state-wide demographic profile (Western Australia), a community newsletter (Australian Capital Territory), an emergency management exercise report involving culturally and linguistically diverse (CALD) community members (in the State of South Australia) and a state-based CALD community engagement map (Victoria).

Public awareness of disaster resilience is also enhanced through the school curriculum, which provides opportunities for teachers and students to study the issues involved in the risk and consequences of disaster. These issues, and the knowledge of preparedness and risk reduction methods, can often be studied in a local context, developing life skills and knowledge at an early age, which can influence families and local communities.

The Attorney-General's Department's schools education program supports the learning and teaching in this area with publications, videos and interactive learning games for students, teachers and the general public.



The latest interactive resource is due to be available later in 2011. The Institute's School Education program develops teacher resources for school age education nationally of disaster risk, impact, preparedness, planning, response and recovery. This is primarily web-based, but hard copy education kits are provided free of charge to any school on request.

### **Context & Constraints:**

Challenges in public awareness raising of disaster resilience include:

- when attempting to educate school children, the school curricula can become oversubscribed and bringing new activities into the curricula can be difficult;
- it can be difficult to maintain a continuing public awareness, as the frequency of some events in Australia such as earthquakes and tsunami is low; and
- ensuring that national publicity campaigns to develop and maintain public awareness of existing and new disaster resilience capabilities are nationally consistent, but allow for appropriate tailoring of the message to suit each State. For instance, in recognition that while each State faces a range of risks of natural disasters, the risks of particular hazards (i.e. fire or cyclone) varies significantly between them.

---

## **Cook Islands** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Is there a national disaster information system publicly available?**

Yes

### **Means of Verification:**

\* Yes: Web page of national disaster information system

> Emergency Management Cook Islands

[http://www.pmoffice.gov.ck/index.php?option=com\\_content&view=article&id=26&Itemid=37](http://www.pmoffice.gov.ck/index.php?option=com_content&view=article&id=26&Itemid=37)

\* No: Established mechanisms for accessing DRR information

### **Description:**

The Cook Islands have in place an Information Act on DRM data and information management and sharing which provided policy guidance for overall DRM information management.

Some achievements have been made in strengthening the knowledge base for more effective disaster risk management. Progress has been made in strengthening capacity of EMCI to monitor and facilitate coordination and partnerships including information flow and sharing of resources through the development of the Frontline Emergency Response Network (FERN) database.

Several international agencies have provided training on various aspects of disaster risk management, including operational exercises and geographical information systems. EMCI organised GIS training by

SOPAC in 2008 and 2009 in order to increase training opportunities for data collection and data management including design and analysis, and GIS for statisticians and staff from responsible agencies to meet information users' needs.

**Context & Constraints:**

Significant challenges exist in terms of quality, completeness, analysis and sharing of data. Although considerable data is collected on DRM issues, it is not always appropriately reviewed or analysed, or shared with relevant agencies and communities in a timely fashion. Currently, data is frequently gathered in multiple incompatible formats, and not always shared with those with a need to know.

Another challenge relates to the cost and relevance of documenting traditional knowledge, which can be expensive, and traditional practices may not always be relevant, giving changing disaster risk profiles due to climate change. Vulnerable groups are known to have lower levels of information and preparedness than the general population, and they should receive greater attention through community consultations and disaggregated monitoring and evaluation.

The Frontline Emergency Response Network (FERN) offers a major opportunity for strengthening the DRM knowledge base and resolving data coordination and sharing problems currently occurring.. FERN is a newly-designed information tool for preparedness and response. It will enable FERN will enable shared inter-agency management of DRM data, including GIS data, risk maps and contact details for each island, as well as task lists for when an emergency is activated. It will permit automated email lists and media notifications, and include a tool for assessing relief needs in disaster-hit areas. Nevertheless, although the shell for this system has now been created, more funding is needed to populate the shell with data, and clear agreement will be required on who is responsible for entering and maintaining data.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* Yes: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

The Ministry of Education has made significant progress in mainstreaming DRM. DRM is integrated into the curriculum at all grade levels and in a range of subject areas, including social sciences, science, geography, and health and physical wellbeing. School children are taught disaster response procedures (such as evacuation drills) and encouraged to study various aspects of DRM, including traditional knowledge (such as traditional warning signs for impending cyclones) as well as contemporary knowledge.

EMCI has organized essay writing and coloring competitions for school children on DRM-related issues in partnership with the Ministry of Education. A child graduating from this curriculum at the age of 16 should know the causes, social impacts and mitigation strategies for adverse events and climate change. Since 2004, schools have also been involved in a UNESCO-funded coastal environment protection project called Sandwatch. As a part of this project, children participated in a four-day conference in 2010, and gave presentations on topics of relevance to their islands, including the Aitutaki cyclone and climate-induced forced migration.

School children are taught disaster response procedures and encouraged to study various aspects of DRM. The Ministry of Education requires all schools to conduct at least two evacuation drills per year, and each class to have an evacuation plan. Schools have worked with parent committees to plan pickup locations for children in case of an evacuation, to avoid confusion and ensure that all children are accounted for. To enable children with disabilities to evacuate quickly, a high-needs unit located by the beach includes a van.

The Careers Expo in 2009 encouraged students to consider careers in DRM and provided vocational guidance in DRM to high schools students and other interested institutions.

Discussions have been initiated with USP/Cook Islands to include DRM to the university curriculum.

#### **Context & Constraints:**

Ongoing monitoring will be required to ensure that all schools implement the policies and plans of the Ministry of Education. Continued coordination with EMCI will also be important, to ensure maximization of resources and consistency of messaging.

Another challenge is the cost and relevance of documenting traditional knowledge which can be expensive, and may not always be relevant, given changing disaster risk profiles due to climate change.

The school curriculum, which already includes DRM components at every grade level, offers the opportunity to further strengthen community-level knowledge of DRM, including traditional practices, and to ensure that even the most disadvantaged members of society are better prepared for disasters.

#### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* No: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

#### **Description:**

There has been progress in term of assessing vulnerabilities and impacts and also on economic and social impacts. However, addressing or putting into place appropriate measures to mitigate these impacts have

not been fully met due to reasons of competing priorities and budgetary constraints.

Currently, there is no active research underway into seismology or tsunami warning and mitigation, and communities, government and media lack access to adequate information.

