



Australia

National progress report on the implementation of the Hyogo Framework for Action (2011-2013) - Interim

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Reporting period: 2011-2013
Report Status: Interim
Last updated on: 27 September 2012
Print date: 31 October 2012
Reporting language: English

An HFA Monitor update published by PreventionWeb
<http://www.preventionweb.net/english/countries/oceania/aus/>

Section 1: Outcomes 2011-2013

Strategic Outcome For Goal 1

Outcome Statement:

Australia continues to build on progress made in the last reporting cycle through the implementation of the National Strategy for Disaster Resilience (the Strategy), which Australian governments adopted in February 2011. The Strategy sets the direction for enhancing Australia's capacity to prepare for, withstand and recover from disasters. It is designed to guide action by all levels of government, as well as businesses, communities and the non-profit sector.

The Strategy comprises seven strategic priorities for action, each with identified priority outcomes. It has a particular emphasis on understanding risk, specifically risk identification and management, rebalancing recovery towards risk reduction, and the appropriate sharing of responsibility for the community's disaster resilience between all elements of the community. Australian governments, comprising the Federal and State and Territory (State) governments, have key, but not exclusive roles and responsibilities to increase disaster resilience in Australia.

Some of the Strategy's key priority outcomes aim to increase knowledge and understanding of risks. Work to address this includes:

- Australian States undertaking state-wide risk assessments, which support evidence-based decisions and provides states and territories with a tool for making those decisions;
- endorsing the National Emergency Risk Assessment Guidelines as the nationally consistent methodology for future use by Australian governments to assess risk for priority hazards; and
- developing the Enhancing the Built Environment Roadmap, which provides a clear action plan to influence and effect land use planning and building codes so that they better integrate consideration of priority natural hazards.

The Strategy does not operate in isolation. It is complemented by other initiatives such as the Australian Federal Government's Critical Infrastructure Resilience Strategy, the National Climate Change Adaptation Action Plan, the National Partnership Agreement on Natural Disaster Resilience and the Federal Government's Sustainable Population Strategy.

Strategic Outcome For Goal 2

Outcome Statement:

At the national level, the Federal Government continues to develop and strengthen the institutions, mechanisms and capacities that contribute to building resilience to disasters.

High-level emergency management committees include:

- the National Security Committee of Federal Cabinet;
- the Standing Council on Police and Emergency Management, which comprises ministers responsible for Police and Emergency Management from the Federal Government, States, New Zealand, along with a representative of the Australian Local Government Association. It oversees the implementation of the National Strategy for Disaster Resilience;
- the Australian New Zealand National Emergency Management Committee (ANZEMC), which is the senior officials group supporting the above ministerial council. It provides strategic leadership on Australia-wide, whole-of-government emergency management policy and supports related capability and capacity development activities;
- the National Crisis Committee, which is a coordination body involving senior Federal and State government officials. The NCC allows for national coordination in response to a crisis, particularly where existing coordination mechanisms may be insufficient; and
- the Australian Government Crisis Committee, which is a coordination body raised during a crisis, comprising senior officials from relevant Federal Government agencies.

The ANZEMC has four sub-committees that work to address Australian-wide issues in the areas of capability development; community engagement; recovery; and risk assessment, measurement and mitigation. Each sub-committee has a number of working groups that deal with specific tasks relating to specific functions or issues. The sub-committees and working groups support and develop national approaches to address disaster resilience Australia-wide.

The Australian Government Disaster Resilience Reference Group, which consists of representatives from Federal Government agencies, facilitates coordinated Federal Government involvement and support of the ANZEMC's functions.

The Federal Government continues to support the Trusted Information Sharing Network for Critical Infrastructure Resilience, which provides an environment where business and government can share vital information on security issues relevant to the protection of Australia's critical infrastructure and the continuity of essential services in the face of all hazards.

The Federal Government hosts other forums involving sections of the community, including forums involving emergency services volunteers, as well as round tables and forums involving members of the business, non-government, academic and community sectors.

Strategic Outcome For Goal 3

Outcome Statement:

Emergency management in Australia is based on the concept of Prevention, Preparedness, Response and Recovery.

As indicated in Australia's previous progress report, reducing risk underpins the design and implementation of emergency preparedness, response and recovery policies and programs by Australian governments. It is a central tenet of the National Strategy for Disaster Resilience. Two major priorities in the Strategy are 'understanding risks' and 'communicating and educating people about risks'. A clearer understanding of risks and appropriate resulting action is crucial to building resilience, particularly at the community level. A significant proportion of the initial work to implement the Strategy is in these two areas.

Identifying and reducing the impact of disaster risks across all Australia's States has been a priority. Part of this has been achieved through the overarching national agreement between the Federal Government and each State – the National Partnership Agreement on Natural Disaster Resilience. Among a number of key elements, the Agreement has ensured that States have conducted state-wide risk assessments to inform risk mitigation priorities.

Other relevant work that has progressed since the last report includes:

- developing a consistent methodology for Australian governments to use when undertaking risk assessments;
- reviewing land use planning and building policies, regulations and codes across Australia and developing a roadmap that provides a clear action plan to influence and effect land use planning and building codes so that they integrate consideration of priority natural hazards;
- review of Australia's Natural Disaster Relief and Recovery Arrangements;
- promulgation of a National Strategy for Disaster Resilience Communications Plan;
- enhancing the Triple Zero (national emergency services phone number throughout Australia) surge capacity;
- enhancing Emergency Alert, the national telephone-based emergency warning system; and
- updating the emergency sector Volunteers Action Plan.

