

Compilation of National Progress Reports on the implementation of the Hyogo Framework for Action:

HFA Priority 4, core indicator 4.4:

Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.

Know the Risks and Take Action

Reporting period: 2007-2009

This document has been compiled from the national progress reports provided by 76 countries through the HFA Monitor.

Note that these extracts are provided for convenience only.

National HFA progress reports should be considered in their entirety and can be found at:

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

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Africa

Algeria (in French)

Level of Progress achieved:

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

Description:

La réglementation sur les établissements classés pour la protection de l'environnement rend obligatoire des études d'impact et de danger préalables et instaure des plans internes et externes d'intervention en réponse à une catastrophe. Ces études et la réalisation des investissements et installations concernés font appel aux normes et standards de conception, de construction et d'exploitation les plus rigoureux et universellement admis.

Context & Constraints:

Le principal défi en la matière réside dans l'amélioration significative du respect des prescriptions et règles de construction et de sécurité industrielle. Ceci pourra être obtenu progressivement par la démultiplication des actions de formation des intervenants et d'organisation des différentes professions concernées.

Angola (in English)

Level of Progress achieved:

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

Description:

Todos os projectos para as novas construções no país tem sido objecto de análise e parecer dos órgãos competentes como os bombeiros, polícia e gabinetes especializados.

Context & Constraints:

A falta dessas estruturas no resto do país tem dificultado o trabalho do estado a certos níveis.

Burkina Faso (in French)

Level of Progress achieved:

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

Description:

Le Burkina Faso a mis en place une politique de planification et de gestion des établissements humains qui s'exécute à travers le ministère de l'Habitat et de l'Urbanisme. La planification et la gestion des établissements humains se font sur la base du Schémas directeurs d'aménagement urbain (SDAU) et du Plan d'occupation des sols (POS). Pour aider ce département ministériel à mener à bien cette politique de planification et de gestion des établissements humains, le gouvernement vient de créer le Conseil National de l'Urbanisme et de la Construction dont les membres ont été installés le 17 Juillet 2008.

Il existe un ensemble documents et de textes de base regissant le secteur de l'urbanisme et de la construction au Burkina Faso dont FASONORMES en cours d'élaboration.

Context & Constraints:

- Insuffisance des ressources financières,
- Insuffisances de ressources humaines qualifiées,
- Insuffisance de moyens logistiques,
- Insuffisance et difficulté d'application des textes,

- l'analphabétisme des populations,
 - la pauvreté des populations,
 - L'insuffisance d'information.
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Burundi (in French)

Level of Progress achieved:

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

Description:

La planification et la gestion des établissements humains n'a pas intégré la réduction du risque dans le passé. Actuellement, des initiatives tenant compte de la RRC commencent à voir le jour avec le soutien de quelques bailleurs .

Context & Constraints:

Le contexte socio-politique instable.

Cote d'Ivoire (in French)

Level of Progress achieved:

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

Description:

La planification et la gestion des établissements humains intègrent très peu des éléments de réduction du risque ; en effet, la grande expansion des habitats humains et le manque d'infrastructures d'assainissement associées notamment dans les grandes agglomérations, la pratique de l'agriculture extensive ainsi que l'anarchie qui caractérise l'utilisation des espaces (pour l'habitat et l'agriculture) dans certains cas, sont de nature à augmenter les risques.

Context & Constraints:

Un des problèmes rencontrés dans la planification et la gestion des établissements humains est celui l'installation des populations déshéritées (majoritaires) dont le nombre continue de croître avec le coût élevé de la vie. Pour réduire la vulnérabilité des populations et de l'environnement, la planification et la gestion des établissements humains doivent nécessairement intégrer des éléments de réduction du risque, notamment, la gestion rationnelle des espaces.

Egypt (in English)

Level of Progress achieved:

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

Description:

Land-use management plans contain regulatory disaster prevention measures at the national and local levels.

In Egypt, planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes, particularly for the newly developed settlements in satellite cities and new community structure hosting medium to low income people. A new code of buildings has been introduced and all structural designs should be based on the new codes. Licensing and permits for construction have utilized tighter measures.

Context & Constraints:

Although construction codes were developed and the law required for their implementation was issued, violation of these codes happens and the results are catastrophic. Therefore, enforcement of the

construction codes will remain a challenge. Disaster risk reduction elements are incorporated in land-use plans particularly for the newly expanding human settlements.

Ghana (in English)

Level of Progress achieved:

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

Description:

The existing building code/regulations are not adhered to, especially since post independence. Current estate private developers also flout the building code by putting up building without cognisance of the identified and publicised hazards. A typical example is the establishment of a real estate by the Social Security and National Insurance Trust - SSNIT and the private Ghana Real Estate Developing Agency - GREDA at Donkonna, an area of flooding, earthquake and radio gas emission. Private individual building are that close to and even in known hazard prone areas of flood and earthquake.

Context & Constraints:

Real Estate developers - both public and governmental have the idea that real disasters such as earthquakes are not possible in the country, but that they can exist only where they have been reported through the media, outside the country. Even modern real estates lack designated safe havens, properly managed refuse disposal and therefore sanitation, many private constructions are going on along with potential land/mass slides in hilly areas.

High-rise building also do not have risk reduction elements such as helipods on the highest floors; rather they are occupied by communication utterance, etc. Inadequate or no-drainage systems exist even in modern real estates.

Kenya (in English)

Level of Progress achieved:

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

Description:

Enforcement of building codes is poor which unethical activities being rampant.

Context & Constraints:

Professionals etiquettes are weak, no political goodwill to reinforce the existing laws.

Madagascar (in French)

Level of Progress achieved:

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

Description:

Le gouvernement lance aujourd'hui le processus d'élaboration des schémas régionaux d'aménagement du territoire (SRAT). Ces plans détermineront la politique en vigueur en matière d'occupation de l'espace à l'échelle régionale. L'élaboration de ces SRAT tient compte de la dimension de la réduction des risques. Par ailleurs, le BNGRC, en collaboration avec des partenaires a déjà initié le processus d'intégrer les normes et standards de construction et de reconstruction. Le processus est à ses débuts. Mais il conquiert déjà l'approbation du Gouvernement et l'appui de plusieurs partenaires.

En coopération avec la Banque Mondiale, un programme de protection sociale est aussi mise en œuvre dans la construction d'écoles et de centres de santé de base suivant les normes anticycloniques dans les

zones exposées aux aléas.

Context & Constraints:

Des recherches approfondies doivent encore être menées pour trouver les normes et standards de construction adaptables au contexte géographique de Madagascar et aux moyens financiers des populations (des normes qui requièrent un gros budget seront de facto rejetées par les populations locales faute de ressources financières). Des échanges d'expériences avec d'autres pays présentant des similarités géographiques et climatiques seront importants.

Malawi (in English)

Level of Progress achieved:

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

Description:

Currently, there is no policy framework for human settlements especially for the rural setting. While building codes exist for buildings in towns, they don't exist for houses in the villages where most of the disasters occur. Development of a Settlement policy framework is one of the activities to be undertaken under the UNDAF cluster work plan for 2009. The development of the policy framework will ensure that DRR is incorporated in human settlements.

Context & Constraints:

Poverty of most people in the rural areas results in their constructing weak houses which are usually damaged when affected by disasters. There is need for these people to be empowered economically.

Mauritius (in English)

Level of Progress achieved:

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

Description:

Generally human settlements do take into consideration disaster risk reduction elements. But, in the absence of proper legislation, there are some human settlements in vulnerable areas, namely in landslide and flood prone areas.

Building codes have not been systematically enforced with the result that a few building in coastal regions are in the beach within the high water marks.

Context & Constraints:

Relevant policies need to be promulgated to encourage disaster risk reduction.

Mozambique (in English)

Level of Progress achieved:

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

Description:

Recent experience with floods (from 2000 to 2008), demonstrated the need of improving settlement location planning, mainly in floods risky areas.

After 2007 and following 2008 floods in Zambezi River, a large resettlement programme was set up aiming to transfer 59 000 families that were affected in both event to new safe location.

In this sense, in 2007 the objective of the resettlement programme was to build 30.000 new improved houses using conventional materials: burnt bricks produced by each family. Other materials were supplied by government.

In 2008, new 21000 families were affected and enlarged the 2007 year figure. To improve standard living of the former residents of the resettlement areas, they were also benefited by the programme. As result, the figure increased to 59.000 families.

To ensure that all people remain in the resettlement areas, all the 92 areas created were chosen by the community leaders and approved by MICOA. In cyclone affected areas, in 2007, Inhambane Government launched a reconstruction programme using improved local materials and promoting new technologies so that houses can resist to storms and winds. Housing construction guidelines and standards are being developed by Government with the support of the UN-Habitat. Sensitization is being made to ensure that all families follow the building codes that are disseminated.

This resettlement programme is being used as a mechanism for technology transfer to local communities: groups of 8 local individuals were trained to design and implement settlement expansion plan according to future local needs. Government supports all activities through INGC, MICOA, Ministry of Public Works and Housing, Ministry of Science and Technology.

Currently, a Socio-anthropological study on resettlement carried out by Eduardo Mondlane University (UEM), with support of UNDP has started and is expected that the results will contribute to understand the causes for the failure of the resettlement programmes conducted in the past in the same areas and offer an opportunity to prevent similar scenarios in future.

In urban areas land use planning is a new priority for municipalities, district capitals and small towns where rapid urbanization is taking place, as a mechanism to avoid soil erosion and flooding. In other hand, there are plans to requalify slums in Maputo, Xai-xai and Tete cities until 2009.

Context & Constraints:

There are essentially 3 constraints: time, financial resources and local capacity.

Related to time, the 2007 post-emergency resettlement Program view was to build all 30.000 houses until December 2009. But, before good progress was made, the same areas were flooded again in 2008, bringing more 21000 families to the programme. As a result the adjusted programme is designed to end in 2010. Now it becomes challenging to end this programme within the deadlines as local skilled man power is not sufficiently available to build 59.000 houses in 3 years.

Financial resources are another big constraint. Within the current scheme, the whole resettlement programme costs over than US\$120 million. This amount is extremely high when compared to the annual Government budget, which will not support such high demand to build all houses in 3 years. Changing the approach, for instance, by hiring construction companies can accelerate the process, but it will increase the cost and reduce the number of jobs available to local labor.

Once finalized, housing construction guidelines and standards must be disseminated in a systematic manner to play a critical role to build hazard proof houses. Nevertheless, these codes must be flexible to be used in all areas since they are adjusted to the local context.

For urban areas, there's a need to enhance local planning capacity to Provinces, municipalities and district so that they can accelerate land use plans formulation and implementation in new areas identified for urban expansion before populations decide to settle by themselves and initiate the production of news slums in the urban expansion areas.