**Context & Constraints:**

As mentioned above, key challenges are competing priorities and budgetary constraints. Another key challenge is the capacity to conduct assessments. This refers to both skill and availability of already stretched resources to carry out these assessments. There are opportunities with partnering with other agencies, development partners and so forth to conduct research.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

Public education campaigns on DRR reach risk-prone communities to some extent. EMCI has promoted disaster awareness through the media, particularly during the annual Disaster Awareness Week. The Red Cross has coordinated community-based disaster preparedness and first aid training on all inhabited islands and EMCI has undertaken community level DRM awareness in the South Group of the Cook Islands. Furthermore, the National Environment Service (NES) and Cook Islands Red Cross have developed programs to document and preserve traditional knowledge of DRM in Pukapuka and Manihiki. Several international agencies have provided training on various aspects of disaster risk management, including operational exercises and geographical information systems.

EMCI has conducted a media campaign on pre-cyclone preparations (stressing the importance of tying down roofs, preparing emergency supplies and identifying alternative shelters should a cyclone hit). Some progress has been achieved as regards developing and implementing long-term communication strategies using all media available: annual Disaster Awareness Week activities, radio spots and TV commercials.

**Context & Constraints:**

During the response of the Tropical Cyclone Pat in February 2010 it was identified that vulnerable groups had lower levels of information and preparedness than the general population, and they should receive greater attention in the future through community consultations and disaggregated monitoring and evaluation. The real concern is the complacency among the people towards the tropical cyclone warning when everyone was aware that they are in the cyclone season. Even when the cyclone warning for Pat

was issued not many took notice of it and the general comment after the cyclone was 'we didn't expect that it was going to be this bad'.

There were lessons learnt from TC Pat and the people now know that they must be prepared for any potential disaster heading their way. It would also be opportune to nurture greater community interest in DRM following the 2009 Samoa tsunami as a means to strengthen community-level preparedness. This is a role which could ably be filled by EMCI, if it received funding for the Disaster Risk Planning Officer position, recommended in the EMCI Business Plan (2009-11) and the NAP. The Cook Islands Red Cross, with its strong community presence, including on the Outer Islands, would also be an important actor, as would civil society groups including the Religious Advisory Council.

---

## **Fiji** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is there a national disaster information system publicly available?**

No

#### **Means of Verification:**

\* Yes: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### **Description:**

Overall Fiji has a strong education institution and a literate population that written media (newspaper, pamphlets, and libraries) is used widely together with audio and virtual public broadcasts in the provision of information on disaster risks. In the development of DRM information systems various progresses have been made at sector and agency level whereas the development of national level systems is just beginning.

A national DM Information System (DMIS) is being developed to be housed at NDMO. For full establishment NDMO still requires in-house technical expertise, funding and additional equipment. Separately the DISMAC (Disaster Management Council) has established a website for information sharing and it is open to the public however usage is predominantly by urban dwellers. This is just one of many web-based information sources available from departmental and agency websites.

To reach the public, many agencies are disseminating information on disaster risks using all available media and training means. Awareness campaigns are run by NGOs, government agencies, civil societies, church groups and youth groups. Radio broadcast is popular, running repeated announcements on preparedness in Fijian, Hindustani and English. An estimated 90% of households have radios, and woman seemed to be more informed than men in villages, more actively seeking information.

Communities are being educated about disaster risks through development of Community Disaster Plans (CDPs) and DRR Programmes. More of these needed to be conducted in local languages.

Traditional knowledge is not practised much with now a greater reliance placed on radio and media broadcasts. In counter moves, some government departments as Health and Agriculture have started implementing projects to revive traditional knowledge like food security and agricultural systems but it's a major challenge to sustain the efforts of preserving and transferring local knowledge from the older generation to the fluid and outward looking younger generation.

### **Context & Constraints:**

Typically information is available at agency level but with varying ease of accessibility which often is not very facilitative of outside needs as the processes involved in accessing data are slow and time consuming. However changes are happening as it is now seen that NGOs who have very good data bases on village profiles are sharing data with key government departments who use such baseline information to improve on services.

There is an urgent need to prepare an inventory of available information and secondly to establish an information kiosk aimed to assist the public know where to go for information.

NGOs are fully supportive that Fiji has to establish a national information system and are willing to lend expertise to NDMO towards this. Additionally, protocols are yet to be developed that would allow ease of access to individual databases that are housed in different ministries and essential for development purposes eg

- GIS Land Tenure, Topography and Map information with Lands Dept
- GIS Maps on utilities and service information with respective agencies as FEA, Water Authority, NFS
- Hydro-geological and Seismicity Maps with MRD
- Statistical data with Bureau of Statistics.
- Climate and meteorological data with Fiji Met Services

There are practical issues and cost considerations facing NDMO in its current effort to establish a national Disaster Information Management System (DIMS). Lack of in-house expertise and personnel are the critical constraints setting NDMO back from completing DIMS set-up and manage it.

### **Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Is DRR included in the national educational curriculum?**

Yes

### **Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* Yes: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

DRM is incorporated in the national curriculum of primary and secondary schools and drills are done. The bulk of Fiji schools are owned outside of government and managed by school committees but the curriculum is under the education policies of government. These committees have strong outreach into the community which support schools in DRM activities with emphasis on safety and security measures for children foremost then next on assets and investments. EW messages as for cyclones and floods are observed strictly and evaluated through checks on school attendance records; children are assigned research projects on DRM topics and schools develop SOPs. New developments consider risks through EIA assessment.

Work continues in the development of a Manual on DRR for Primary Schools with the lead of Fiji Red Cross supported by NDMO, Ministry of Education and Ministry of Youth.

At tertiary level USP offers DRM and CC as course subjects; FNU teaches DRM in its medical school and is discussing with TAF/OFDA cross-crediting of TAF/OFDA courses and qualification in DRM.

Other trainings of relevance include the National Disaster Awareness Week (NDAW), managed by NDMO, for which school children are always the primary target eg in Nadi from 12/10-15/10/10 students from both primary and secondary schools were involved; DRM training of civil servants by the Government Training Institute; National Fire Authority organised activities in primary and secondary schools and the joint PCIDRR-Red Cross organised "Primary & Secondary Schools West Awareness and Simulation Exercises".

As the Ministry and school committees have a culture of cooperation and support, some achievements have been attained in incorporating DRM activities in school curriculum.

**Context & Constraints:**

The role of the National Disaster Management Committee in developing content of DRM curricula is not clear but it should be involved with Education. For adults, DRM training is coordinated through NDMO with training of civil servants done through the government training institute.

Knowledge in traditional practices is thin and in danger of complete loss as it is not included in training materials nor in school/institution curricula. For this reason SPC is conducting community training on preserving traditional knowledge and practices to support the revival of the traditional means of DRM.