Information on the above initiatives is provided throughout the report.

Section 2: Strategic goals

Strategic Goal Area 1

The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.

Strategic Goal Statement:

As indicated in Australia's previous progress report, the Federal Government provides national leadership in disaster resilience and emergency management and provides support to State governments at policy, coordination, technical and financial levels. Under Australia's constitutional arrangements, the government of each Australian State has responsibility and authority for the protection of life and property and prevention, preparedness, response and recovery in the emergency management context.

Australian governments at all levels are working towards the priority outcomes in the National Strategy for Disaster Resilience including:

- Risk assessments are undertaken for priority hazards and widely shared among at-risk communities, stakeholders and decision makers.
- Risk assessments consider risks and vulnerabilities and capabilities across the social, economic, built and natural environments.
- Consistent methodologies and data frameworks are applied in risk and disaster impact assessment to enable information sharing and accurate interpretation.
- Information on lessons learned—from local, national, and international sources—is accessible and available for use by governments, organisations and communities undertaking risk management planning and mitigation works.
- Partnerships are in place which support improved access to risk information and more effective collaboration in assessing and monitoring hazards and risks common across jurisdictional boundaries.
- Organisations, individuals and governments routinely share information and maps on risks, for the benefit of the community.
- Strong networks across sectors and regions fill information gaps, share information and build understanding at all levels.
- Risk reduction knowledge is included in relevant education and training programs, such as enterprise training programs, professional education packages, schools and institutions of higher education.
- Costs and benefits associated with hazard management inform risk reduction activities.
- Emergency messages are clear and, where appropriate, nationally consistent.
- Existing and, where necessary, improved data and tools for assessing hazards and risks, enable communities to better understand and act on their risks.

Strategic Goal Area 2

The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.

Strategic Goal Statement:

Australian governments will continue working towards the National Strategy for Disaster Resilience's priority outcomes, including:

- Current information is available on websites and in other forms, about disaster risk and mitigation including relevant local knowledge tailored where appropriate to different target audiences.
- Strong networks across sectors and regions share information and build skills and understanding at all levels.
- Communities are supported through appropriately targeted training and awareness activities, including those that highlight the role of volunteers to enhance local capacity to mitigate and cope with disasters.
- Vulnerable individuals have equitable access to appropriate information, training and opportunities.
- Compatibility of information sharing technologies is promoted.
- Strong links between policy, research and operational expertise and mechanisms, effectively transfer information and knowledge.
- Partnerships between government, businesses and the not-for-profit sector promote:
 - o development of innovative risk management approaches; and
 - o shared understanding of disaster resilience.
- Emergency services have effective relationships with the media to support vital information reaching communities in an appropriate form.
- Emergency management arrangements are sound, well understood and rehearsed and involve diverse stakeholders, including members of the community.
- Local planning for the response to and recovery from disasters will take account of community vulnerabilities and incorporate disaster risk reduction measures.
- Recovery strategies are developed in partnership with communities and account for long-term local needs and provide support and tools to manage their exposure to future disasters.
- Recovery strategies recognise the assistance the community is likely to provide in the immediate recovery phase, and allow for the identification, facilitation and coordination of the community resources.
- Post-disaster assessments involving all stakeholders are routinely undertaken to consider the effectiveness of prevention and preparedness activities and response and recovery operations. Findings from significant events are broadly shared and incorporated into improved disaster resilience planning.

The Standing Council on Police and Emergency Management (SCPEM) supported by the Australia New Zealand Emergency Management Committee (ANZEMC) will continue providing the leadership, guidance and oversight necessary to implement the National Strategy for Disaster Resilience.

Strategic Goal Area 3

The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.

Strategic Goal Statement:

The Federal Government will continue working with the States towards the systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programs in the reconstruction of affected communities through the implementation of the National Strategy for Disaster Resilience and other initiatives. Australian governments will continue working towards the Strategy's following priority outcomes:

- All levels of decision making in land use planning and building control systems take into account information on risks to the social, built, economic and natural environments.
- Information on the likelihood of damage from hazards is actively shared, and tools are available to support understanding of potential consequences and costs.
- Building standards and their implementation are regularly reviewed to ensure they are appropriate for the risk environment.
- Development decisions take account of both private and public risks.
- Natural hazard management principles are included in tertiary and vocational training and education curricula for relevant professional and building industry sectors.
- Settlements, businesses and infrastructure are, as far as is practicable, not exposed to unreasonable risks from hazards or have implemented suitable arrangements, which may include hardening infrastructure or taking up adequate insurance, to protect life and property from known hazards.
- Following a disaster, the appropriateness of rebuilding in the same location, or rebuilding to a more resilient standard to reduce future risks, is considered by authorities and individuals.

Section 3: Priority for action 1

Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.

Priority for action 1: Core indicator 1

National policy and legal framework for disaster risk reduction exists with decentralised responsibilities and capacities at all levels.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Is disaster risk taken into account in public investment and planning decisions?
Yes

National development plan	Yes
Sector strategies and plans	Yes
Climate change policy and strategy	Yes
Poverty reduction strategy papers	Yes
CCA/ UNDAF (Common Country Assessment/ UN Development Assistance Framework)	No
Civil defence policy, strategy and contingency planning	Yes

Have legislative and/or regulatory provisions been made for managing disaster risk? Yes

Description:

The government of each State has responsibility and authority for the protection of life and property in the emergency management context.