Level of Progress achieved:

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

Description:

Les différents codes établis au Sénégal (code de l'environnement, code de l'urbanisme, etc.) intègrent des éléments de réduction du risque, la vétusté des textes de lois et les interférences entre les responsabilités de certaines structures en charge de la RRC (Protection Civile, Urbanisme, Environnement, etc.) sont de plus en plus dénoncées.

Context & Constraints:

L'étude commanditée par le projet d'appui et relative à la réforme des textes législatifs et réglementaires en rapport avec la RRC devra contribuer à mettre davantage en relief l'intégration des éléments de réduction du risque, y compris l'intégration des normes de construction dans la planification et la gestion des établissements humains.

Sierra Leone [\(in English\)](#)

Level of Progress achieved:

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

Description:

Enforcement of policies is another aspect and it not always done, thus enforcement and strengthening must be a priority at all levels.

Context & Constraints:

The level is THREE. There is the national office in charge of town and city planning and an office responsible for issuance of building permit and regulations. However, the enforcement of the laws governing the operations of these offices is very minimal if any at all. After the civil conflict the city and other provincial and district headquarters saw a sharp increase in population and with the same plots of land, settlements sprung in areas not fit for human settlement.

Swaziland [\(in English\)](#)

Level of Progress achieved:

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

Description:

DRR has not been mainstreamed. we are currently engaged on public awareness campaigns

Context & Constraints:

Capacity constraints

Tanzania, United Rep of [\(in English\)](#)

Level of Progress achieved:

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

Description:

Tanzania Land Use Framework Plan 2008 - 2028 promote balanced distribution and spatial organizations of settlements to enhance socio economic development and environmental management through: designating eight settlements agglomeration zones as centers of growth and nodes of socio economic and environmental development; establishing viable urban jurisdictional areas for all urban centers consistent with future land requirements and capacities in service provision and facilitate preparatory authorities to

prepare City, Municipal, district, regional, zonal and village land use plans in their respective jurisdictional areas as stipulated under section 29 of the Land use Planning Act (2007). Other policies that have emphases in planning and management of human settlement include The National Land Policy, 1995; The National Human Settlements Development Policy, 2000 and The Environmental Management Policy. All these policies are supported by legislations

Context & Constraints:

Streamline management of land issues in accordance with the National Land Policy 1995 Land use planning takes place at various levels ranging from farmland, village, district, Regional and National levels. These levels have to be critically examined in order to address obstacles and issues of conflicts that affect sustainable land use and management. Section 19 of Land Use Planning Act No. 6 of 2007 empowers the National Land Use Planning Commission as the National Planning Authority to Prepare National frame work Land Use Plan the Plan is a guiding document which Intends to meet challenges of Land management in Tanzania.

Togo (in French)

Level of Progress achieved:

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

Description:

la création du clège de l'ordre des architectes du Togo chargé de la prospection et de délivrance des permis de construire suivants des normes adaptées aux aspects morphologiques des sols.

Context & Constraints:

faiblesse d'une politique réelle en matière d'habitat. les difficultés liées à la politique foncières rendent complexe la gestion des établissements humains.

Zambia (in English)

Level of Progress achieved:

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

Description:

Laws and bi-laws governing planning and management of human settlement incorporate aspects of Disaster risk reduction. Enforcement of building codes at national and district levels are however weak.

Context & Constraints:

Local authorities do not have sufficient funds and commitment to monitor and enforce building codes.

Americas

Anguilla (in English)

Level of Progress achieved:

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

Description:

The addition of the Director Disaster Management on the Land Development Control Committee greatly enhanced the understanding of settlement and location issues as well as giving a voice to climate change and mitigation of risk to environment.

Building codes are available but not enforceable in their current form.

Context & Constraints:

via CDERA the participating states are working toward model building codes taking into account seismic as well as CUBIC

Argentina (in Spanish)

Level of Progress achieved:

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

Description:

Los planes de vivienda social en el orden gubernamental y los planes impulsados por diversas ONGs, como se nombrara anteriormente, contemplan en sus programas la implementación de códigos de construcción adaptados a las nuevas exigencias para la RRD.

Por otra parte, se ha aprobado el Plan de Desarrollo Territorial con alcance nacional que involucra a los asentamientos humanos.

Sin embargo, en ocasiones los indebidos controles (seguramente más en el orden masivo público) pueden derivar en efectos no deseados.

Context & Constraints:

Extender la necesidad de este impacto, y alcanzar con ello también otras cuestiones como las viviendas de nivel medio o alto, que a veces no asumen este tipo de responsabilidades.

Bolivia (in Spanish)

Level of Progress achieved:

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

Description:

Existe cierto progreso, como por ejemplo la iniciativa del Plan de Ordenamiento Territorial que en la actualidad contempla la inclusión del factor de vulnerabilidad al riesgo en su totalidad, sin embargo no existen aún políticas sistemáticas ni compromisos institucionales fortalecidos, además que existen severas limitaciones en la implementación del Plan.

A nivel del Viceministerio de Vivienda y Urbanismo, se trabaja la promoción de la vivienda que no genere riesgo o que no reproduzca el riesgo preexistente en las zonas afectadas.

Desde el año 2007, se cuenta con un código de construcciones sismo resistentes. Adicionalmente se está considerando la reducción del riesgo de edificaciones de salud.

Iniciativas en materia de promoción de edificaciones seguras en el sector de educación, se están considerando desde el Ministerio de Educación.

Context & Constraints:

Falta de normativa en el tema de desarrollo rural y urbano.

Carencia de conocimiento con respecto a la normativa vigente.

Deficiencia en la capacitación y asistencia técnica para mitigar riesgos.

Difusión a comunidades y líderes locales de normativas, leyes, etc. limitada

Atención limitada, sin ejecución eficiente, ni seguimiento a largo plazo. La asistencia es parcial y limitada.

Mejorar la implementación de los Planes de Ordenamiento Territorial existentes y la formulación de nuevos planes.

Mejorar la coordinación de acciones entre entidades gubernamentales, no gubernamentales, de cooperación, de acción social, etc.

British Virgin Islands (in English)

Level of Progress achieved:

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

Description:

Currently, the VI (UK) Physical Development Plan is being drafted. To support this plan, a land use and zoning plan is being designed, and will designate hazard and risk prone areas.

Context & Constraints:

Enforcement of building codes is an on-going challenge. A large effort is being made by the Planning and Building Authority within the Development Planning process to ensure compliance with Building Codes.

Additional technical Resources and Trained Professionals within the Government and Private Sectors are needed to ensure the success of this measure.

Cayman Islands (in English)

Level of Progress achieved:

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

Description:

The Cayman Islands adopted the Southern Building Code (U.S) in 1995 and it is rigorously enforced for new developments. The Building Code mandates homes and offices have suitable means of egress for evacuation purposes. Many properties are fitted with fire alarms and have fire suppression equipment.

Electrical building inspectors conduct field inspections to ensure that electrical installations and electrical components comply with the standards contained in the National Electrical Code and Electrical Law and Regulations. New electrical application drawings submitted for approval are reviewed to ensure that they meet standards.

The Builder's Law (2007) which has passed (but not fully activated as yet) requires that contractors are licensed and obtain a minimum C.I. \$1 million in liability insurance. The law requires both construction businesses and their employees to register with the Builders Board, New road infrastructure is built five feet above Mean Sea Level thus reducing potential risks associated

with flooding in natural disasters.

The Petroleum Inspectorate closely monitors installations and fuel storage areas that handle petroleum products and most service stations currently employ the 'Veeder Root' system which offers vapor-recovery and leak detection devices. All new installations for above and below ground fuel tanks must be UL listed or equal and must be installed according to NFPA 30 and 39A.

Vehicles that transport bulk petroleum products are required to come completely off main arterial roads when dispensing fuel. Esso and Texaco service the Cayman Islands as the wholesale suppliers and they both espouse a safety-first ethic and work environment.

Companies that store dangerous substances are required to conduct emergency drills.

Home Gas Ltd. is currently the sole provider of propane gas. The company operates a Liquid Petroleum Gas (LPG) bulk storage facility close to one of the main school districts on Walkers Road, in the capital George Town and there is also one on the Island of Cayman Brac. The installations comply with all aspects of the adopted National Fire Protection Association Standards. Home Gas Ltd. has the capacity to store 210,000 gallons of propane in above ground storage containers and a further 540,000 gallons of propane can be stored underground in buried tanks. These buried tanks are enclosed in concrete walls which are then backfilled with quarried sand and aggregate, providing two feet of protective insulation. Fire protection systems at the sites have been upgraded and the new buried installations comply with the American Petroleum Institutes API-2510 requirements.

All buildings must get approval from the Planning Department, and regular inspections are carried out during construction.

Context & Constraints:

Properties constructed under the requirements of the Southern Building Code are rated to a category three hurricane. The Cayman Islands remain vulnerable to impact from hurricanes of categories four and five. Increasing the standard of the Building Code to require new developments to meet or exceed the impact of a category five hurricane could cause building costs to become prohibitively expensive.

There are some ongoing problems with the improper use and storage of small LPG cylinders offsite from the wholesale gas distribution sites but Home Gas Ltd. has conducted some public awareness campaigns and have liaised with the Fire Services Department to upgrade premises and private dwellings not in compliance with the fire protection standards. There are a number of independent contractors who install gas appliances and some of this work has been identified as below standard, however Home Gas Ltd. recently brought down an instructor who conducted a week long course to train contractors. Those that successfully completed the training obtained a gas fitters license. The use of gas is almost exclusively confined to pressurized cylinders and is not piped underground as is common in some countries. Following the passage of Hurricane Ivan it is believed a number of cylinders were washed away from private homes and may have ended up on raw or undeveloped land. These cylinders pose a small but potential risk if they are handled improperly as they deteriorate with time.

Colombia (in Spanish)

Level of Progress achieved:

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

Description:

La Ley 388 de 1997, por la cual se desarrollan los Planes de Ordenamiento Territorial establece en su

artículo 10, en donde se especifican los determinantes de los Planes de Ordenamiento Territorial que “en la elaboración y adopción de sus planes de Ordenamiento Territorial los municipios y distritos deberán tener en cuenta las siguientes determinantes, que constituyen normas de superior jerarquía, en sus propios ámbitos de competencia, de acuerdo con la Constitución y las leyes:” “1. Las relacionadas con la conservación y protección del medio ambiente, los recursos naturales y la prevención de amenazas y riesgos naturales, así:... Las políticas, directrices y regulaciones sobre prevención de amenazas y riesgos naturales, el señalamiento y localización de las áreas de riesgo para asentamientos humanos, así como las estrategias de manejo de zonas expuestas a amenazas y riesgos naturales.” Existen normas urbanísticas derivadas del Ordenamiento territorial que incluyen la gestión de riesgo. Se ha logrado interiorizar la utilidad del Ordenamiento territorial y de la inclusión de la gestión de riesgo en el desarrollo municipal. De forma complementaria, es de destacar que el país cuenta con la Ley 400 de 1997, por medio de la cual se adoptan normas sobre Construcciones Sismo Resistentes y la norma NSR-98 de Diseño y Construcción Sismo Resistente, a su vez se cuenta con el decreto 564 de 2006, por el cual se reglamentan las disposiciones relativas a las licencias urbanísticas, normas que establecen los parámetros claros para los desarrollos futuros y adecuación de los existentes en materia de asentamientos humanos.