In schools, natural hazards are explained in terms of origins/characteristics and the physical processes involved and information is shared on how to be prepared for or mitigate potential impacts e.g. some schools in Suva have conducted earthquake retrofitting assessments. Government departments receive training from the NDMO as well as from regional and international organisations.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national scientific applied-research agenda/budget?**



No

\* Yes: Research outputs, products or studies

\* Yes: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

**Description:**

Technical and scientific researches on DRM are budgeted and executed separately as relevant to each ministry, mainly Meteorological Services, Fisheries, Forests, Health, Environment, Agriculture, Mineral Resources, and the Water Authority. Although NDMO has a research unit, it operates only as fund permits - there is no national research budget on the applied sciences of DRM. In practice, ministries pool their resources where there is common cause eg. Water Authority, Water Resources Management, Mineral Resource Department and Lands conduct in consultation research activities on watershed management, Flood Level Monitoring, hydro-geological studies and aquifer mapping.

Generally researched data and information exist but is dispersed in each ministry. Major DRM related research works of ministries are done with support of external agencies. The primary industry sector conducts research with ministries of agriculture, fisheries and forests maintaining research stations, as well as the Fiji Sugar Cane Research Division.

Land use information is researched and widely disseminated; whilst government organisations are funded on climate change researches eg a new CC and health project will expand researches centred on CCA-DRM issues.

Vulnerability assessments are driven on project basis by different actors with marked differences in tools used both for scientific assessments and for community based vulnerability assessment (VCA). Some social/economic assessments are done, both before and post-disaster. Socio-economic reports for disasters exist but are not detailed. Impact and damage reports of past disasters are kept at NDMO. Work is in progress to demonstrate the economic costs of disasters with scenarios and potential losses particularly on floods following recent extreme events.

Availability of disaggregated (age, gender, diversity) social impact assessments is limited, highlighting the overall need for better social impact assessment to understand the impacts and needs for different groups/persons.

**Context & Constraints:**

A fundamental constraint in the development of cost benefit analysis is the time consuming data collection given the lack of information sharing and poor information management. The proposals to establish an Information Kiosk would facilitate data collation, in addition to introducing procedures and protocol to facilitate access to and sharing of assessment reports.

Cost benefit analysis is not practised generally at the sector levels for lack of awareness, knowledge and tools. There are tools for assessing national level macro-economic costs of disasters but few tools for sector level micro-economic assessment for the socio-economic costs of disasters. A manual exists for the region to apply at the sector level, i.e. "Economic Impact of Natural Disasters on Development in the Pacific: Volume 2 Economic Assessment Tools". DRM socio-economic cost analyses of actual flood events have been conducted in Navua, Nadi and Ba. Little awareness exists on the existence and application of such sector level micro-economic tools and their potential benefits.



The socio-economic costs assessments need to be built into a bigger framework outlining the economic costs and benefits of DRM. Such analytical studies on the cost and benefit are urgently required in order to support the case for incorporating DRR into development planning. Also lack of human resource capacity to do such an analysis currently limits the implementation of this kind of work.

With the pending review of the NDRMA, these gaps will be highlighted for the attention of the Training and Preparedness Committee which has the following specific functions:

- Establish an integrated national information system, for collection and management of comprehensive data and information, for disaster risk reduction and disaster management
- Strengthen national capacity for conducting comprehensive disaster impact assessment, and cost benefit analysis of disaster risk reduction and disaster management measures.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

- \* Yes: Public education campaigns.
- \* Yes: Training of local government
- \* Yes: Availability of information on DRR practices at the community level

#### **Description:**

A framework for public awareness raising in DRM and related issues is in place with responsibilities for individual departments. Sector agencies produce good sector specific information to which the public easily relate to. There is a plethora of materials on DRR available for use at all levels with many targeted at the community level. These are sourced broadly from within government and from outside agencies.

The NDMO runs a National Disaster Awareness Week whilst various other agencies conduct public education campaigns. In general the public is further informed about disaster risks and preparedness through TV, radio, dvd, newspaper, booklets, pamphlets, posters, yellow pages, telephones, school tours and trainings.

The community is well targeted with government conducting community disaster response exercises in collaboration with NDMO & NGOs. This is in addition to normal NGO partnership programmes with government in community development work where use is made of community -based DRM projects to include public education on DRM.

Public education is a daily routine activity amongst the key ministries of Health, Agriculture, Education, Water and Works. In addition they conduct regular radio broadcasts in which they incorporate DRM issues

as appropriate.

Government has mainstreamed reporting on DRR activities to come through the Provincial Development Boards where departments, community leaders and private sector consult on development issues. More information is available on the individual web pages of agencies, as well as of the individual NGOs.

There are various ways in which the effectiveness of public education awareness programme is evaluated across the sectors. Health has a comprehensive and integrated monthly in-patient reporting. Education uses the school attendance roll to judge heeding of warnings by the community. Agriculture and Water Authority conduct field visits and assessment. The feedback confirms that messages are reaching the community on time and they are responding effectively.

**Context & Constraints:**

There are many agencies conducting public education training, awareness and campaign on DRM with varied interpretation in DRM terminology eg storm surges and tsunami waves have the same word “ualoka” in translation. Some standards are needed on translation of technical terms and information on disaster risks as they are disseminated to all communities. An emerging need now is to consider also standards for gender- and rights-inclusive awareness programmes.

From the beneficial values of the NDAW, the NDMO is to consider staging Disaster Awareness Week at district levels, perhaps to be included in the Provincial Council Meeting Agenda. Viewed together DRR/DRM and CCA are two sides of the same coin and there is a need for synergy across specific public outreach campaigns. Both value analysis of traditional coping mechanism and much analysis and promotional work on traditional mechanism is needed to ensure the knowledge from the older generation is documented for the use of future generations.

Substantial achievement has been attained yet more can still be done as there still exist remote and vulnerable communities and disadvantaged groups.

---

## **Marshall Islands** (in English)

**Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

There is currently no national database for disasters, nor are there established mechanisms for accessing DRR information.. The EPA intends to establish a comprehensive website containing disaster information;

however, technical capacity and lack of funds are proving difficult obstacles to overcome.

Progress has been achieved in capacity building in mapping with the expansion of geographic information systems (GIS) software. Two EPA staff undertook a GIS course through the University of the South Pacific (USP). The College of the Marshall Islands (CMI) assists MICS with mapping tasks. CROP organizations such as SOPAC and SPREP have provided assistance in GIS capabilities over the past few years. Digital mapping provides relevant data on disaster vulnerability and information sharing allows various ministries and NGOs access to the data collected.

Several ministries and NGOs run successful public awareness campaigns on various aspects of DRM. Public awareness initiatives exist within the MoH and the EPA, both drawing upon various forms of media (radio, newspaper) and targeted educational products in Marshallese. WUTMI is also active in public awareness on a range of issues, and reach outer islands via their vast network of members. The US Land Grant, implemented through CMI, includes public outreach and involves capacity building for agriculture, aquaculture, fishing, cooking and nutrition. The NGO Youth-to-Youth in Health undertake elements of risk reduction via their program relating to health, well-being and disease. Most information relating to DRM is distributed in the outer islands by initiatives run by NGOs such as MICS and WUTMI, which provide effective information and educational materials (often in Marshallese).