Each State prepares and maintains its own disaster preparedness arrangements, managed through a State emergency management plan. Legislation supports the work of each government and its agencies in carrying out its emergency management responsibilities.

The Federal Government provides national leadership in disaster resilience and emergency management and provides support to State governments at policy, coordination, technical and financial levels. Implementation of the National Strategy for Disaster Resilience guides national reform work across the disaster resilience spectrum, and complements many other initiatives undertaken by States in their jurisdictions.

Examples of sector strategy plans and related supporting documents are evident in the national health sector. The National Health Emergency Response Arrangements and National Health Security Agreement, are supported by the periodic conduct of National Health Disaster Management Capability Audits, the publication of relevant information for Health Professionals, the operation of the National Incident Room and the National Medical Stockpile.

The Federal Government brings critical infrastructure sectors together to discuss and address cross-sectoral vulnerabilities within supply chains on a national and cross-jurisdictional basis. This cross-sectoral work makes a significant contribution to critical infrastructure resilience by recognising and addressing the cascade or knock-on impacts that can spread from one sector to another.

Federal Government plans and arrangements related to emergency management are periodically reviewed. Examples of reviews underway include the Aviation Disaster Response Plan, the Overseas Disaster Assistance Plan, the Disaster Response Plan, the Plan for Reception of Australian citizens and Approved Foreign Nationals Evacuated from overseas, Maritime Radiological Response Plan, Radioactive Space re-entry Contingency Plan, and the Plan for Mass Casualty Incidents involving Australian Overseas.

Context & Constraints:

The National Strategy for Disaster Resilience reinforces the respective roles and the responsibilities of the States.

States are responsible for ensuring that effective legislative and regulatory provisions are established to support the work they do to manage disaster risk.

For instance, most public investment and planning decisions that might involve a disaster risk element are taken at the State level, either when building State owned infrastructure, or approving the construction by the private sector of infrastructure and buildings.

Local governments ('councils') with responsibilities for specific towns, cities and shires, also have defined responsibilities of relevance to disaster preparedness, including through land use planning, controls of building design, siting and occupancy, flood mitigation measures and provision of community facilities and local response to emergencies.

Priority for action 1: Core indicator 2

Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels

Level of Progress achieved: 4

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

Key Questions and Means of Verification

What is the ratio of the budget allocation to risk reduction versus disaster relief and reconstruction?

	Risk reduction / prevention (%)	Relief and reconstruction (%)
National budget	See below	See below
Decentralised / sub-national budget	Not known	Not known

USD allocated to hazard proofing sectoral development investments (e.g transport, agriculture, infrastructure)	See below
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Description:

The States are responsible for providing dedicated and adequate resources to implement disaster risk reduction plans and activities at all administrative levels within their borders.

The Federal Government supports the States through a number of funding mechanisms, in the aftermath of disasters, through regular funding mechanisms and provision of funding for other purposes that also enhance Australia's disaster resilience capacity.

In the past few years, the Federal Government has provided very substantial funding to the States in the aftermath of disasters (such as for floods in the State of Queensland and fires in the State of Victoria) for relief and reconstruction purposes.

Standing funding mechanisms are another avenue by which the Federal Government provides funding for disaster resilience purposes.

For instance, the National Partnership Agreement on Natural Disaster Resilience (NPA) is an agreement between the Federal and State governments and establishes the mechanism through which the Federal Government provides the States with approximately US\$27 million per annum to invest in disaster mitigation projects prioritised in accordance with their respective state-wide natural disaster risk assessments. Through the Agreement, States

have increased flexibility to effectively meet the requirements of local communities threatened by disasters in the strategic context of their risk priorities. This recognises that different jurisdictions have different priorities and that these may change over time.

Federal Government funding is also provided through a number of grants programs, such as the National Emergency Management Projects (NEMP).

The projects aim to increase emergency management capability by strengthening communities, individuals, business and institutions to minimise the adverse effects of disasters in Australia. NEMP expenditure of US\$3.8m in 2012-13 will be used to develop 17 emergency management capability projects including: National Emergency Risk Assessment Guidelines practice guide; developing a process and tools for building resilience in vulnerable households; developing a Triple Zero Kids Challenge Smartphone and Tablet Application, and a regional and remote volunteer leadership development program.

Context & Constraints:

Budget allocations and expenditure for disaster risk reduction, prevention, relief and reconstruction are spread across all Australian governments. The reconstruction of assets and support provided to affected communities after major disasters is likely to be well above any budget allocations for those years.

Other Federal Government investment also improves the disaster resilience of Australian communities, through improvements in infrastructure, such as road and rail. The Federal Government is investing US\$36 billion on road and rail infrastructure through the Nation Building Program over the six year period from 2008-09 to 2013-14. This investment is delivered through a range of road and rail programs and projects across the National Land Transport Network. The network is based on national and inter-regional land transport corridors that are of critical importance to national and regional growth.

The National Security Science and Innovation Strategy is a further vehicle by which funding is provided for broad national security purposes that include a disaster resilience element, such as research into issues including protecting Australia from invasive diseases and pests, health protection and biosecurity and forecasting, modeling and risk assessment.