Context & Constraints:

Entre las limitación más importante es la falta de control urbano y en el seguimiento en el cumplimiento de las disposiciones derivadas del POT correlacionados con las normas urbanísticas y las zonas de expansión a nivel municipal. Lo anterior se agudiza, si se tiene claro que en el país su desarrollo urbano ha sido principalmente a través de la informalidad, aspecto que complejiza la toma de decisiones para la incorporación de elementos de la reducción del riesgo de desastres, entre ellos el cumplimiento de los códigos de construcción.

Costa Rica (in Spanish)

Level of Progress achieved:

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

Description:

“La planificación y la gestión de los asentamientos humanos incorporan elementos de la reducción del riesgo de desastres, entre ellos el cumplimiento de los códigos de construcción”

Nivel alcanzado:4

Desde los años sesenta y con algunos antecedentes previos, Costa Rica cuenta con leyes que regulan el desarrollo de los asentamientos humanos y las construcciones; su código de construcción data de entonces y posteriormente ha tenido varias reformas. El Instituto de Vivienda y Urbanismo colabora con y asesora a las municipalidades para la planificación de este tema y para que velen por el cumplimiento de las normas.

Los proyectos de construcción que superan los 300 metros de construcción están sujetos a la aprobación de medidas definidas en la Ley de Ambiente y que entre otros aspectos obligan a la presentación del estudio de impacto ambiental.

Recientemente los técnicos han empezado a poner énfasis estricto en la valoración de amenaza, así como la determinación de consideraciones de vulnerabilidad para la adecuación de los procedimientos de fiscalización y control. Igualmente, existen proyectos de gran escala, como el proyecto PRUGAM, que busca generar propuestas y medidas para la regulación del desarrollo en el Gran Área Metropolitana, en una perspectiva que entre otras cosas, trascienda el ámbito municipal y abarque la dimensión de cuenca.

Context & Constraints:

La exacerbación de proyectos de explotación agrícola, turística y residencial, especialmente el

desarrollado con capital extranjero se une a la práctica continua de “precarización” de zonas de amenaza, en un proceso complejo que se combina con la falta de capacidad del Estado para ejercer control, especialmente en el ámbito municipal. Ello demanda de un esfuerzo por planificar a efecto de contar con nuevas medidas de regulación y de ordenamiento del territorio.

Dominican Republic (in Spanish)

Level of Progress achieved:

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

Description:

Existen varios desafíos a enfrentar:

1. Asegurar el respeto de las normas de construcción vigentes.
2. Actualizar las normas para tomar en cuenta el factor riesgo
3. Promover una política de ordenamiento y de reubicación en zonas de alto riesgo

Context & Constraints:

Hace falta desarrollar proyectos piloto para demostrar la validez del ordenamiento territorial a nivel municipal.

Ecuador (in Spanish)

Level of Progress achieved:

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

Description:

- AVANCE 3

POLÀTICA 5. Todas las instituciones, organismos colegiados, grupos técnico-científicos, centros de educación superior, etc., deberán iniciar acciones sostenidas de investigación y generación de información de la temática de gestión de riesgos.

Context & Constraints:

Recomendación

- Generar un proceso de construcción de estándares de construcción
 - Elaborar mecanismos de participación conjunta en el nivel político y técnico para elaborar las normas de construcción en zonas de alto riesgo.
 - Actualizar el código ecuatoriano de la construcción.
 - Generar un proceso de construcción de instrumentos locales para el ordenamiento territorial
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El Salvador (in Spanish)

Level of Progress achieved:

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

Description:

Existen planes de ordenamiento y desarrollo territorial, pero se restringen a zonas específicas y aún en estos municipios no se ha incorporado la GR de una manera sustancial y categórica.

Context & Constraints:

Es necesaria la actualización de los planes de desarrollo para las amenazas, revisión de códigos de construcción.

Jamaica (in English)

Level of Progress achieved:

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

Description:

The achievements to date have been in the form of policy and legislation mainly as listed below. However there are limitations towards comprehensive management of human settlements due to the outmoded nature of numerous development orders and the deficiency in the institutional capacity of monitoring agencies to enforce existing legislations.

Building codes

Town & Country Planning Act

Local improvements Act

Parish Council's Act

NRCA Act

Development Approval process

The country's frequent experience with hazards prompted the decision for Environmental Impact Assessment to be a requirement for medium to large scale projects or those that are undertaken in environmentally sensitive areas. The National Disaster Office is also required to conduct vulnerability assessments for some types of developments.

Context & Constraints:

Challenges

- Limited human resource capacity to adequately enforce legislation related to the development process.
- Capacity of Local Planning Authorities limited as it relates to conducting Vulnerability/ Risk Assessments.
- Further dissemination of the Building Code

Recommendations

- Continued building of capacity of Local authorities in DRR
 - Bolstering of technical/ human resource capacity of the National Disaster Office to deal effectively with DRR.
 - Strengthening of legislation related to DRR/ development penalties as well as associated sanctions.
-

Panama (in Spanish)

Level of Progress achieved:

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

Description:

Son varias las instituciones involucradas en este procesos algunas de ellas son:

MEDUCA, GEOCIENCIAS, MEDUCA, MIVI, UTP. Las mismas preparan estudios y trabajos en conjunto que permiten conocer la facilidad de utilizar las tierras.

Ejemplos:

- Estudios de Microzonificación Sísmica. (GEOCIENCIAS)
- Mapas de Áreas vulnerable a inundaciones. (SINAPROC)
- Informe del Estado Ambiental de la Cuenca Hidrográfica del Canal de Panamá. Comisión Interinstitucional d la Cuenca Hidrográfica del Canal de Panamá (CICH)

A su vez el país cuenta con reglamentación para las construcciones sismo-resistentes y para resistir vientos fuertes; hay una nueva ley de ordenamiento territorial. También se incorpora al código penal procesos penales por los daños al medio ambiente y por la generación de nuevos riesgos.

Ejemplo:

De estos avances es que con la aprobación de la Ley de Ordenamiento Territorial se han generado más de 16 Juntas Municipales de planificación. El MIVI considera que no existe caos por el auge inmobiliario, mas bien lo consideran un proceso acelerado de desarrollo que se está tratando de nivelar, para que en un plazo no muy largo, Panamá pueda estar a la altura de este sistema.

También se han mantenido jornadas “Experiencias de la Juntas de Planificación Municipal en la Ley 6 de 2006 sobre ordenamiento territorial” dentro del programa que realizó la Secretaría Técnica de Infraestructura Pública. Actualmente se han instalado 17 Juntas de Planificación, cinco de las cuales se encuentran en la provincia de Los Santos. El potencial de la Ley de ordenamiento territorial únicamente se ha explotado en un 10%, no obstante con la instalación de las 17 juntas de planificación que existen, abarcan el 80% de la población nacional. En todas las cabeceras de provincias y los grandes centros urbanos, existen juntas de planificación, sin embargo aún faltan algunos municipios que son pequeños, que deberán ser integrados en el transcurso de la Ley.

Ejemplos de leyes:

El Ministerio de Vivienda MIVI mantiene muchas leyes, decretos, acuerdos en cuanto al tema, las cuales deben ser las bases para el asentamiento urbano.

Ejemplos:

- LEY N° 21 De 2 de julio de 1997, Gaceta oficial N° 23323 de 3 de julio de 1997. Por la cual se aprueba el Plan Regional para el Desarrollo de la Región Interoceánica y el General de uso, conservación y Desarrollo del Área del Canal.

- LEY N° 41 De 1 de julio de 1998, Gaceta oficial N° 23578 de 3 de julio de 1998. Ley General de Ambiente de la República de Panamá.

- LEY N° 79 De 23 de diciembre de 2003, Gaceta oficial N° 24956 de 24 de diciembre de 2003. Que hace adiciones al anexo I de la Ley 21 de 1997, que aprueba el plan Regional para el Desarrollo de la Región Interoceánica y el Plan general de uso, conservación y desarrollo de Área del Canal, y dicta otras disposiciones.

- Decreto N° 44-B De 14 de mayo de 2001 Gaceta oficial N° 24331 de 26 de junio de 2001. Artículo 8: Para el desarrollo de los Programas de Viviendas que se ejecutan según las disposiciones establecidas en esta Ley.

- LEY N° 6. De 1 de febrero de 2006. Gaceta oficial N° 25478 de 3 de febrero de 2006. Que reglamenta el ordenamiento territorial para el desarrollo urbano y dicta otras disposiciones.

- RESOLUCIÓN N° 13-91. (De 19 de febrero de 1991). Gaceta oficial N° 21836 de 24 de julio de 1991. Por el cual se aprueban las disposiciones varias y excepciones sobre el uso residencial.

- RESOLUCIÓN N° 188-93. (De 13 de septiembre de 1993) Gaceta oficial N° 22390 de 8 octubre de 1993. Por el cual se aprueba la modificación y actualización de las Normas de Desarrollo Urbano

Comerciales para los distritos de Panamá y San Miguelito.