CMAC members effectively share information, and given their wide membership which spans the local to the national level, they are able to share relevant lessons learned in an effective manner. In times of disaster, radios are relied upon heavily for distributing information.

**Context & Constraints:**

Although radios provide an effective means to distribute information to a wide audience, not everyone has access to radios. It was noted that only approximately 40% of people own a radio. Some people who do own a radio cannot afford to power it. Other educational materials may only be available in English. It is recommended that further materials are also made available in Marshallese to engage more effectively with the RMI population.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

- \* No: Primary school curriculum
- \* No: Secondary school curriculum
- \* No: University curriculum
- \* No: Professional DRR education programmes

**Description:**

DRR is not formally integrated into the school curriculum. However, some progress in introducing DRR to students has made by the EPA. The EPA visited 41 schools both on Majuro and Ebeye and presented on water quality, pollution, littering, solid waste, global warming, climate change and high tides. Total number of students on hand to receive and learn from EPA's environmental awareness presentations was 6944. Other visits to the CMI, Majuro Boys Scouts and RMI Youth Council to raise awareness were also conducted. The "Close-Up" Program, funded by US Department of Interior (US DoI) also sends students to Washington DC and included in the program is a module on climate change.

The CMI runs an Integrated Coastal Management course, which includes modules on coastal development and climate change. CMI also have a Marine Science Certificate, which includes DRM content.

**Context & Constraints:**

There is a clear need and desire from Ministry of Education representatives to incorporate DRR into the school curriculums at all levels. However, once again, the RMI lacks the capacity to do so. Additional funding would therefore be required to effectively mainstream DRR (and potentially climate change) into schools programs. While some activities are associated with risk reduction (e.g. programs on water safety, local food crops and health and nutrition), a more robust and comprehensive program is needed.

Raising the standard of science in schools was also highlighted as a priority. By incorporating a higher standard of teaching of science, students would be better equipped to undertake further studies at the tertiary level, and alleviate some of the capacity issues currently causing limited progress in DRM in the RMI.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

There is no dedicated budget to perform research associated with DRM in the RMI. Any such research is generally undertaken by donors, or donor funded programs. An example is an initiative within the MoH called Health Vulnerability and Adaptation working group, which is investigating the links between climate and health. This program is being assisted by US Centre for Disease Control (CDC), WHO, SPC and EPA.

Research is not generally high on the RMI's agenda with regard to DRM. It is not given any priority in the DRM NAP, and seen by most government representatives as somewhat of a luxury when more urgent requirements (such as supply of fresh, clean water) are apparent.

**Context & Constraints:**

This core indicator is constrained by the limited priority given to research. National budgets are therefore

unlikely to cover research initiatives until potential benefits of doing so are realised.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

#### **Description:**

Significant progress is being achieved against this core indicator, although again it appears to be unrelated to the priority given to education in the DRM NAP. Despite this fact, government ministries and civil society groups are educating the public in various ways to reduce underlying risk, and how to better prepare for and respond to disasters. The NWS run an annual Hazards Workshop (with assistance from NOAA) for Mayors and government officials providing information on climate and disaster related hazards. The Ministry of IA run annual Mayors Workshops, which include information on disaster preparedness and response, thus understanding of response procedures should filter to the public.

As previously mentioned, public awareness initiatives exist within the MoH and the EPA, both drawing upon various forms of media (radio, newspaper) and targeted educational products in Marshallese. WUTMI are also active in public awareness on a range of issues, and reach outer islands via their vast network of members. The US Land Grant via CMI includes public outreach and involves capacity building for agriculture, aquaculture, fishing, cooking and nutrition. Youth-to-Youth in Health, a youth-led NGO, undertake elements of risk reduction via their program relating to health, well-being and disease.

The ADMIRE project conducted a workshop on renewable energy at Majuro Middle School, and other school related programs are also underway. The EPA visited 41 schools both on Majuro and Ebeye and presented on water quality, pollution, littering, solid waste, global warming, climate change and high tides. The "Close-Up" Program, funded by US Department of Interior (US DoI) sends students to Washington DC and included in the program is a module on climate change.

#### **Context & Constraints:**

The main challenge associated with this core indicator is raising the awareness of the importance of viewing risk reduction as a development issue, thus something worth taking seriously across and within all sectors. And as mentioned, this is particularly needed for alaps (traditional land owners) so as to make a real difference at the local level. A dedicated awareness strategy, in Marshallese, is required to overcome this challenge, as ignoring this obstacle will result in lack of real progress for local communities for years to come.

The development of a DRM knowledge base as a resource for developing public awareness programming

material is a challenge for the RMI. The EPA is updating its website, which aims to provide a comprehensive source of information on DRM and environmental issues, however, once again, limited resources hamper the establishment of a 'one-stop' resource center for information on DRM.

---

## **New Zealand** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Is there a national disaster information system publicly available?**

Yes

#### **Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

#### **Description:**

Civil defence emergency management legislation encourages and seeks to enable communities to achieve acceptable levels of risks through:

- identifying and managing risks
- consulting and communicating about risks
- identifying and implementing cost-effective risk reduction
- monitoring and reviewing the process.

Relevant government agencies, local authorities, emergency services and lifeline utilities have a legislative responsibility to participate in emergency planning at the national and local level. Statutory national and local plans are open to public submission during preparation, are approved and managed by political representatives of communities, and are made publicly available while in force (most easily accessible through the relevant agencies' websites). These arrangements facilitate open information-sharing and accountability. Similar processes exist for environmental planning.

Plans are based on risk assessments to identify priority concerns, and may include hazard risk mapping or zoning. Publicly funded hazard and risk information from research institutions and government agencies is generally available, and is often packaged for targeted outreach programmes.

Information on hazards associated with a particular parcel of land or property may be linked to its legal title documents. This Land Information Memoranda (LIM) or Property Information Memoranda (LIM) is available from the local council to any party upon request and payment of a fee. This information may have a bearing on people's decisions to purchase a property, and indicate restrictions on further development or changes in use.

Public information campaigns (leaflets, media) are based on the steps that citizens should take to help protect themselves from nationally generic and locally specific hazards and risks (see Indicator Three for

more information).