The Federal Government provides other funding programs which can be directed to disaster mitigation (measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and environment), such as through funding to local government of towns and regions. These funding mechanisms include the National Partnership Agreement on Natural Disaster Resilience and the National Emergency Management Projects, as described above.

Due to the number and range of government agencies with responsibilities for, or that contribute to, Australia's disaster resilience efforts, it is not possible to accurately estimate the ratio of the total budget allocation to risk reduction versus disaster relief and reconstruction.

The private sector owns and operates most transport, agriculture, and infrastructure in Australia and is therefore responsible for hazard proofing such facilities, and recovering from disasters when they occur. No central data base of such expenditure is maintained.

Priority for action 1: Core indicator 3

Community Participation and decentralisation is ensured through the delegation of authority and resources to local levels

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Do local governments have legal responsibility and regular / systematic budget allocations for DRR? Yes

Legislation (Is there a specific legislation for local governments with a mandate for DRR?)	Yes
Regular budget allocations for DRR to local government	No
Estimated % of local budget allocation assigned to DRR	Not known

Description:

State governments have responsibility for emergency management planning and providing services to the community, including managing disaster risks and disaster resilience more generally within their jurisdiction, and responding to emergencies and disasters when they occur. Police, fire, ambulance and emergency service authorities are funded and managed by the governments of those jurisdictions.

Local governments within States also have some authority and resources provided by State governments to implement disaster management measures, though this varies from State to State.

The Federal Government supports community participation and decentralisation to local levels through a range of mechanisms, including by formal agreements, funding projects and working with the States on particular issues of national concern.

The Federal Government supports State and local government-based initiatives through the National Partnership Agreement on Natural Disaster Resilience and the National Emergency Management Projects program, both described at Priority 1, Core Indicator 1 above.

Two examples concerning community participation relate to attracting volunteers in the emergency management arena and managing donations from the community community participation during and after disasters.

Volunteers are a crucial component of community participation in preparing for and responding to emergencies in Australia. Australia has some 500,000 emergency management volunteers. Extensive work at a national level continues to identify and resolve systemic issues that hinder the attraction and retention of emergency volunteers, including requirements for accreditation and training.

Community participation during and after disasters, in the context of donated goods have benefited from the development of National Guidelines for Managing Donated Goods. The Guidelines give communities clear advice on the most effective way to support the recovery process and provide a nationally consistent and planned approach to supporting appropriate donations following natural disasters in Australia. The guidelines include advice on planning, handling unsolicited goods, media messages, educational tools and evaluation methods to ensure that communities in need receive appropriate donations following a disaster.

Context & Constraints:

Community participation and appropriate allocation of resources to local levels is crucial to effective preparation and response to emergencies and disasters. The National Strategy for Disaster Resilience emphasizes that fundamental to the concept of disaster resilience is that individuals and communities should be more self-reliant and prepared to take appropriate responsibility for the risks they live with. A resilient community will understand and have the ability to use local networks and resources to support actions required during an emergency and to support recovery efforts.

As communities exist within the boundaries of the Australian States it is primarily the role of governments of those jurisdictions and local government authorities to engage with and support local community actions required during an emergency and afterwards.

Priority for action 1: Core indicator 4

A national multi sectoral platform for disaster risk reduction is functioning.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Are civil society organizations, national finance and planning institutions, key economic and development sector organizations represented in the national platform? Yes

Civil society members (specify absolute number)	Not known
National finance and planning institutions (specify absolute number)	Not known
Sectoral organisations (specify absolute number)	Not known
Private sector (specify absolute number)	Not known
Science and academic institutions (specify absolute number)	Not known
Women's organisations participating in national platform (specify absolute number)	Not known
Other (please specify)	NA

Where is the coordinating lead institution for disaster risk reduction located?

In the Prime Minister's/President's Office	Yes
In a central planning and/or coordinating unit	No
In a civil protection department	Yes
In an environmental planning ministry	No
In the Ministry of Finance	No
Other (Please specify)	

Description:

Australia has a number of well-established platforms, bodies and mechanisms for disaster risk reduction. These platforms include:

- intra-governmental platforms such as:
 - o the ministerial Standing Council on Police and Emergency Management; and
 - o the Australia New Zealand Emergency Management Committee (ANZEMC), the senior officials committee supporting the ministerial council.
- inter-agency platforms such as the Australian Government Crisis Committee (AGCC) and the National Crisis Committee
- national or cross-sectoral platforms, such as:
 - o the Trusted Information Sharing Network for Critical Infrastructure Resilience (TISN), comprising Federal and State Governments and business. The TISN is a business-government engagement mechanism that provides a forum in which owners and operators of critical infrastructure can work together by sharing information on security and resilience issues which affect critical infrastructure; and
 - o platforms for engaging with volunteers, such as the Australian Emergency Management Volunteers Forum (AEMVF), which provides a national platform, representative of the volunteer emergency management sector.
- other ad-hoc multi-sectoral forums that involve both government and non-government representation such as:
 - o a Young Leaders in Emergency Management Forum (August 2012), where over forty 18-25 year old emergency management volunteer attendees will participate in discussions with senior sector representatives to determine a way forward for recruiting, retaining and engaging with young emergency management volunteers;
 - o National Emergency Management Forums to consider new and emerging technologies, focussing on floods (October 2011) and developments in Emergency Warning Systems (June 2012). The forums bring together the private and emergency management sectors to discuss the latest scientific and technical expertise in building disaster resilience capability;
 - o the inaugural National Disaster Resilience Advisory Roundtable (September 2012) on building disaster resilience, hosted by the RedCross; and
 - o ongoing engagement with academia and research institutions such as the Bushfire Cooperative Research Centre through various Forums conducted by universities and research organisations on a range of disaster resilience topics.