- RESOLUCIÓN N° 7-94. De 13 de enero de 1994. Gaceta oficial N° 22472 de 9 de febrero de 1994. Por el cual se establecen las Normas de Diseño relativas al Régimen de Propiedad Horizontal.
- DECRETO EJECUTIVO N° 36. De 31 de agosto de 1998. Gaceta oficial N° 23627 de 10 de septiembre de 1998. Por el cual se aprueba el Reglamento Nacional de Urbanizaciones, de aplicación en el territorio de la República de Panamá.
- RESOLUCIÓN N° 139-2000. (De 8 de agosto de 2000). Gaceta oficial N° 24130 de 1 de septiembre de 2000. Por el cual se aprueban Normas Especiales de Urbanizaciones, para mantener el carácter de Ciudad Jardín en la Región Interoceánica.
- DECRETO EJECUTIVO N° 205. De 28 de diciembre de 2000. Gaceta oficial N° 24212 del 03 de enero de 2001. Por el cual se aprueba el Plan de Desarrollo Urbano de las áreas metropolitanas del Pacífico y del Atlántico.
- RESOLUCIÓN N° 155-2001. De 31 de julio de 2001. Gaceta oficial N° 24392 de 20 de septiembre de 2001. Por el cual se establecen nuevas normas de diseño, relativas a estacionamientos para vehículos en la República de Panamá.
- RESOLUCIÓN N° 160-2002. De 22 de julio de 2002. Gaceta oficial N° 24645 de 24 de julio de 2002. Por el cual se crean los Códigos de Zona y Normas de desarrollo para el área del Canal.
- RESOLUCIÓN N° 236-2002. De 28 de octubre de 2002. Gaceta oficial N° 24675 de 6 de noviembre de 2002. Por la cual se dictan medidas urbanísticas especiales para la urbanización Punta Paitilla del corregimiento de San Francisco, distrito de Panamá.
- RESOLUCIÓN N° 28-2003. De 21 de febrero de 2003. Gaceta oficial N° 24757 de 11 de marzo de 2003. Por el cual se aprueba el Reglamento para calles privadas en las urbanizaciones y notificaciones ubicadas en el territorio Nacional.
- RESOLUCION N° 112-2003 (de 22 de julio de 2003). Gaceta oficial N° 24858 de 4 de agosto de 2003. "Por la cual se aprueba el Plano de Zonificación de los usos del suelo y las Normas de desarrollo urbano para el corregimiento de San Francisco".
- RESOLUCION No.127-2003. (De 25 de agosto de 2003). Gaceta oficial N° 24882 de 8 de septiembre de 2003. "Por la cual se aprueba la zonificación del uso del suelo y las normas edificatorias para el Casco Antiguo de la ciudad de Panamá.
- RESOLUCIÓN N° 184-2003. DE 20 de noviembre de 2003. Gaceta oficial N° 24942 de 5 de diciembre de 2003. Por el cual se establecen nuevas regulaciones a nivel Nacional, para el cálculo del número de habitaciones en edificios de apartamentos y establecimientos de hospedajes públicos y se deroga una Resolución.
- RESOLUCIÓN N° 237-2005. De 16 de agosto de 2005. Gaceta oficial N° 25376 de 1 de septiembre de 2005. Aclara los conceptos de aplicación a la altura, Línea de Construcción y Retiro Frontal para las actividades Mixta Residencial y Comerciales, contenidas en los artículos 3,24, 25 y 26 de la resolución 160-2002 de 22 de julio de 2002.
- RESOLUCION No 08-06 (De 18 de enero de 2006). Gaceta oficial N° 25490 de 21 de febrero de 2006.

Por la cual se aprueba la adición del uso de suelo mixto comercial urbano de alta intensidad (Mcu3) al turismo urbano (TU) vigente, para los terrenos localizados en la península de Amador, corregimiento de Ancón.

- RESOLUCION No 09-06. (De 18 de enero de 2006). Gaceta oficial N° 25489 de 20 de febrero de 2006. "Por la cual se establece como uso complementario a la norma de alta densidad RM3, MCU3 y C2, el código de zona Residencial Turístico Urbano (RTU) de aplicación en el territorio de la República de Panamá"

Ya se han tenido situaciones donde los desarrollos urbanísticos ubicados a márgenes de ríos al haber crecidas del cauce de los mismos hemos tenido pérdida de vidas y bienes por lo que hay que vigilar de cerca que se tomen en cuenta la probabilidad de ocurrencia de algún desastre, al momento de preparar proyectos urbanísticos.

Context & Constraints:

Tenemos el marco legal falta integración, intercambio de información y divulgación; porque la pregunta es cuantas de estas leyes se cumplen realmente.

Limitaciones:

- La principal, es lograr que el MIVI sea más participativo en las actividades de la Plataforma Nacional.
- Se requiere integrar los estudios técnicos científicos, el personal del MIVI, la empresas constructoras y promotoras en las acciones que llevan como resultado el desarrollo y planificación de asentamiento urbano de manera que los elementos de la gestión de reducción de riesgo estén incluidos en los planes para el uso del suelo es una herramienta de gran importancia para reducir la vulnerabilidad de las comunidades ante las amenazas. Una planificación del uso del suelo que se diseña cuidadosamente y se implementa rigurosamente representa un enfoque muy útil para abordar la expansión de los asentamientos urbanos y para minimizar los riesgos asociados con esto.

Debemos integrar a la Dirección de Desarrollo Urbano del MIVI, en el proceso de consultas para fortalecer este tema, ya que mediante la Ley No. 9 de 25 de enero de 1973, a ellos les competen las funciones, que tienen que ver con los asentamientos humanos y se relaciona con la planificación urbana a nivel nacional :

- Proponer normas reglamentarias sobre desarrollo urbano y vivienda y aplicar las medidas necesarias para su cumplimiento;
- Recomendar la aprobación de planes y proyectos de vivienda y de desarrollo urbano en el País tanto de carácter público como privado;
- Preparar los planes para el desarrollo armónico y ordenado de los centros urbanos del país.

Peru (in Spanish)

Level of Progress achieved:

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

Description:

Nivel de Progreso 2:

Existen lineamientos de política de Ordenamiento territorial, incluye la Evaluación de Riesgos EVAR, no existe compromiso de las autoridades locales.

- Existen algunos avances en el Programa Binacional de Ciudades Sostenibles: Perú – Ecuador, incluye elementos normativos en el ámbito local de sus intervenciones elementos metodológicos en relación a Planes de Ordenamiento Territorial
- Se ha logrado la aprobación por ley la creación del Sistema Nacional de Planeamiento Estratégico y del Centro Nacional de Planeamiento Estratégico (CEPLAN), encontrándose pendiente su reglamento e implementación.

Context & Constraints:

- Incorporar la Gestión del Riesgo como una política de Estado adicional a las existentes en el Acuerdo Nacional, con carácter vinculante en cada una de las escalas de gestión territorial.
 - Promover la implementación del Sistema Nacional de Planeamiento Estratégico y del Centro Nacional de Planeamiento Estratégico (CEPLAN).
-

Saint Lucia (in English)

Level of Progress achieved:

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

Description:

The Physical Planning Act covers some DRR considerations and requires the enforcement of some building codes; it also allows for the review of development plans by NEMO where DRR considerations may be addressed.

The Programme for the Regularization of Unplanned Developments (PROUD) was a program aimed at regularizing squatter settlements in the country and its in its activities it did consider DRR issues. Its responsibilities including the DRR considerations were recently transferred to the Ministry of Housing.

Context & Constraints:

It is apparent that the existing building codes need revision and update. Additionally they need to be enforced more stringently. Input by NEMO on the review of development plans need to be utilized more frequently.

United States of America (in English)

Level of Progress achieved:

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

Description:

Building codes represent a key component of disaster risk reduction in the United States. Such codes are adopted and implemented at the state and local level based on model building codes that are developed through a consensus process by non-governmental organizations such as the American Society of Civil Engineers and International Code Council. These model building codes incorporate current scientific and engineering understanding across multiple hazards, including seismic shaking intensity, wind loads, and fire characteristics, among others.

Context & Constraints:

See above.

Venezuela, Bolivarian Rep of (in Spanish)

Level of Progress achieved:

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

Description:

La República Bolivariana de Venezuela cuenta con uno de los códigos de construcción sismorresistentes más actualizado de la región y los asentamientos humanos planificados se desarrollan siguiendo las normativas vigentes. Paralelamente y a lo largo de las últimas cinco décadas, también se han desarrollado construcciones no planificadas, que incrementan las condiciones de riesgo. Existen en Venezuela una serie de regulaciones que han sido creadas para la planificación y gestión de los asentamientos humanos, sin embargo, sus disposiciones no son cumplidas en todos los casos, y dichas faltas no son sancionadas.

Context & Constraints:

Dar cumplimiento a los proyectos concebidos por distintas instituciones, con énfasis especial en aquellos relativos a la microzonificación sísmica.

Asegurar la aplicabilidad y adecuación de la normativa vigente en los asentamientos formales, para promover construcciones siguiendo los parámetros urbanísticos que contemplen la variable riesgo.

Asia

Bahrain (in English)

Level of Progress achieved:

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

Description:

- The Kingdom's Building and Fire Codes are based on International Standards.
- Implementation of policies, have ensured that land use and human settlements are in compliance with such regulations.

Context & Constraints:

- Close monitoring is essential as much of the Kingdom was built before such codes were introduced.
 - A refined regime of regular inspections and in particular the use of licences for all sectors providing a service to the Public needs to be introduced.
 - An effective inspection and audit regime will involve additional resources and funds.
 - The current Legal Framework does not fully empower the Government to take immediate action to rectify major failings. New legislation will help.
-

Bangladesh (in English)

Level of Progress achieved:

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

Description:

Ministry of Land is preparing for National Land Zoning which is supposed to identify safe settlement zones. Adaptation to Climate Change through Coastal Afforestation project of the Ministry of Environment and Forest in collaboration with the Land and Water Resources Ministries are planning to identify vulnerable coastal zone and protection of coastal settlement from potential natural hazards. Building codes are introduced in urban areas. Rural and Urban Landuse planning is under active consideration of the Government. Government prepared a plan to resettle the vulnerable people in the Chittgong Hill Tract to safer places. Building Code document includes a guideline on planning settlement. GoB hosted a regional workshop to develop a guideline on community based risk reduction.

Context & Constraints:

Building codes are in place but yet to be enforced appropriately. Updating of Building codes is one of the constraint.

Cambodia (in English)

Level of Progress achieved:

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

Description:

There are some considerations and projects management of human settlements implemented by partner agencies, who are working on disaster risk reduction activities, for example, various small-scale village road repairing, raised houses, safety boats, safe area development etc. The projects are serving for human settlements during the flood seasons

There are also considerations from the national government agencies to implement the project related to

disaster risk reduction measures (flood and drought), for example, Ministry of Water Resource and Meteorology (MOWRAM) are implementing flood protection structures (dikes and dams) to protect cities and provinces from river and flash flood. Moreover, Ministry of Public Work and Transportation are also implementing the road protection from flood in the flood prone areas. The projects are usually funded by World Bank and Asian Development Bank (ADB). The projects are also used as the human settlements during flood seasons as well.

Context & Constraints:

- > There are critical challenges in managing and maintaining the projects, due to insufficient mechanism, policies and plans to maintain, while the projects handed over to communities and authorities.
- > There are inadequate human and animal settlements in the flood prone communities, and there are challenges of facilities on safe areas (latrines, clean water facilities, and drainage systems etc) are not available and/or are not functioning, due to lack of maintaining mechanisms.
- > There have not been initiatives and progresses of developments of Building Code or policies related to human settlements.
- > DRR in post recovery reconstruction has not been integrated into any strategy yet.
- > Most vulnerable people are located in slum and high risk areas, especially who are living along the river.