**Context & Constraints:**

Raising people’s awareness of hazards and risks needs to be linked to means for them to reduce their risks. For example, an ongoing challenge is increasing community involvement in, and hence support for, land-use policy and planning development processes that will achieve hazard risk reduction.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

- \* Yes: Primary school curriculum
- \* No: Secondary school curriculum
- \* Yes: University curriculum
- \* Yes: Professional DRR education programmes

**Description:**

A comprehensive package for teachers and schoolchildren enables civil defence emergency contexts and activity-based learning across all areas of the New Zealand curriculum for students aged 8–12 years. Called "What's the Plan Stan", and produced by emergency management personnel and teachers, the resource covers what to do before, during and after six types of emergency events: earthquakes, tsunamis, volcanoes, storms, floods and non-natural disasters.

In 2008 a version was developed in Te Reo, the language of New Zealand's indigenous Maori people. In 2009 the entire resource was revised to align with the new 2010 NZ School Curriculum, and provided free to all primary and intermediate schools.

The feedback from schools continues to be positive. The resource has been identified as a potential “international best practice” model, and is the focus of a Fulbright scholar’s research project during 2011.

Learning about hazards management also forms part of social studies and geography programmes at the secondary school level in line with national curricula requirements.

A CDEM Competency Framework was published by the Ministry of Civil Defence & Emergency Management in June 2009. It provides a useful evidence basis for evaluating the relevance and effectiveness of current and proposed programmes of study in the tertiary education sector. Tertiary education providers worked constructively with the Ministry in late 2009 to identify areas of alignment with the Framework, and areas for further development. Generally tertiary providers in New Zealand have particular complementary niches within the hazards and emergency management fields (e.g. Canterbury



University has a physical science focus, whereas Massey University has a social science focus) which enables them to work together to form learning pathways. The Framework is also informing the development and review of unit standards to support practitioner work-based learning.

**Context & Constraints:**

Challenges include linking general messages in national curricula to local awareness of, and involvement in, local hazard and risks reduction processes and emergency planning. Ongoing challenges in relation to the tertiary education fields are largely around capacity and resources.

The Ministry of Civil Defence & Emergency Management is working closely with training providers to ensure that they are committed to, and being supported with, implementing the CDEM Competency Framework. A key finding through the development of the Framework is the lack of emphasis on risk management in relation to the emergency management context, particularly in work-based learning programmes. This will be addressed by the Ministry in the short to mid-term through participation in educational institutes' Boards of Studies and Programme Advisory Groups.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Is DRR included in the national scientific applied-research agenda/budget?**

Yes

\* Yes: Research outputs, products or studies

> Natural Hazards Research Platform Interim Research Strategy (2009)

[http://www.preventionweb.net/files/14579\\_interimstrategyfornhrpv1.8jul2009.doc](http://www.preventionweb.net/files/14579_interimstrategyfornhrpv1.8jul2009.doc) [DOC ]

\* Yes: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

New Zealand's National CDEM Strategy emphasizes the importance of well promoted, coordinated and accessible hazards and disaster research in underpinning national aspirations towards resilience. A wide range of basic and applied research is undertaken in New Zealand for the purposes of improving our quantitative understanding of our complex hazardscape, assessing community and infrastructural vulnerabilities, understanding community preparedness and response behaviours, and developing models and tools that can be applied to inform hazard, risk and emergency management.

Priorities for central government funding of hazards and disaster research emphasises an all-hazards approach with research objectives linked to national outcomes.

Central government (via the Earthquake Commission) funds science capability and technology for a nationwide geological monitoring and reporting network (GeoNet). National research and science capabilities are applied to national models and to specific regional level issues within the constraints of local resources.



Since 2010 the New Zealand Government has moved towards longer-term negotiated funding for hazards and disasters research, principally through the establishment of a multi-agency, trans-disciplinary Hazards Research Platform. The self-managed Platform aims to enhance collaboration between researchers from different organisations (including Crown-owned research institutes, universities, and private researchers), and promote effective engagement between researchers and research users. Funding is contingent on the research directly contributing to improved economic, infrastructural and social resilience to natural hazards in New Zealand. The science capability supported by the Platform will also be available to assist decision makers during significant hazard events.

**Context & Constraints:**

Key challenges are:

- New Zealand's relatively small economy which limits the total available investment in hazard and disaster research;
- Effective engagement between researchers and research users to support improved accessibility, transfer and uptake of research;
- Developing more robust formal and informal pathways to practice.

The newly evolving Natural Hazards Research Platform seeks to address aspects of these challenges through better alignment of funding streams, promoting strategic integration across research organisations, and requiring participation of research users in the development of research programmes that include identifying mechanisms of transfer and uptake into practice

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

- \* Yes: Public education campaigns.
- \* Yes: Training of local government
- \* Yes: Availability of information on DRR practices at the community level

**Description:**

The challenge for emergency management agencies is to sell messages of preparedness, resilience, self-responsibility and community responsibility. Achievement is defined by a growing increase in percentages of people aware of the risks of hazards and taking action to mitigate or prepare.

Research had indicated that, despite high levels of awareness of the potential for disasters in New Zealand, many individuals and communities are not as prepared as they need to be to deal with, and recover from events when they happen.

A long-term national public education programme and social marketing campaign, "Get Ready Get Thru"

(link below), was launched in 2006 aimed at increasing individual and community preparedness for disasters.

Research in 2010 indicates that the preparedness messages are continuing to have an impact with increased awareness of hazards and growing numbers of people who are prepared.

Other national public education activities related to other hazard risk management include:

- The On-farm Adverse Events Recovery Framework promotes a shared understanding of the roles and responsibilities of central government, local government and the primary production sector in preparing for, and recovering from, adverse events; Adverse Events are severe climatic events or natural disasters that are beyond the ability of the community to cope with (link below)
- Earthquake preparedness, EQ-IQ (link below);
- National brochure and signage for tsunami hazards
- Fire-safety: "C'mon guys, get fire-wise" (link below);
- Pandemic health messages are broadcast at times of heightened risk (link below);
- Biosecurity risks are heavily promoted to travellers and workers at border entry points (link below)
- Climate change (link below).

Information on many websites is now available in nine languages to ensure ethnic communities have access to the information. Resources have also been developed for people with a hearing disability.

#### **Context & Constraints:**

Awareness of hazards is increasing with inter-agency engagement at all levels, from local to national, public and private, on risk reduction and civil defence emergency management matters. In part, this increase is attributed to increasing knowledge from ongoing research, public education, and to news media portrayal of emergencies and disasters in New Zealand and in other countries.

The major challenge is changing behaviour of individuals and organisations, and progressing intentions into actions.

Behaviour changes can result from sustained education campaigns over the long term, for which the maintenance and refreshing of programmes are an ongoing requirement.