Context & Constraints:

The range of platforms listed above reflect the large number of governmental, private sector and not for profit sector organisations that have parts to play to support and enhance Australia's disaster resilience. Mechanisms exist to facilitate communication, consultation and where appropriate coordinated action, while recognising the authority and responsibilities of each organisation.

The Federal Department of the Prime Minister and Cabinet has a key role in national security and emergency management. In times of crisis it plays a significant part in ensuring coordinated policy advice to government and effective coordination among agencies. It chairs the AGCC and co-chairs the ANZEMC.

The Federal Attorney-General's Department leads the development of emergency management policy at the national level and coordinates emergency management activity both within Australia and when Australia assists with overseas disasters.

Section 4: Priority for action 2

Identify, assess and monitor disaster risks and enhance early warning

Priority for action 2: Core indicator 1

National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Is there a national multi-hazard risk assessment with a common methodology available to inform planning and development decisions? Yes

Multi-hazard risk assessment	Yes
% of schools and hospitals assessed	100%
Schools not safe from disasters (specify absolute number)	0%
Gender disaggregated vulnerability and capacity assessments	No
Agreed national standards for multi hazard risk assessments	Yes
Risk assessment held by a central repository (lead institution)	Yes
Common format for risk assessment	Yes
Risk assessment format customised by user	Yes
Is future/probable risk assessed?	Yes
Please list the sectors that have already used disaster risk assessment as a precondition for sectoral development planning and programming.	Not known

Description:

Australia is continuing to progress its work on national and local risk assessments and risk assessments for key sectors.

Much of the current work to implement the National Strategy for Disaster Resilience reflects and emphasises the importance of risk identification, assessment and mitigation.

This work includes:

- States conducted state-wide risk assessments of their priority hazards and identified the likelihood factors and impacts along with the adequacy of current preventative/preparedness and response/recovery controls. Work will continue to improve the consistency and sophistication of the risk assessments, and risk assessment information will be published by June 2013;
- States maintaining registers of significant risks to inform decision making at all levels of government and by the private sector and communities;
- implementing the National Emergency Risk Assessment Guidelines as the nationally consistent methodology for Australian governments to assess risk for priority hazards;
- developing a communications strategy to help people understand their risks and allow them to use the information to make decisions;
- developing a National Flood Risk Information Portal to enhance community awareness of flood risk and improve decision making;
- developing related national guidelines on the collection, comparability and reporting of flood risk information;
- revising design rainfall information, crucial in the development of flood studies; and
- implementing a National Work Program for Flood Mapping, which will provide a clear understanding on the coverage of existing flood maps, their level of detail and the tools to improve the quality of flood maps within Australia.

Context & Constraints:

Australia is a very large country, divided into eight State jurisdictions, varying from the very large (i.e. Western Australia, Queensland, and Northern Territory) to relatively small areas (i.e. Tasmania, Australian Capital Territory). Population, climate differences and number of critical infrastructure facilities vary significantly.

The government of each jurisdiction is responsible for conducting risk assessments within their jurisdictions, including for facilities in the education and health care sectors. In this context, risk assessments are generally conducted at a State, area, industry sector or facility level, depending on the purpose of the assessment.

The National Partnership Agreement on Natural Disaster Resilience (NPA) includes a requirement for all States to produce a State wide prioritised natural disaster risk assessment in accordance with the relevant Australian standards. The risk assessment component of the NPA was included because allocating funding to the highest risk priorities was the most effective and efficient use of federal funding.

Having risk assessments in place supports evidence-based decisions and provides states and territories with a tool for making those decisions. Although this work pre-dated the endorsement of the National Strategy for Disaster Resilience, the completion of state-wide risk assessments highlight the national movement towards gaining a greater understanding

of risk, which will allow for more effective use of mitigation and community education efforts.

At the time the NPA was being developed, work was already underway to develop the National Emergency Risk Assessment Guidelines (NERAG). In November 2011, SCPEM endorsed the NERAG as the consistent methodology for future use by Australian governments to assess risk for priority hazards.

Priority for action 2: Core indicator 2

Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Are disaster losses and hazards systematically reported, monitored and analyzed? Yes

Disaster loss databases exist and are regularly updated	Yes
Reports generated and used in planning by finance, planning and sectoral line ministries (from the disaster databases/ information systems)	Yes
Hazards are consistently monitored across localities and territorial boundaries	No

Description:

A number of Federal Government agencies monitor and analyse disasters and resultant losses and have developed systems and databases to facilitate this. Examples include:

- the Australian Government Crisis Coordination Centre, which has the ability to manage three (3) major events concurrently across the all-hazards spectrum and provide situational awareness and briefing products to Federal Government Ministers; and
- the Disasters Database, which contains records of natural and non-natural disasters within Australia, and outside Australia where a number of Australians have been affected. In particular it records insured and uninsured losses. Determining loss assessment data is a protracted process; therefore some fields in the Database are continually being updated. (<http://www.disasters.ema.gov.au/Default.aspx>).