Recommendations to Overcome:

- > There are needs to have the comprehensive management and maintaining mechanisms the projects, such as policies and plans. The operation and maintaining mechanisms need to integrate with local development policies and plans.
- > There are needs of technical and financial support from partner agencies and funding agencies to implement the projects related to human and animal settlements, especially in the high risk areas. Meanwhile, the national government agencies at all levels also need to consider as one of the priorities within its programme and project cycle and mobilize the resources to implement these activities as well.
- > There are needs to provide technical and financial support to develop and enforce the Building Codes and develop the related policies and plans to ensure the implementations.
- > City planning and settlement planning at local levels should be integrated DRR and social land concession.

India (in English)

Level of Progress achieved:

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

Description:

Standards/Codes for construction practices relating to structural safety from natural hazards including the National Building Code are second to none in technical content in India. The National Building Code is advisory in nature and lays down a set of minimum provisions relating to structural safety, fire safety and health safety to ensure safe habitat for public. In addition to it there are hazard specific codes designed by Bureau Of Indian Standard to ensure structural safety against natural hazards like floods, Cyclone, Landslides and Earthquakes. The country has also formulated the Model Town and Country Planning Act in the year 1960 further revised in 1985 which provides the provisions for preparation of comprehensive master plan for development of urban areas. In 1991 Urban Development Plan Formulation and

Implementation Guidelines have been formulated. Ministry of Home Affairs constituted a technical committee and prepared an expert report which provides the suggestive amendments to be made in the existing Land Use Zoning Regulations, Development Control Regulations, Town and Country Planning Act and building byelaws to ensure structural safety natural hazard prone areas. Many State governments have revised their land use zoning regulations and amended their byelaws to incorporate disaster risk reduction elements and developed compliance mechanism to ensure implementation of the building codes.

Context & Constraints:

The implementation of the provisions prescribed in the building codes and compliance to the building byelaws is an area of concern and despite creating an enabling environment there is an apprehension among people that adding disaster resilient features into the structural design may be costly and not much effective. There is a need to provide adequate training and create awareness among the engineers, architects, masons and common citizens about disaster resistant technology and its usefulness'. In rural areas of India masons construct houses for the people. It is very important to provide adequate training to these artisans on hazard resilient construction practices to ensure safe rural habitat.

Indonesia (in English)

Level of Progress achieved:

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

Description:

Pertaining to the planning and management of human settlement incorporating disaster risk reduction elements, including the enforcement of regulations for human settlements, the relevant institutions have enforced the policies on building codes, zoning and building construction permit. Besides, there is a growing public awareness of the earthquake-proof buildings and an effort to certify the quality of building, public buildings in particular. Law enforcement related to building supervision that considers public safety must be promoted.

Context & Constraints:

There are several of constraints, such as lack of coordination among the organizations concerned with the planning and management of people's settlements in mainstreaming disaster risk reduction elements, including the enforcement of building codes. Also there needs to be a comprehensive strategy for building codes and spatial planning, as well as clear distribution of roles among relevant government agencies.

To address these challenges, it is recommended that a coordination mechanism is established among the relevant institutions to make the work more effective; the use of micro-zoning for the formulation of spatial plans in hazard-prone areas; improved supervision for the enforcement of building codes; public awareness raising for building codes; and enhanced monitoring and evaluation of the implementation of the building codes.

Furthermore, there is also a need to develop incentive/disincentive system to encourage the operationalization or implementation of existing policy and regulations.

Iran, Islamic Rep of (in English)

Level of Progress achieved:

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

Description:

Describe some of the key contextual reasons for the country's ranking/ assessment at the indicated level Highlight key contextual challenges encountered by the country/ national authorities and partner agencies; and recommendations on how these can/ will be overcome in the future.

Within the two 5-year development plan, 3 million residential buildings have to be retrofitted by the support of the government through providing subsidies, construction material and technical assistance to the low income families combined with other facilities including grants and soft loans to the owners. Each year 300,000 houses are planned to be completed by the end of the 2015

1. The buildings, whether rural or urban: A large amount of research has been carried out in this area. It is necessary that the related research leads to administrative procedures;
2. The lifeline infrastructures: No considerable research has been done in this area. It is necessary to do some applicable research concerning the importance of different infrastructures such as telephone, power, gas, water supply, wastewater and roads;
3. Emergency residences;
4. Temporary residences as a part of permanent residences. Special attention must be paid to this issue;
5. Permanent residence;
6. The important and particular structures: structures such as dams, bridges, power stations and public buildings like hospitals, and security centers particularly the crisis room, are the other areas where a fixed procedure is required
7. Providing fast evaluation methods for buildings security after earthquakes and classifying them;
8. Repairing methods: after natural disasters it is necessary to apply proper repairing methods for damaged buildings. It is also important to consider the material used, speed of work and the methods.

Context & Constraints:

One of the constraints is that people normally stick to the place they have lived and it is difficult to convince them to change their attitude and move to a newly constructed residential site that has been costly to the government

Japan (in English)

Level of Progress achieved:

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

Description:

Japan has City Planning Act which incorporates disaster risk reduction elements in the provisions. Especially it stipulates the measures to be taken for dense populated residential areas. Based on the Act and the related plans, disaster management bases with such functions as information management, operations coordination and logistics need to be developed and networks has been constructed. Additionally, subsidies are provided to local governments to promote qualitative and quantitative improvements of local disaster management bases.

Japan also has the Building Standard Act (enacted in 1950) and the Act on Promotion of Seismic Retrofitting of Buildings (enacted in 1995). It has been confirmed that buildings constructed under the revised Building Standard Act (known as the "New Seismic Design Method") enacted in 1981 have adequate earthquake resistance.

The Central Disaster Management Council drafted Urgent Countermeasures Guideline for Promoting the Earthquake-proofing of Houses and Buildings in 2005 which set a national target for lifting the rate of earthquake-proofed houses from the current 75 percent to 90 percent within 10 years. Further, the Act on

Promotion of Seismic Retrofitting of Buildings were revised in January 2006, and defined the national goal for raising the rate of seismic resistant buildings from the current 75 percent to 90 percent within 10 years. In consideration of the estimated significant damage in the congested urban areas when an earthquake occurs, the urban areas which have high risks of suffering from conflagration was designated as the prioritized areas to improve the countermeasures within 10 years from 2001. Reinforcement of the system and active promotion of the project for the improvement has been pursued.

Context & Constraints:

Many buildings in Japan (roughly one-third of the total) have inadequate earthquake resistance because they had been built before the relevant standards were tightened in 1981; it has been pointed out that little progress is being made in improving the earthquake resistance of these aged buildings.

Kazakhstan (in English)

Level of Progress achieved:

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

Description:

n/a

Context & Constraints:

n/a

Korea, Rep of (in English)

Level of Progress achieved:

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

Description:

To secure disaster-free settlement and enhance building code considering changing disaster factors, following items are currently reviewed and implemented.

1. Establishment of design code for disaster-prevention facilities considering river basin characteristics
2. Strengthening of design code considering abnormal climate
3. Reinforced construction for rainfall infiltration and detention facilities

Context & Constraints:

Since various disaster-prevention facilities such as river, dams, and reservoirs are managed by different authorities, it is not always possible or easy to implement holistic disaster risk reduction.

For a starter, integrated river basin management system is needed for holistic disaster management.

Kyrgyzstan (in English)

Level of Progress achieved:

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

Description:

In the Kyrgyz Republic there is used the building code developed during the Soviet Union (1982). Buildings and structures of old construction are located in the cities and urban-type settlements. Construction of new buildings and structures in the cities and urban-type settlements was started during the recent years but

not rapidly. The quality of new buildings and structures is improperly controlled. Only private houses are constructed rather quickly.

In the rural area the construction of new residential buildings is implemented by the same methods as before. i.e. the buildings are made of the local material (mainly clay and stone). Such residential buildings where the majority of the population lives are of the most serious danger during strong earthquakes and other disasters.

According to preliminary experts assessment the possibility of strong earthquakes occurrence in the area of one of the capitals of Central Asian states for the coming 20 years makes 40%, and for the coming 50 years - 70%.

Of course, separate activities on disaster consequences mitigation are implemented by the state organizations responsible for land management and urban planning, but it is not enough.

Context & Constraints:

Constraints:

1. New building codes including new modernized technologies and methods construction are not developed
 2. The by-laws prohibiting construction of buildings and structures in the most disaster-prone areas are not developed
 3. No clear mechanism of identification of territories and sites for residential buildings construction taking into account the areas of possible disasters
 4. No clear division of responsibilities of the authorities responsible for land management, urban planning and coordination of activities on disaster prevention and response
 5. No coordination of actions between the state authorities and scientific institutions on disaster prevention.
-

Lao People's Democratic Republic (in English)

Level of Progress achieved:

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

Description:

As mentioned earlier, the UNDP Regional Project implemented by the NDMO and ADPC conducted a research on the impact of disasters on the education sector. The findings and lessons learnt from the research will be used to advocate for the construction/retrofitting of disaster resilient schools. They should also provide valuable national mainstreaming examples to build support for further mainstreaming of disaster risk reduction into development policy and planning as well as for making other buildings disaster resilient.

Context & Constraints:

Information is not available

Maldives (in English)

Level of Progress achieved:

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

Description:

The governments Population Consolidation Programme in the 90's was developed in the lines of better management and planning for the human settlement which shaped up into a 'safer islands' concept after the tsunami. In the past few years disaster risk reduction elements have been looked into and have been the basis of relocation and settlement.

The recovery process saw the government emphasize on stricter building codes in addition to the EIA process, the national building codes of late has incorporated disaster risk reduction elements

Context & Constraints:

Implementation of any related elements including the codes is a severe limitation in the country. One of the possible solutions would be develop simple hand books that contain checklists for the incorporation of the above mentioned elements.

Nepal (in English)**Level of Progress achieved:**

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

Description:

Land-use planning is a significant commitment by each and every periodic development plans. Unfortunately, the implementation and monitoring is weak due to several reasons. Building Code is made compulsory in municipal areas. New public buildings have been constructed according to the norms but needs rigorous monitoring mechanism. National Shelter Policy 1996. and National Urban Policy 2007 has incorporated to some extent the issue of DRR.

Context & Constraints:

- Human settlement program is not substantially designed and implemented from a building back better perspective only policy is formulated and not effectively implemented.