---

## **Samoa** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is there a national disaster information system publicly available?**

No

#### **Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

Data on Samoa has been gathered and collated where available for the Pacific Cities Project. This included the incorporation of existing database of roads, physical features and the water reticulation network, a detailed seismic micro zonation of the city and the survey of the structure of all buildings in the greater city area, the assembly of the borehole database, production of a coarse digital terrain model, and aerial photography and survey of control points in preparation for the production of a fine-scale working digital terrain model.

A database of all development in Samoa and community and district infrastructural, environmental, social information of all coastal villages has been developed and is maintained by the Planning and Urban Management Agency (PUMA).

Development is currently underway for a DMO website which will facilitate public access to disaster information.

**Context & Constraints:**

Considerable work is required to strengthen communications, dialogue and the sharing of information on vulnerability and risk reduction initiatives and responsibilities within and between individual agencies. There persists the problem of information sharing between agencies, such as GIS Layers data, where there is a general lack of interagency cooperation and there is a reluctance to share agency-owned information. Possible options to counter this problem is the development and maintenance of a National Disaster Database to coordinate crucial information and resources for emergency purpose and mandatory requirements need to be attached to ensure ministerial and agency compliance. The DesInventar Methodology which has already been tested in other Pacific island countries may be a suitable tool also for Samoa.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* Yes: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

Under the Government of Samoa's Second Infrastructure Asset Management Project (SIAM-2) Project, the Disaster Risk Modules – Teacher's Resource Kit, was developed in an interactive CD and includes seven modules (Be Disaster Safe, Tropical Cyclone, Earthquakes, Floods, Home Safety, Forest Fires and In the

Aftermath) which focuses on teaching disaster management, disaster risk reduction, hazard science and hazard safety. The DRM Teacher's Resource Kit targets Pre-school to Secondary level students (K to Year 13) and has been distributed to all schools in Samoa, including government, faith-based and private schools.

The National University of Samoa (NUS) offers a DRM course delivered in collaboration with the University of Hawaii and Japan, but requires further adaptation to cater to the specific needs of Samoa.

### **Context & Constraints:**

The major setback for integrating DRM into schools is that modules has been provided to schools in a CD format, and only 38% of schools have computers which are made available for teaching purposes. The implications to the usability of the CD will impose difficulties in the overall DRM integration process. This problem is also exacerbated by the fact that many teachers possess little or no computer knowledge or skills. This issue is being addressed by the Ministry of Education, Sports and Culture (MESC) who recognise the lack of ITC capacity in schools and which has also been highlighted by MESC's own Multi-media Project. United Nations Educational Scientific and Cultural Organization (UNESCO) will also support the development and integration of disaster management and preparedness in schools and in educational learning resources.

DRM programmes and courses have not been institutionalised into post-secondary education. Current mechanisms for knowledge and skills transference between researchers and end users are weak where currently such knowledge is limited to few individuals. This is a major capacity building gap within Samoa and such mechanisms should be strengthened through the provision of resource support to local education institutions to develop and deliver professional short courses and full-time programmes which cater to the DRM needs of Samoa. Existing post-secondary programmes should also be reviewed for DRM integration.

### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

Samoa has not fully recognised the benefits of conducting multi-risk assessments, and as such the need to promote and advocate the development and use of such tools needs priority consideration. Government is still hugely reliant on regional/international development agencies to assist in both funding and implementation of multi-risk assessments. Although Samoa receives research/study/analysis products, capacity levels to continue similar work remain low because the focus is normally on the end product rather than the process or the methodologies used to get there. This is where the major multi-risk assessment gap is, Samoa has yet to recognise the need to have local experts and to develop a national multi-risk

assessment process which is relevant and applicable to Samoa. There are a number of development partner agencies who Samoa may approach to assist in the development of their own multi-risk assessment process. These agencies have in existence these tools and methodologies and who have conducted such assessments in the pasts, some of which include:

- For hydrological hazards, the Pacific Hydrological Cycle Observing System - 'Pacific HYCOS' Project has an overall objective of attaining a sustainable level of capacity in Pacific Island Countries to be able to assess and monitor the status and trend of Pacific countries' water resources, and to provide the water-related information and hazard warnings needed to support national social and economic development and environmental protection.
- Development of comprehensive hazard and risk management tools for the safeguarding of communities. Post disaster technical assessments, hazard and risk mapping, strengthening information management systems and training in the use of GIS/RS for DRM.
- Economic impact assessment of flood events in Samoa using the 2001 and 2006 events as the baseline for the study, the findings has since been addressed in the Flood Management Plan.

#### **Context & Constraints:**

Undoubtedly, the greatest challenge is translating the information and data from these studies and research projects into a format that is comprehensible to planners and other end-users, and requires a mechanism to ensure all research/study information reaches relevant planning and regulatory bodies to further DRR mainstreaming processes. The capacity to carry out cost/benefit analysis is another identified gap and addressing this will contribute to making some progress towards mainstreaming DRR into development investments.

There is also a need to increase the number of research conducted in Samoa, as DRR integration is multi-sectoral and multi-faceted with many of its components requiring further research. This may require Government and development partners to identify potential areas of research studies aligned to National Priorities, and offered to national and regional educational and private sector as research grants.

#### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

DMO in collaboration with SFESA and AusAID have launched a nation-wide public awareness/education campaign through television informing the public of measures to take in preparing for and responding to

cyclones, flooding, earthquakes, tsunamis, road and fire safety. The television advertisements are delivered in both the English and Samoan languages and include sign language for the deaf or hearing impaired members of the public. These ads have been well-received by the general public.

Community level awareness is conducted through the DRR and CCSDP workshops and have been incorporated in the various community programmes led by MWCSA, Ministry of Health, Ministry of Agriculture, Samoa Water Authority, MNRE forestry, and energy programmes to name a few. All programmes are well attended by the different social groups that exist within each village (women's committee, youth, etc). Village participation in government programmes is done through the Sui-ole-Malo (Village Mayor) and the Sui-Tamaitai-ole-Malo.

There is however a large group of people who reside on the fringes of the village system, they include ostracised families, households on freehold land (normally within new settlements), and those living in squatter-type settlements (many of which are found in the Apia urban area). Although many are located within villages, they are not active participants in the village system and therefore are not able to access community DRM awareness and education programmes. The MWCSA is addressing this problem by conducting six-monthly assessments under the Aiga Ma Nuu Manuia Project and is the main reason government is now able to identify these families through the assistance of the Sui-Tamaitai-ole-Malo and village mayors. So far this programme has assisted in gaining birth certificates for children so they are able to attend school as well as domestic violence and sexual abuse referrals.