The Federal Government has a number of tools to monitor particular hazards both within

Australia and within the region either during an emergency or to help with planning. These include:

- satellite capability for monitoring fires;
- Australian Flood Studies Database, which provides metadata on flood studies and information on flood risk;
- the Australian Water Resources Information System is under development which brings together all rainfall and river level data which will, in time, be readily accessible through the Bureau of Meteorology’s website;
- local combined storm surge / flood inundation assessments in Australia;
- an open source modeling tool for local onshore tsunami hazard assessments in Australia, Indonesia and Papua New Guinea;
- an open source earthquake risk model that has underpinned the release of the 2012 version of the Australian earthquake hazard map and local earthquake impact assessments, as well as disaster risk reduction activities in Indonesia and Papua New Guinea; and
- an open source tropical cyclone risk model that has underpinned the National Wind Risk Assessment and disaster risk reduction activities in the Philippines and the Pacific.

Context & Constraints:

Australian States also gather, assess and maintain data on key hazards and vulnerabilities within their jurisdictions. As the information is gathered for a range of State-specific purposes, it can be challenging to correlate this data for national purposes when this is needed, for example to inform national policy development.

Priority for action 2: Core indicator 3

Early warning systems are in place for all major hazards, with outreach to communities.

Level of Progress achieved: 5

Comprehensive achievement with sustained commitment and capacities at all levels

Key Questions and Means of Verification

Do risk prone communities receive timely and understandable warnings of impending hazard events? Yes

Early warnings acted on effectively	Yes
Local level preparedness	No
Communication systems and protocols used and applied	Yes
Active involvement of media in early warning dissemination	Yes

Description:

Australian governments have, and continue to develop and introduce a range of technological solutions to warn affected people of hazards, through a multi-modal approach. Emergency Alert, Australia's national telephone-based emergency warning system, sends warnings to fixed-line and mobile telephones based on the customer's registered service address. Work is underway to enhance Emergency Alert to provide emergency warnings to mobile telephones based on the location of the handset at the time of an emergency (see www.emergencyalert.gov.au).

A new standard for emergency messaging is now available for use around the country with the release of the Australian Government standard for the Common Alerting Protocol - Australia Profile (CAP-AU-STD). The new CAP standard will improve interaction between the existing network of Australian alerting and warning systems that send emergency messages to the public through radio, television, mobile phones, social media, internet, email and roadside signage. It will also enhance the existing capabilities to transmit emergency messages and public safety information through all compatible technology-based devices, (see www.em.gov.au/CapAuStdIt).

Federal Government warnings are issued through the Bureau of Meteorology and Geoscience Australia. The Bureau of Meteorology issues warnings and watch notices via a range of mediums directly to the public for weather warnings (such as severe thunderstorm, high sea, flood and tropical cyclone warnings) and, in conjunction with Geoscience Australia, also issues tsunami warnings, via the Australian Tsunami Warning System. Warnings issued by these agencies also inform the warning messages that State control agencies disseminate to the public.

The Australian Broadcasting Commission (Australia's public broadcaster) and commercial broadcasters continue to provide timely information on hazards, by radio, television and the Internet when appropriate.

There is also an increasing awareness among State emergency services of the significant role that social media can play in informing communities, and the benefits of crowd sourcing to gain critical intelligence on emergencies and natural disasters. A number of States have updated, or are working to update, their emergency plans to include a social media component to address this important trend.

More information on emergency warnings can be found at (<http://www.em.gov.au/Emergency-Warnings/Pages/default.aspx>).

Context & Constraints:

The development, adoption and implementation of emergency warning systems are primarily the responsibility of State governments and their agencies. State emergency management agencies have full autonomy in relation to:

- whether and when to issue an emergency warning;
- which delivery mechanisms to use to disseminate the emergency warning; and

- the content of the warning.

Individual States choose which warning technologies to adopt and when to activate them in accordance with the specific circumstances of an incident. All States have disaster emergency plans that include a communications component for the dissemination of rapid onset emergency warnings to the community. Nationally agreed emergency warning principles also underpin warning arrangements.

The Federal Government actively assists States in instances where a national focus for emergency communications and warnings is warranted. For example, the Federal Government provided \$26.3 million in funding to establish the national telephone-based emergency warning capability, Emergency Alert.

Situational awareness systems are also being developed at the local level to meet local needs. One local council area in the State of Queensland, devastated by floods in 2011, is trialling a new flood early-warning system with radar and satellite technology. Solar powered cameras have been installed above two creeks which feed information back to the area's disaster management centre, to enable monitoring the rate of rise of water, as well as specific water levels. A satellite-based backup system is also under development.

While risk prone communities receive timely and accessible warnings of impending hazard events, there are still challenges in this area. These include precisely assessing who should be warned, and how to express the appropriate degree of urgency of the situation to the wide range of people who will receive the warning. The provision of information is not always sufficient. Work is needed to better prepare and present warnings to ensure appropriate action occurs.