Pakistan (in English)**Level of Progress achieved:**

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

Description:

Pakistan is ranked at level three. In post earthquake (2005) scenario, the thinking is now emerging that Pakistan needs to promote land use planning and implementation of building codes for safer construction. Safer construction practices have been widely followed in the earthquake affected region as part of the reconstruction process. However, promotion and adoption of building codes in other vulnerable parts of the country remains a challenge and a priority agenda for NDMA.

NDMA is working on developing simplified version of the National Building Codes in Urdu language and to disseminate it widely for the benefit of general public including local masons, contractors, builders and other stakeholders. It believes that the simplified version of building codes would allow people to understand the safer construction requirements and adopt them. NDMA has also launched two small projects to promote safer construction in the cities of Mansehra, Muzafarabad and Quetta.

Context & Constraints:

Population growth couple with rapid urbanization works in multiple ways to create and exacerbate vulnerabilities. The continuous uncontrolled increase in population and urbanization will push more people to move and live in hazard prone locations, thus increasing the ratio of vulnerable segments of the society with each passing year. The consistent increase in the vulnerable population due to uncontrolled growth may neutralize the DRR efforts in the long run hence may be taken as a major challenge in the implementation of DRR policies.

The second major challenge is the rampant poverty. The poor segments of the society do not have the financial capacity to build hazard resilient abodes as the observance of building codes entails additional cost of construction. The third major challenge is the lack of capacities of the local authorities to develop, update and enforce building codes in their respective areas.

To overcome the above challenges, vulnerable areas have to be identified in the first place through the national disaster risk assessment and hazard analysis exercise which is already under way. Once the exercise is completed, the Federal, Provincial and District Governments have to devise a strategy to discourage the general populace from inhabiting the vulnerable areas as a policy matter. Incentives may be offered by the Government in the shape of tax rebates etc to encourage people to observe building codes and adopt other hazard resistant measures such as retrofitting in their buildings.

Philippines (in English)

Level of Progress achieved:

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

Description:

Intended for land-use planners and local policy-makers, the NEDA's Guidelines on Mainstreaming DRR in Sub-national Development and Land-Use/Physical Planning will enable government to identify suitable location for various human activities.

With respect to siting and land use, the Housing and Land Use Regulatory Board (HLURB) and National Housing Authority (NHA) provide guidelines for LGUs and real estate developers. The HLURB developed a GIS Cookbook, which promotes spatial planning. Some LGUs have been using GIS in the preparation of their respective Comprehensive Land Use Planning (CLUP). Diffusion of needed tools and techniques has proven to be a challenge.

The Association of Structural Engineers of the Philippines (ASEP) and the Philippine Institute of Civil Engineers (PICE) are currently reviewing the Building Code (for general construction reference), last revised in 1992. Consultation has formally started with the first ASEP Multi-stakeholder Forum on National Structural Codes (for design of structures) and Standards.

As far as advancing emergency management is concerned, NGOs that advocate safety such as Construction Safety Foundation, Inc. (CSFI), Safety Organization of the Philippines Inc. (SOPI), and Makati Fire Safety Foundation, Inc. (MFSFI), are among the resources that can be tapped on relevant areas which to date have not received adequate attention. With risk management thinking as its primary umbrella, SOPI is notable for observing a safety theme for every month of the year together with a government agency.

Context & Constraints:

While GIS has diffused to the LGUs, a number of issues remain to be addressed. These include compatibility of databases/datasets, availability of required personnel, and level of priority given by the LCE. In cooperation with mapping agencies, proponents of GIS-based risk assessment and integration of DRR into planning such as NEDA needs to review data compatibility.

Suitability analysis of relocation areas should also be included among tasks in land use planning by LGUs. A collaborative working arrangement with mapping and risk assessment agencies and entities thus links with DRR partners are not only limited to during the hazard event or post-event activities but also further strengthened in a broader development sense.

Enforcing the Building, Structural and Fire Codes has always been a challenge. As MFSFI has shown, substantial improvement in safety can be achieved through inspection of buildings and establishments, and providing training and technical support, Efforts of such NGOs and professional organizations should be supported by government at all levels.

A continuing concern is finding suitable sites for resettlement of disaster victims. Political intervention and the threat of corrupt practices are often a predominant constraint to a just process and safe locations.

Public officials should be held accountable for actions that prevent the selection of safe resettlement sites.

There is likelihood that a separate and “new” planning process is re-invented to accommodate DRR. However, an added dimension into the existing one is integrated so what results is a reduction in disaster risk and vulnerability.

Singapore (in English)

Level of Progress achieved:

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

Description:

The prevention of fires is also a cornerstone in SCDF’s strategy to ensure a safe and secure Singapore. An important means of achieving this is through the administration of the Code of Practice for Fire Precautions in Buildings, commonly known as the Fire Code. This has been instrumental in establishing the high standards of fire safety in Singapore.

The Building and Construction Authority of Singapore has strict building codes and also conducts regular checks on buildings to ensure their compliance.

Context & Constraints:

Nil

Sri Lanka (in English)

Level of Progress achieved:

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

Description:

The National Council for Disaster Management, the highest authority deciding the policies have decided that local authorities have to obtain technical advice from National Building Research Organization for any proposed development in landslide prone areas. The hazard zoning plans are designed for landslides.

The technical development committee on development of guidelines for construction in hazard prone areas have undertaken research programme to determine suitability of building codes for cyclone resistance.

Designed guidelines developed after 1978 cyclone in batticaloa district with the assistance of Australian government has been revised by the technical committee and simplified designed guidelines are published for the use of practitioners and enforcement authorities.

Building guidelines that developed by Center for Housing and Planning for floods,lightening strickes ,seismic effects ,landslides ,cyclones are available.planning forTraining stakeholders in progress.

The focal agencies that are mandate to enforce guidelines on disaster risk reduction have employed legal officers to enforce the relevant regulations.

Buffer zone is declared in coastal belt to prohibit unauthorized constructions.

Establishment of natural dense vegetation cover in the coastal belt is completed in several districts to disburse wave and wind energy to reduce the potential damage for inhabitance and their property. Discussions are in progress to implement vegetation barriers in other coastal areas.

Rainwater harvesting projects in several dry zone districts are been implemented to reduce the drought impact on lives and livelihood of community.

Dredging and de-silting of water resources in flood prone areas are undertake by several organization to reduce flood affects on lives and livelihood.

Many of the organizations dealing with environment activities are possessed with their own legal cell. The attorney generals Dept. provides legal assistance on request by govt. organizations. Developemnt of plans for school and hospital buildings to withstand disaster and use as evacuation centres are in progress

Context & Constraints:

Some of the nonstructural mitigation measures such as coastal green belt programmes are not provided the expected progress due to lack of long term maintenance and peoples participation. Future programmes will be designed to address the gaps.

Public compliance for the existing laws and regulations are limited only for some areas. The enforcement mechanism is weak due to insufficient specializes officers to handle the work load.

The political and some legal conditions influence and hamper proper implementation of DRR activities.

The legal enforcement powers of DMC as the focal point that established to coordinate DRR activities is insufficient. Amendments to the DM act is urgently required.

DMC should be made an authority with more powers to form regulation and enforcement of provisions in teh act.

Syrian Arab Republic (in English)

Level of Progress achieved:

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

Description:

The first seismical code was issued in 1995 for designing and executing buildings to prevent earthquakes and reducing its impacts. It is still being developed in order to practically approach a suitable design for earthquake prevention.

Last year the Arabic unified building code was issued from the Arab League to prevent earthquakes, where it will be developed in order to take into consideration the International development.

Context & Constraints:

Tajikistan (in English)

Level of Progress achieved:

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

Description:

The Republic of Tajikistan uses construction norms and rules that were developed back in the time of the USSR (1982). The buildings and structures of old construction exist in the cities and settlements of urban type. Construction of new buildings and structures was resumed in large cities and settlements recently, although not in large volume and not at very fast rate. The quality of the new construction is not

appropriately supervised. The private housing construction is developing at relatively high rate. In rural areas, new residential construction continues same way as before, i.e. houses in rural settlements are mainly built of local construction materials (stone and clay). This type of residential houses in which most of the population of the Republic of Tajikistan lives present the largest danger at strong earthquakes and other natural disasters.

By preliminary expert estimations (Almaty, October 1996) a strong earthquake in the area of the city of Dushanbe will result in the death of about 50,000 persons and 220,000 will be injured. According to the same experts, the probability of strong earthquakes in the area of the capitals of Central Asian countries is 40% for the nearest 20 years and 70% for the next 50 years.

The state organizations responsible for land use and urban construction implement activities aimed at mitigation of natural disasters, but that is far from enough.

The relatively high interest in this sphere is demonstrated by international organizations (Focus humanitarian Assistance, Caritas, Oxfam, etc.) that allocate funds for construction of individual houses in rural areas with use of local construction materials, provide training in such construction with involvement of specialists from relevant universities (Tajik Technical University), and implement activities for preparing the population for the possible natural disasters. Such activities were carried out after strong earthquakes in the Kumsangir (2006) and Rasht (2007) districts), after floods and mudslides in Vosse (1998), Asht (1999) and Aini (2001).

In 2008, for the first time in the history of the city of Dushanbe, the assessment was carried out of the residential housing sector, basic and secondary schools, and random assessment of health institutions. The implementers developed 16 scenarios of a strong earthquake in Dushanbe, that were submitted to the city authorities and to the national government for taking appropriate measures for ensuring safety of the population of the city. This work was implemented by the national NGO "PMP International" with financial support of the European Union (DIPECHO), with participation of the World Health Organization (UN WHO) and the UN International Strategy for Disaster Reduction (UNISDR).

Context & Constraints:

Difficulties:

1. The new construction norms and rules were not developed, to take into consideration modern technologies and new methods of construction
 2. Legislative acts were not adopted to prohibit construction of buildings and facilities in especially dangerous areas with hazardous natural processes
 3. The clear mechanism does not exist, for allocation of plots and areas for residential construction with consideration of dangerous zones of high probability of natural disasters
 4. There is no clear division of authorities of the organs of power in responsibility for land use, urban construction, and coordination of activities in prevention and response to emergency situations
 5. There is no coordination among state structures in activities in prevention of natural disasters.
-

Uzbekistan (in English)

Level of Progress achieved:

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

Description:

In Uzbekistan, construction of public sector is strictly governed by the Construction Norms and Rules "KMK 2.03-65". Having been developed through engagement of a large number of institutions, it was approved by the Decree of the State Committee of Architecture and Construction of the Republic of Uzbekistan on 12 December 1995. It was set into action from 01 March 1996. The seismological section of the project was developed by the Seismology Institute of Academy of Sciences of the Republic of Uzbekistan. A new classification of soils has been developed and integrated, the frequency of various seismic intensities were specified for 361 populated zones of Uzbekistan. Actions are being taken on micro-zoning of highly seismic

oblasts.