**Context & Constraints:**

Although many community-targeted programmes call for equal participation of the different social groups, little is known as to the effectiveness of such programmes. Most community programmes do not normally have follow-up action (impact assessments), so it is difficult to assess its impacts on the community as a whole, women and men, youth and children and other vulnerable groups.

The need now is for Samoa to not only maintain and strengthen awareness programmes but also to move on to increased efforts in the DRM implementation. The challenge however exists not only in resourcing implementation but also ensuring effective and efficient coordination of all DRM programmes at all levels. In addition more needs to be done to evaluate the effectiveness of public awareness strategies for DRM. Integrating DRM considerations into existing community-based programmes will assist in furthering DRR mainstreaming.

The Ministry of Health and the Samoa Red Cross Society need to regularly update the List of Vulnerable Families and include within this list ostracised families, households on freehold land, and squatter settlements. This list needs to include information collected by the MWCSA.

## **Solomon Islands** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

No

**Means of Verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

**Description:**

DRM information is available but there is little awareness about it and it is not easily accessible to all that may be able to benefit from it. The data is currently housed in different ministries. All mapping information i.e. satellite imagery etc is kept by the Ministry of Lands, hazard information is with Mines and Energy, population data is held by the Ministry of Statistics. This information is essential for DRM planning, yet difficult to access. NDMO has recently engaged a DRM Information Officer who is currently (Sept '10) undergoing training with SOPAC in an effort to house this vital information under the NDMO.

There is a great deal of information available from different agencies, particularly NDMO and NGOs, but information sharing is still limited. Different mediums are used, such as TV, newspaper, radio, brochures etc to share information about disaster risks with the public. The NDMO has a good package of public information on DRM and most community-based programmes are using DRM materials.

**Context & Constraints:**

Accessing disaster information often represents a major challenge. There is currently no single agency responsible for housing all DRR relevant data. The processes involved in accessing data are slow and time consuming. Many agencies are not keen to share their information. In a region where the term 'knowledge is power' has particular significance it is really a matter of incrementally altering the way people think about sharing information. It is important for agencies to realise the value of mutual co-operation for achieving DRR objectives. In addition it is recommended that more effective mechanisms for improving access to and sharing of post-disaster assessment reports with relevant stakeholders, be explored.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Is DRR included in the national educational curriculum?**

No

**Means of Verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

**Description:**

DRM is not incorporated into the national curriculum. In schools, natural hazards are explained in terms of



the physical processes involved but no information is shared on how to be prepared for or mitigate potential impacts.

Local Government receives training from the NDMO, regional and international organisations. It was noted that DRM training modules that are available are not always tailored to specific in-country training needs. An example given was the lack of training available on how to conduct rapid assessments post-disaster. DRM is not integrated into University curricula in the Solomon Islands.

Traditional knowledge is not well documented and therefore not integrated in training curricula, despite there being a wealth of traditional DRM knowledge and practices in existence.

#### **Context & Constraints:**

DRM should be incorporated into the national curriculum to complement already existing lesson plans on hazards and their origins/characteristics. Focus should be placed on information on how to prepare for and mitigate potential hazard impacts. Schools and teachers will need to be assisted by all stakeholders. Efforts should be made to better align DRM training modules with identified knowledge and skills gaps that require capacity building.

Traditional DRM knowledge and practices should be documented and shared, particularly in urban areas where this knowledge has been eroded.

#### **Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

#### **Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

#### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

#### **Description:**

There is no allocated budget for DRM research. External agencies' experts carry out most of the disaster related research in-country. However, the Ministry of Agriculture does do research on crop adaptability and food preservation, the latter with support from FAO. Prior to loss in a fire during the political crisis (circa 2001) the Solomon Islands had one of the best agriculture research centres in the South Pacific. There is the intention to rebuild this facility, but presently this is constrained by inability to identify an appropriate site.

Most vulnerability assessments are carried out by NGOs/CSOs and it is felt that they are conducted as a result of global obligations or trends. Access to and sharing of assessment reports is limited and an example of poor co-ordination in terms of DRR work. There are currently no analytical studies carried out on the economic costs & benefits of DRM.

#### **Context & Constraints:**

Procedures to facilitate greater access to and sharing of assessment reports is required.

Analytical studies outlining the economic costs & benefits of DRM are urgently required in order to support the case for incorporating DRR into development planning. A lack of understanding in terms of potential benefits of these kinds of study, as well as a lack of human resource capacity to do such an analysis



currently limits the implementation of this kind of work.

### **Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

4 - Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

#### **Do public education campaigns on DRR reach risk-prone communities?**

Yes

#### **Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

#### **Description:**

There are extensive public education campaigns especially before and during the cyclone season. On average, TV broadcasts air for 15 mins per day approximately 5 days per week and there are around 6-7 radio spots per day. Dedicated awareness raising radio and TV broadcasts are conducted in English and Pidgin. A budget of SI\$500,000 per annum is used for public information on disasters.

There is an issue with lack of involvement in public awareness raising from other sectors with DRM roles and responsibilities, however it is hoped that this will improve with implementation of the new arrangements and with the establishment of the Provincial Disaster Officers (PDO's). The PDO's are the means by which the NDMO will engage in ongoing capacity building and training at the provincial level.

#### **Context & Constraints:**

Although there are many mediums for awareness raising such as TV, radio, newspaper rural communities are often not able to benefit from these campaigns, as they don't all have access to TV's, radio's etc. Standardised information on disaster risks needs to be disseminated to all communities and standards for gender-inclusive awareness programming should be used.

Community access to radio technology needs improvement, particularly in remote parts of the country.

Provision of clockwork radios would negate the need for replacement batteries.

Posters containing guidance for preparing for disaster events would be useful, particularly for remote communities. Levels of literacy and language use (Pidgin or local dialects) should be carefully considered if this course of action is to be explored.

---

## **Vanuatu** (in English)

### **Priority 3: Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is there a national disaster information system publicly available?**

Yes

**Means of Verification:**

\* Yes: Web page of national disaster information system

\* Yes: Established mechanisms for accessing DRR information

**Description:**

Meteorology and Geo-hazards have both established web sites to help inform the public about threats.

NDRMO is available to answer queries from the public in Port Vila. Information on how to contact NDRMO is provided in the public phone book. At the provincial level, the two Provincial Disaster Offices established in Malampa and Santo, provide information services to the local population.

Existing public information materials and preparedness brochures for all main hazard, i.e. cyclones, earthquake, tsunami, volcano have recently been revised by NDRMO and are used and disseminated by civil society organizations through their community level programmes.

**Context & Constraints:**

The public information system is still operating only during office hours. There is no dedicated 24hrs/7 information service established with a dedicated staff.