Priority for action 2: Core indicator 4

National and local risk assessments take account of regional / trans boundary risks, with a view to regional cooperation on risk reduction.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Does your country participate in regional or sub-regional actions to reduce disaster risk? Yes

Establishing and maintaining regional hazard monitoring	Yes
Regional or sub-regional risk assessment	Yes
Regional or sub-regional early warning	Yes

Establishing and implementing protocols for transboundary information sharing Yes

Establishing and resourcing regional and sub-regional strategies and frameworks

Yes

Description:

Australia is doing significant work in our region to help with disaster risk reduction. Australia is committed to reducing the burden of disasters on countries in our region, and is a leading donor on disaster risk reduction.

Since 2009, aid program expenditure on DRR rose from US \$48 million in 2009-10 to over US \$109 million in 2010-11.

Examples of Australian engagement in the international arena include:

- its role in 2010-11 as co-chair of the World Bank's Global Facility for Disaster Reduction and Recovery; and
- its support for the creation of the Model Act for the Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance – a concrete tool to help governments prepare for disasters.

Australia is working through the East Asia Summit (EAS) and the ASEAN Regional Forum (ARF) to progress closer regional cooperation, and is working through the ASEAN Defence Ministers Meeting Plus forum to encourage and build practical cooperation between regional Defence forces on humanitarian assistance and disaster relief.

Australia also supports implementation of the ASEAN Agreement on Disaster Management and Emergency Response, including the establishment of the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management.

In addition, through APEC's Emergency Preparedness Working Group (EPWG), Australia has pursued the EPWG's goal of building capacity in the region to mitigate, prepare for, respond to, and recover from emergencies and disasters. In 2012-2013, Australia plans to lead an EPWG project to promote the use of business continuity plans in developing economies in the region.

The Federal Government agency AusAID is supporting a number of programs helping governments in our region build resilience to natural hazards. For instance:

- In Bangladesh, Vietnam and the Pacific AusAID is doing this through training, safe infrastructure and livelihoods diversification programs; and
- Australia has committed US \$67 million to the Australia-Indonesia Facility for Disaster Reduction (AIFDR). A notable achievement of the AIFDR has been its work with Indonesian Government agencies to establish a real time, earthquake impact estimation system to enable rapid estimates of the number of people potentially affected in a disaster;
- Australia helped conduct an aerial survey of Metro Manila to generate state-of-the-art hazard mapping for floods and typhoons and an exposure database that will inform building codes and land use planning. AusAID also supported the development of natural hazard maps for 27 high-risk provinces across the Philippines.

Context & Constraints:

Given Australia does not share land boundaries with other countries, its national risk assessments are primarily domestically focused.

However, as reported in the previous Hyogo Protocol progress report, Australia continues to contribute to improved risk assessments in its region.

Climate change is a further area where risk assessments are crucial. In our region, Australia:

- delivers programs under the International Climate Change Adaptation Initiative, to enhance partner country capacity to assess key climate vulnerabilities and risks, formulate appropriate adaptation strategies and plans, and mainstream adaptation into decision making; and

- Australia's work in the Pacific has been guided by a publication released by the Federal Government in 2009 titled *Engaging our Pacific Neighbours on Climate Change: Australia's approach*. This work includes the US \$12.8 million Pacific Adaptation Strategy Assistance Program, the US \$21.4 million Pacific Climate Change Science Program and the US \$32.2 million Pacific Australia Climate Change Science and Adaptation Planning Program (2011 to 2013). The Federal Government is also supporting the development of early warning systems in its region. The Bureau of Meteorology, has supported the building of capacity for providing and delivering tropical cyclone and severe weather warnings, and an effective community response to these messages, throughout the South Pacific region. This has involved Australian severe weather forecasters providing hands-on support in the Tropical Cyclone Warning Centre in the Fiji based Regional Specialised Meteorological Centre and in-country training across the region.

To enhance regional cooperation further, in July 2012 the Council of Australian Governments (COAG) welcomed New Zealand's move from long-term observer to a member of the Australia New Zealand Emergency Management Committee (and the National Counter-Terrorism Committee) to ensure the closest possible coordination and cooperation on emergency management and counter-terrorism issues.

Section 5: Priority for action 3

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

Priority for action 3: Core indicator 1

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

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Is there a national disaster information system publicly available? Yes

Information is proactively disseminated	Yes
Established mechanisms for access / dissemination (internet, public information broadcasts - radio, TV,)	Yes
Information is provided with proactive guidance to manage disaster risk	Yes

Description:

The National Strategy for Disaster Resilience recognises the importance of relevant information on disasters being available and accessible to all stakeholders through appropriate means.

Information on disasters is available via a number of means, including via:

- the Australian Emergency Management Knowledge Hub, which commenced operation in 2012. It is a virtual and actual knowledge environment, with access to resources in the Australian Emergency Management Library. It provides information on current and historical disasters and provides ready access to evidence-based research, leading to improved policy development, decision making and best practice in the emergency management sector. The Hub also supports a social media platform, to date comprising forums and Twitter (<http://knowledge.em.gov.au/>);
- State operated websites, such as State police and emergency management websites, that inform the public of disaster risk reduction and emergency management matters;
- websites such as the Australian Broadcasting Corporation's ABC Emergency, which delivers official warnings and alerts and publishes emergency coverage;

- social media sites (see Priority 2:Core 3);
- public and commercial television broadcasters;
- smartphone applications, developed at the federal and state levels to improve access to disaster information, providing accurate and timely information to the public. One example is DisasterWatch, which provides information about disaster events in Australia via direct feeds from a range of authoritative sources in the States and Territories and nationally;
- manuals, such as the Australian Emergency Management Manual Series, which are published regularly and are free to download via www.em.gov.au.; and
- promulgation of a National Strategy for Disaster Resilience Communications Engagement Framework and Communications Plan, with key messages that all governments have agreed to use to promote disaster resilience activities.