Context & Constraints:

n/a

Viet Nam (in English)

Level of Progress achieved:

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

Description:

The document called "Plan for 2006 and main objectives and tasks for the next 5 year" of the Construction Sector, there is no sight of integration of natural disaster mitigation. The plan as a whole is merely for developing the sector in terms of technical aspect and growth.

Main tasks and solutions of the Construction Sector that are related directly to natural disaster prevention, response and mitigation are designing and implementing construction planning, especially in the sites that are frequently suffered from natural disaster. However, in fact, there are 39 provinces and cities have set up urban and rural planning, the whole 93 cities and town, 589 out of the total 621 town and 161 industrial zones have set up their construction planning. The construction planning rate is about 18% of planning communes.

In term of document of the sectoral development plan, the DM integration is not clearly reflected since there is no instruction for the integration. However, the DM somehow is reflected in the current tasks, and in urban and rural construction areas in the whole country.

The construction sector mainly carries out projects that are related to natural disaster prevention, response and mitigation when they are assigned by the Government: From 2001 to 2006, the Ministry of Construction has completed the Phase 1 of Urban Infrastructure Planning in the Central region for flood and storm mitigation and building high foundation against flood in Mekong River Delta with the total investment fund of VND 5,000 billion. At the moment, the Phase 2 of the Urban Planning in Central Viet Nam is being initiated with the total investment fund of about VND 7,000 billion. Planning for coastal and island areas that are frequently suffered from flood and storm, is also developed.

Besides, since 2008 MARD has requested provincial governments to develop and implement the residential relocation projects for the disaster prone areas (e.g. landslide, flashflood, etc.) and the extremely poor areas (e.g. lack of drinking water, basic infrastructure, agriculture land, etc.). The National Strategy has also paid attention to the development the disaster-resistant building codes. Pilot projects/programs have been implemented in which many flood and storm -resistant housing models have been developed and applied in different areas. Moreover, Ministry of Construction has promulgated the guidelines for constructing housings and the infrastructures for the purposes of socio-economic that are taken into account the DRR issues.

Context & Constraints:

Limited awareness of communities on the integration of DRR into development and the limited capacity and resource of households are the main challenges to plan, and implement the residential clusters and residential relocation projects and programs that integrate the DRR issues. In addition, the construction laws and guidelines are not strictly enforced, for example, the violation of construction permits, and guidelines to the master plan is another challenge of DRR integration.

Proposed solutions:

- > Strengthen awareness raising and enhance knowledge on disaster prevention, response, and mitigation for communities;
- > Continue reviewing, studying and improving the building codes and construction guidelines in the disaster prone areas.
- > Monitor the implementation of the construction codes and guidelines and develop mechanisms to enforce those guidelines.

> There should be a policy to support poor households to build a safer housing.

Yemen (in English)

Level of Progress achieved:

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

Description:

Risk evaluation and URBAN PLANNING MUNICIPALITY OF SANA'A STUDY , HAS BEEN STARTED In the context of the City Development Strategy and make recommendations for the integration of the CDS and DRM information for the Urban Master Plan, and for potential institutional capacity building needs with regards to disaster risk management (c) prepare an integrated storm water master plan (ISWMP) for the city of Sana'a., as a pilot project conducted from MWE and GFDRR/WB project. This model will be replicated for the similar cities .

MWE through NTEDR where the members from relevant agencies will assure the integration of the DRR concepts and procedures through provide the appropriate capacity to the policy maker at the central and local levels.

Context & Constraints:

The Main constraints face EEGD and NTEDR to achieve this object are:

- Lacking to the clear regulations.
 - Lacking to the financial resources.
 - Lacking to awareness at the official and public levels.
 - Lacking to the information , experience and knowledge.
 - Lacking to the researches Institutes and studies.
-

Europe

Armenia (in English)

Level of Progress achieved:

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

Description:

The building codes have been twice enforced (1994 and 2006 editions) aiming to meet the safety criteria for construction designated for seismically active regions worldwide

The vulnerability assessment of settlements especially the critical facilities and lifelines is of special attention of Armenian specialists.

The Armenian NSSP team comprising of experts in Earthquake Engineering has performed the visual inspection of 10 public schools located in Kapan, Goris, Sisian and Kajaran cities of the Syunik marz and collected the extensive data for schools. The schools survey form (school ID card) has been elaborated including the following data: city, status of the school, date of construction, number of pupils, number of buildings, planning decisions, structural solutions, type of building etc.

Extensive database in digital mode using GIS technology has been acquired relating to lifelines, water and gas and power supply as well as building stock which are served as the basis for compiling the seismic hazard map for Syunik prefecture and the cities of Kapan and Goris. Initial data concerning the lifelines infrastructure and residential and public facilities have been acquired by town-watching groups comprising of the specialists of the Armenian NSSP and the high-school students led by the teachers and principals

Context & Constraints:

The seismic risk for urban settlements in Armenia is on the high level. More than 40% of building stock in the capital city of Yerevan needed the retrofitting and strengthening according to new edition (2006) of building codes.

The cost of such urgent activities is about \$4 bil and due to recent .

Bulgaria (in English)

Level of Progress achieved:

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

Description:

Developing of a regulation for "territorial structure, city structural and other technical measures" for reducing the vulnerability and other under-regulative legislation acts

Context & Constraints:

building up of a unitary data base on territorial construction and passportization of the buildings

Croatia (in English)

Level of Progress achieved:

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

Description:

Building code has been applied since 1964. With earthquake hazard high in Croatia, disaster risk reduction

forms part of spatial plans and is regularly applied.

Context & Constraints:

There is pressure exerted on the part of construction investors to reduce building codes because they increase construction costs so that they are not fully applied at all times.

Czech Republic (in English)

Level of Progress achieved:

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

Description:

Planning and management has been incorporated. However, sometimes appropriate building codes are not fully obeyed.

Context & Constraints:

Sometimes economic aspects overrule safety and security parameters and it is not quite watched by a state administration and local and regional governments.

France (in French)

Level of Progress achieved:

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

Description:

La France dispose de 2 normes spécifiques de construction relative à l'inondation et au séisme : la réglementation technique en vigueur notamment dans le domaine de la construction et, en particulier, celle qui traite de la qualité des matériaux ou encore de leur mise en oeuvre (parasismique, neige et vent....)

Context & Constraints:

...

Germany (in English)

Level of Progress achieved:

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

Description:

The German building law consists of two parts: the private building law under the "Baugesetzbuch" (BauGB) and the public building law which consists again of two extra parts, the "Bauplanungsrecht" under the BauGB and "Raumplanungsgesetz" (RPG), as well as the "Bauordnungsrecht" under the building laws of the Federal States aligned with the national sample building law ("Muster-Bauordnung and "Muster-Industriebaurichtlinie") (see links below for an overview). For example, paragraph 1, article 5 of BauGB states that it should serve to protect and develop the human environment and natural resources, also responsible for general climate protection. For the spatial and land use planning of the "Regional Planning Act" (Raumordnungsgesetz: ROG), the draft for a new version from July 2008 includes the protection of critical infrastructure and civil protection. The urban land use planning ("Bauleitplanung") considers civil protection as one of the main objectives in paragraph 1, article 6. Under paragraph 50 of the "Bundesimmissionsschutzgesetz" (BImSCHG: see link), land use planning is to be regulated in a way that casualties and disasters in industrial areas do not affect residential areas.

Nationwide legislation refers to norms such as DIN, which are flexible to adapt to changing situations. DIN

1055 regulates the national requirement for the strength of buildings in handling wind and snow, depending on the location. Regarding earthquake safety, the national building code DIN 4149 (from April 2004) has to be adhered to and the national committee for the earthquake building code is preparing a national annex for the EU building code EUROCODE 8, which will be introduced soon. For dams, the national building code DIN 19700 (from July 2004) provides the legal basis, which claims lower recurrence periods and higher safety standards for design earthquakes.

In general, the Federal States are responsible for regulations regarding DRR in their specific "Bauordnungsrecht". For flood preparedness, local communities are responsible. They use the expertise of consultants to identify building areas or flood protection plains. The builder/owner of a private building is responsible for its own safety against floods, thereby necessitating private precaution through architectural means as well as insurance. The already mentioned ORTIS attempts here to establish a multi-risk disaster management system at the local level to help communities and private citizens plan their DRR.

Settlement planning and construction specifications are relevant for the German development cooperation especially within the scope of rehabilitation and reconstruction (see next Core Indicator). The GTZ, for example, has developed a guide for building activities after disasters and conflict (see annex in the next Core Indicator). Construction plans within the scope of financial cooperation consider DRR systematically.

Context & Constraints:

The German building codes provide assurance for the most dangerous hazards through norms for wind, snow and earthquakes, but this is not enough. In the case of earthquake norms, for example, there is currently no existing standard for industrial facilities, but is being discussed. The German scientific community continuously reminds us that stronger legislation for DRR is needed.

The principle of subsidiarity has to be strengthened at the community level, especially the dimension of private precaution through better clarification of possible dangers and sensitization to individual responsibilities. The builders and scientific researchers take this a step further and have developed safer building techniques and are constantly exploring new possibilities. The main challenge is to persuade the builders that this is necessary.

Italy (in English)

Level of Progress achieved:

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

Description:

Planning and management of human settlements are carried out by the Regional and the Municipal Administrations according to the National law and to the framework policies provided by the relevant ministries (Ministry of Environment, Land Protection and Sea, Ministry of Infrastructures etc.). Disaster Risk Reduction elements and considerations are already included by law into the planning of human settlements. A number of initiatives have also been undertaken during the last years in order to improve the overall planning, implementation and control capabilities, especially those of municipalities.

Context & Constraints:

Since the introduction of the National Platform for Disaster Risk Reduction on January 2008, a strong effort is being made in order to develop a comprehensive National Disaster Risk Reduction policy and to define its relations with the strategies and plans concerning the related subjects. The immediate goal is to identify as soon as possible the definitive composition and working rules of the National platform. This will allow to officially start cooperation on Disaster Risk Reduction among all actors involved.

Macedonia, The former Yugoslav Rep of (in English)

Level of Progress achieved:

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

Description:

There are systematic, appropriate processes and legal frameworks that define the construction procedures and standards regarding the seismic activities, especially in the aftermath of the great earthquake of 1963. However, in the last two decades, the quality of building construction has declined due to the decrease of the economic potentials, the privatization of the large construction companies as well as the weakening of the control system.

There is a legal framework and certain achievements in terms of flood prevention by the construction of proper protection facilities (dams, river banks etc.), as well as planning of preventive measures.

Although landslides related issues are not regulated by a special law, they are addressed in the Law on spatial and urban planning. The landslides and floods prone areas are excluded from urbanization by the plans for urban planning in order to minimize the damages.