A major concern raised by many stakeholders had been the lack of a common understanding of disaster and hazard related terminologies. This has led to inconsistencies in messaging when awareness materials were adapted by stakeholders. The NDRMO addressed this issue by holding a workshop in October 2010 that brought all relevant stakeholders together to work towards the standardization of terminologies for public awareness and information and a common understanding.

The co-location of NDRMO with Meteorology and Geo-hazards provides an opportunity to develop joint web-pages. There is also a discussion that national web-sites will be established for the NDRMOs, including Vanuatu, on PDN.

**Priority 3: Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3 - Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Is DRR included in the national educational curriculum?**

Yes

**Means of Verification:**

\* Yes: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* Yes: Professional DRR education programmes

**Description:**

The Ministry of Education has successfully updated the education curriculum to incorporate emerging DRR-DM issues (e.g. what to do in the event of a tsunami, cyclone, and volcanic eruption). The new curriculum will be progressively rolled out over the coming years, starting with students aged 11-13. There are also plans to introduce safety drills as part of the curriculum.

NDRMO has successfully incorporated DRR training in the Public Service Commission's annual training schedule. This will help to further improve the level of awareness of DRR-DM issues within government.

NDRMO has conducted some limited training of officers with responsibility for DRR issues (e.g. line agency and provincial focal points for DRM).

Vanuatu has also benefited significantly from training provided by a number of technical agencies including SOPAC and the Red Cross.

**Context & Constraints:**

NDRMO currently does not have a Training Officer who can conduct relevant training programs across government or at community level (this position is proposed as part of the yet to be approved NDRMO restructure).

Insufficient technical staff (e.g. planners, people with training in humanitarian response) also represents a significant challenge. The NDRMO currently relies heavily on the Vanuatu Police Mobile Force as stipulated in the current disaster management act. While police officers are trained in logistics / command and control operations, they don't necessarily have relevant skills and training in running a civilian humanitarian operation.

Most officers engaged in DRR work within government currently have to wear many hats, which makes the task of implementing DRR initiatives very difficult. Especially the provincial level focal points in Malampa and Santo are affected.

**Priority 3: Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

1 - Minor progress with few signs of forward action in plans or policy

**Is DRR included in the national scientific applied-research agenda/budget?**

No

\* Yes: Research outputs, products or studies

\* No: Research programmes and projects

\* No: Studies on the economic costs and benefits of DRR

**Description:**

There is currently no comprehensive applied research programme with a focus on natural hazards and disaster risk reduction in place for Vanuatu. However, a number of stand-alone scientific and technical studies on a variety of DRM and climate change related issues have been carried out, such as for example (list is not exhaustive):

- Louise Munk Klint, Min Jian, Emma Wong, Terry de Lacy: The Climate Change Adaptation Policy Analysis for the Republic of Vanuatu; Pacific Tourism Climate Adaptation Project; Centre of Tourism and Services Research, Victoria University, September 2010.
- ADB: Drainage Risk Assessment in Port Vila which identified water protection zones, drainage hotspots, environmentally sensitive features, marine coastal features, and proposes coastal water quality monitoring sites.

**Context & Constraints:**

A number of opportunities have arisen for moving ahead in the area of assessing the economic costs and benefits of DRR in Vanuatu. The Ministry of Finance and Economic Management (MFEM) requested the support from SOPAC to strengthen their ability to assess the economic impacts of disasters. This request followed on from a presentation on this subject to the Forum Economic Ministers Meeting in October 2009. A workshop was held on the 14th and 15th December 2010 with participants from MFEM, the Reserve Bank of Vanuatu and the Vanuatu NAP Task Force. The Workshop provided an overview of the economic impact of disasters, and resulted in the identification of a strategies and concrete actions towards mainstreaming DRM in national macroeconomic and fiscal policy and budgetary processes in Vanuatu. Also, a regional training course on economic impact assessment was held in March 2011 in Vanuatu for 8 Pacific island countries, including the Government of Vanuatu. The pilot training was organized jointly by UNISDR, SOPAC/SPC, ESCAP, ECLAC and the WB combining the prevalent methodologies currently in use. The workshop resulted in an improved understanding of the importance and key steps of economic impacts assessments.

**Priority 3: Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

2 - Some progress, but without systematic policy and/ or institutional commitment

**Do public education campaigns on DRR reach risk-prone communities?**

Yes

**Means of Verification:**

\* Yes: Public education campaigns.

\* Yes: Training of local government

\* Yes: Availability of information on DRR practices at the community level

**Description:**

There is a very high level of awareness about DRR-DM issues across government – from national through to provincial level. This is significant achievement and a strong testament to the work the NDRMO has

done to raise the profile of DRR-DM issues since the NAP was first introduced.

In terms of community awareness and participation, the Vanuatu government (NDRMO, Meteorology, Geo-hazards) have:

- > conducted successful annual National Disaster Awareness Week events
  - > conducted numerous education and awareness programs at provincial level
  - > distributed information and education materials on key issues to all provinces (e.g. over 1200 brochures on what to do in the event of a tsunami, earthquake or cyclone were distributed in three languages)
  - > conducted radio broadcasts to try and educate the community about new threats, such as tsunamis.
- Anecdotally, there is evidence that this has raised community awareness and led to modified behaviour (e.g. more people moving to high ground when a tsunami alert is issued).

Several NGOs and other key agencies have also conducted numerous community awareness programs in Vanuatu. This support has helped many a significant number of communities to establish their own disaster management plans and committees. To date community disaster plans have been developed in Ambrym, Tanna, Shefa (Tongoa), Futuna, Maewo, Santo and Vanua Lava. Communities have also received practical support in areas such as identifying hazards, conducting disaster assessments, first aid training, water supply and sanitation (WASH), and emergency response drills.

#### **Context & Constraints:**

Although awareness of DRR issues within government is generally high, the NDRMO currently lacks the human resources to conduct routine training of government officers or to lead a national community awareness program. At present, the NDRMO's community awareness activities are largely opportunistic (i.e. conducted when on assessment missions), rather than a strategic national approach which targets the most vulnerable communities. Moreover, there are as yet no nationally endorsed guidelines for DRR.

The majority of community awareness programs are being undertaken by NGOs. Due to resource constraints, the NDRMO is currently unable to play a lead role in overseeing, prioritizing and coordinating the efforts of the many NGOs engaged in delivering community based programs. NGOs are also using a variety of different tools, systems and approaches, which has sometimes led to mixed messages on the ground. Concerns have also been raised over the sustainability of some of these activities (e.g. where community based DRR programs have been implemented as a one-off intervention with no follow up).

In terms of traditional knowledge, the Vanuatu Cultural Centre has collected information on traditional knowledge and community coping mechanisms in the event of a disaster, but this information is yet to be transcribed and incorporated into national guidance, policies and tools.

---