In order to improve the process of planning and managing of human settlements by incorporating DRR elements, the CMC is establishing the intersectoral network of state inspectorates, including the inspectorates for construction and urbanization, infrastructure, environment etc.

The principles and activities are included and implemented through the national, regional and local Spatial Plans.

Context & Constraints:

Although there are systematic, appropriate processes and legal frameworks that define the construction procedures and standards regarding the seismic activities, in the last two decades, the quality of building construction has declined due to the decrease of the economic potentials, the privatization of the large construction companies as well as the weakening of the control system.

In order to improve the process of planning and managing of human settlements by incorporating DRR elements, the CMC is establishing the intersectoral network of state inspectorates, including the inspectorates for construction and urbanization, infrastructure, environment etc.

Montenegro (in English)

Level of Progress achieved:

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

Description:

The competent ministry has adopted a number of laws which incorporate disaster risk reduction elements, in accordance with European standards.

Context & Constraints:

Technical regulations and standards are not harmonized with the European standards. These activities are underway.

Norway (in English)

Level of Progress achieved:

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

Description:

The new land-use planning act is ensuring that disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management and adaptation to climate change.

Context & Constraints:

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Serbia (in English)

Level of Progress achieved:

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

Description:

Nothing reported within this timeframe.

Context & Constraints:

To form headquarters on the local level and develop plans defining commitments and responsibilities.

Slovenia (in English)

Level of Progress achieved:

Nothing reported within this timeframe.

Description:

Nothing reported within this timeframe.

Context & Constraints:

Nothing reported within this timeframe.

Sweden (in English)

Level of Progress achieved:

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

Description:

The National Board of Housing, Building and Planning is the central government authority for planning, the management of land and water resources, urban development, building and housing.

A fundamental requirement in the Planning and Building Act is that land has to be suitable for building development from a general point of view. In examining building permits, the municipality has to take account of whether the land is suitable for development in consideration of the health and safety of the residents.

In the field of planning and urban development the Board is responsible for ensuring that ecological, economic, cultural and social aspects are taken into account in planning. The focus of planning is increasingly turning to regional development and sustainable urban development by introducing new planning methods. In the field of building, the Board is responsible for developing design and building regulations and other regulative measures for construction as well as implementation measures concerning

EC directives. The Board supports the development of cost and energy efficient, healthy and sustainable buildings as well as accessible public spaces.

The Board is responsible for the Environmental Quality Objective "A Good Built Environment":

"Cities, towns and other built-up areas must provide a good, healthy living environment and contribute to a good regional and global environment. Natural and cultural assets must be protected and developed. Buildings and amenities must be located and designed in accordance with sound environmental principles and in such a way as to promote sustainable management of land, water and other resources."

The Planning and Building Act is under redraft. For the coming years changes concerning water front development, environment and climate can be expected.

Context & Constraints:

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Switzerland (in English)

Level of Progress achieved:

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

Description:

The Federal Law on Land Use Planning (22. June 1979) has been adapted and effectively takes into account the natural hazards. Natural hazard maps are part of a process that culminates with their consideration and enforcement within municipal land use planning. Building codes exist and are applied. However, due consideration has only been given recently to the seismic hazard, and therefore there are considerable gaps in seismic security for buildings with more than five floors built before modern construction standards came into effect (1989).

Context & Constraints:

Remedying the poor earthquake resistance of many existing houses will be a major challenge over the next years. The completion of hazard mapping and the full consideration of these maps in municipal land use planning is also on the agenda.

Turkey (in English)

Level of Progress achieved:

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

Description:

The seismic design code of Turkey was revised several times; and the last four previous revisions were made in 1968, 1975, 1998 and 2007. These revisions made the Turkish Seismic Design Code include the most up-to-date information available worldwide. Although, Turkey experienced catastrophic consequences after earthquakes, it is believed that the damage did not stem from insufficiency of codes but substandard construction practice, inadequate inspection and the insufficient enforcement of seismic design codes. The knowledge of existence of many structures, which were not constructed according to seismic design codes and are highly vulnerable in terms of seismic damage, urged the Ministry of Public Works and Settlement to form a commission for revising the 1998 version of the Turkish Seismic Design Code and drafting a new chapter on seismic safety evaluation and retrofitting of existing structures. This new chapter sets standards for assessment and rehabilitation of existing buildings. Retrofit techniques are also proposed for reinforced concrete (RC) buildings.

Building designs and construction are supervised by the municipalities. Provincial offices of the Ministry of Public Works and Settlement supervise public buildings under construction and buildings in rural areas. After the 1999 earthquakes, the government enacted new laws, firstly the Decree No. 595 and later Law No. 4708 for building construction supervision. Accordingly, the building supervision firm exercises the duties of the municipal offices in ensuring the correctness of designs and construction conformed to the design.

Land use plans those are prepared at several scales are based on disaster risk reduction policies.

Context & Constraints:

It is generally agreed that building departments of municipalities are not technically (manpower, laboratory etc.) capable of fulfilling their intended building supervision duty of providing final quality assurance of structural design. Currently legislative regulation for building supervision (Law No: 4708) covers 19 provinces out of 81 and excludes supervision of buildings up to two storey with less than 200 m2 construction area.

United Kingdom (in English)

Level of Progress achieved:

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

Description:

The UK introduced a set of measures to reduce carbon emissions from new homes in December 2006. A new timetable and strategy to make all new homes zero carbon by 2016 was set out - which means that there will be no net carbon emissions from all energy use in the new home over the year.

The measures in the strategy include:

- gradually tightening up building regulations up to 2016 to increase the energy efficiency of new homes and eventually make them zero carbon
- a Code for Sustainable Homes to give homeowners more information about how green their property is
- a draft Planning Policy Statement on climate change.

A new Local Government White Paper gives councils new opportunities to drive local action on offsetting the impact of climate change and adapting.

The UK's commitment to protecting and enhancing the environment is demonstrated in other areas. For example:

- identifying measures to conserve water, especially in areas where there is high demand for housing. There are consultations on new minimum standards to make new buildings more water-efficient
- looking at ways of improving the energy and water efficiency of existing homes
- making sure that developments include important green spaces which are vital to people's health and wellbeing

Knowing that buildings contribute almost half of the UK's carbon emissions, the long-term goal is to reduce carbon emissions by 60 per cent by 2050, and to achieve this it is intended to make new housing much more sustainable.

The UK Building Code attempts to minimise the environmental damage from the construction process and offers an opportunity to revolutionise the design of new homes so that the housing market encourages people to live more sustainable lifestyles.

Context & Constraints:

New building codes on new houses and on repairs to old ones will gradually come into effect over a number of years. This will not affect those houses already in existence on flood plains or in high risk areas. Some insurance companies are working with their customers to initiate some resilience and adaptation to older properties, but there is some way to go in this respect.

Oceania

Australia (in English)

Level of Progress achieved:

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

Description:

Land use planning can be critical in reducing the impacts of natural disasters. The Australian Local Government Association commissioned a detailed report examining the potential contribution of leading edge land use practices to all-hazards risk management. The report, Local Government Land Use planning and Risk Mitigation, provides a clear, detailed analysis of:

- the potential contribution of land use planning to risk management
- the constraints faced by local government in risk management
- recommendations to improve the integration of land use planning and risk management by local government

The Australian Building Codes Board (ABCB) has been directed to incorporate natural hazard and specific bushfire material into building codes and guides. Improvements have been achieved through the development and implementation of building control regimes that better identify hazards and mitigation measures. Education and awareness modules are delivered by the ABCB every February/March to the industry to complement building code amendments. Jurisdictions also publish building and planning guidelines, circulars and practice notes and information brochures for relevant industry. In addition, the Risk Based Land Use Planning Course, delivered by Emergency Management Australia is now a nationally accredited course which attracts Planning Institute of Australia Continuing Professional Development Points.

The Ministerial Council for Police and Emergency Management will work closely with the Local Government and Planning Ministers' Council to facilitate a ready exchange of emergency management information and inputs to planning, development and local government issues in the context of adapting emergency management regimes to meet predicted impacts of climate change.

Context & Constraints:

In the future, incorporation of climate change factors into building codes and land use planning will be imperative.

Marshall Islands (in English)

Level of Progress achieved:

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

Description:

* Standard Mitigation Plan (2005-2007), identified the review, enactment and enforcement of relevant legislation (Planning and Zoning Act 1987, National Building Code)

* DRM NAP - Goal 8: Improve understanding of the linkages between zoning, building codes and vulnerability to disasters

Context & Constraints:

* complex land tenure system in operation. Given the shortage of land ownership of land is considered sacrosanct making it difficult for agencies tasked with land management to apply planning and environmental management regulations

* Inadequate management of rapid urbanization has led to densely populated and poorly planned settlements, often containing structurally deficient buildings

New Zealand (in English)

Level of Progress achieved:

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

Description:

The Resource Management Act requires addressing natural hazards in the context of managing the use and development of land. Local authorities are to plan to avoid, mitigate or remedy adverse effects of land development that includes risks of creating or adding to natural hazard exposure (and any adverse effects resulting from climate change).

A proposed National Coastal Policy Statement under the Resource Management Act, to replace the current New Zealand Coastal Policy Statement, provides additional guidance to local authorities in managing land use and development within coastal areas to mitigate the risks of hazards.

The Building Act 2004 establishes a national Building Code and regulations, with compliance managed by registered persons (usually local authorities). All new buildings and renovations are required to meet the current Building Code. Commercial and multi-unit residential buildings that have specified systems (such as sprinkler systems) are also required to have compliance schedules and undergo an annual 'building warrant of fitness'.

Context & Constraints:

Following concerns about the quality of construction and compliance, the Building Act 2004 was introduced after a comprehensive review. One of the initiatives introduced in the Act is a requirement for the Building Code to be reviewed to determine whether it meets the requirements of the new Act and to determine the extent to which it is stated in sufficient detail to provide clear guidance on performance requirements that buildings must meet <http://www.dbh.govt.nz/bcl-building-code-review>. The Building Code review process has included consideration of hazard risk reduction and the life cycle cost of building.

Vanuatu (in English)

Level of Progress achieved:

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

Description:

As previously stated, risk assessments is being advocated and promoted for all land-use development. This is being developed under their land-use planning policy and regulation by the Ministry of Lands. In short, the policy will regulate development license approval, land use planning, resource development and management and building codes as appropriate. The policy is intended to also obligate communities and business sectors to comply with these regulations and to encourage them to develop their own mechanisms to reduce disaster risks.

Context & Constraints:

The land-use policy is being developed. The risk assessment tool to be used is the Comprehensive Hazards and Risk Management (CHARM) tool of which people will need to be trained in its use.