Australia recognises that it is important that information is provided in a language and format that facilitates understanding. Some of the work done includes converting existing community emergency action guides into languages other than English.

Context & Constraints:

There are ongoing efforts across government to increase the amount of relevant information on disasters that is available and accessible to stakeholders. There are increasing community demands for timely and relevant information to be made available to the public before, during and after emergencies.

Throughout this report there are examples of enhancements to the amount of information provided to the public as well as information-sharing between stakeholder organisations in the disaster resilience arena. However, there are a number of significant challenges to be dealt with before an optimum amount of information can be made available to all stakeholders in the disaster resilience arena.

As indicated in the previous Hyogo Protocol progress report, they include: the large number of government, private sector, and not-for-profit sector organisations involved; the coordination of the information and knowledge generated through the various mitigation and other programs by the States to ensure that best practice approaches are being shared and lessons learned; achieving agreed standardised approaches to information gathering and publication; ensuring the relevance, accuracy and timeliness of information, both when published and ongoing.

The work currently underway to strengthen overarching strategies in the disaster resilience arena that bring together all governments and stakeholder organisations will reduce any unnecessary barriers or inhibitions that impede the flow of disaster related information.

Priority for action 3: Core indicator 2

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

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Is DRR included in the national educational curriculum? Yes

Primary school curriculum	Yes
Secondary school curriculum	Yes
University curriculum	Yes
Professional DRR education programmes	Yes

Description:

The Federal Attorney-General's Department (AGD) contributes to the development of the Australian National Curriculum through input on draft curriculum documents in key learning areas of most relevance to disaster resilience (i.e. Geography, Health & Physical Education, Civics and Citizenship) with an emphasis on alignment to elements of the National Strategy for Disaster Resilience.

AGD also provides freely available teaching resources to educators when designing lessons that will help students understand disasters: how they occur, their possible effects, and how individuals and communities can prepare for and recover from a disaster event. A new website called 'Disaster Resilience Education for Schools' will shortly be launched (<http://schools.aemi.edu.au>).

AGD has also developed a new web resource to help school students and teachers find information about disasters. Aimed at year 5-10 school students, Disaster Mapper – an interactive resource for schools - provides statistics, images, video and text for more than 50 significant disasters that have occurred in Australia since the 1900s.

AGD has also developed the Before the Storm – a game for iPhone and iPod Touch, which is a freely available educational game for middle year primary students. It is designed to encourage thinking about storm preparation and disaster resilience, specifically preparation, actions during the storm, and after the storm. It is based on the Federal Government's Storm Action Guide and helps students and families better prepare for, and recover from, natural disasters.

There are a number of Australian universities offering undergraduate and post-graduate degrees or courses in emergency management and disaster resilience.

For professional development, AGD continues to develop and deliver courses and professional education programs in emergency management and disaster resilience. The courses and diplomas are aimed at both the volunteer and professional emergency services sectors. More broadly, the Federal Government also contributes to the development of professional disaster resilience education and professional development through actively contributing to and participating in a range of academic forums and conferences.

Context & Constraints:

Australian States are incorporating disaster preparedness and risk reduction concepts into school programs. Examples of these include:

- The Victorian Curriculum and Assessment Authority has commissioned the development of a Bushfire Education website that provides learning activities for children and advice to teachers. Four modules have been developed that target children in the Early Years, Lower Primary, Middle and Upper Primary and Secondary years. Each module has four themes, Learning about Bushfires, Learning to Prepare for Bushfires, Learning to Respond to Bushfires and Learning to Recover from Bushfires.
- In Queensland, some 900 high school students in over 20 schools across the state went through a program to help them better prepare for floods. The response to the program has been positive from schools, teachers, student and community. (see <http://www.youtube.com/user/VolunteeringQldT>)

Priority for action 3: Core indicator 3

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

Level of Progress achieved: 4

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

Key Questions and Means of Verification

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

Research programmes and projects	Yes
Research outputs, products or studies are applied / used by public and private institutions	Yes
Studies on the economic costs and benefits of DRR	Yes

Description:

A wide range of research is undertaken in Australia to improve the understanding of our hazards and risks, as well as understanding and assessing community resilience.

A number of universities have centres focused on emergency management research. An important example is the Bushfire Cooperative Research Centre (CRC), which conducts research into the social, environmental and economic impacts of bushfires. The Federal Government provided US \$15 million over three years from 2010-11 to the CRC to conduct research tasks arising from the 2009 Victorian bushfires, including understanding fire risk, communicating risk and managing the threat. Federal and State governments are currently considering the concept of a natural hazards research platform to build on the work of the CRC and other research bodies.

A lot of work is being done in the climate change space to improve our understanding of the causes, nature, timing and consequences of climate change so that industry, community and government decisions can be better informed. For example, the National Climate Change Adaptation Research Facility (NCCARF) is leading the research community in a national interdisciplinary effort to generate the information needed by decision-makers in government, industry and in vulnerable sectors and communities to manage the risks of climate change impacts. The NCCARF's National Climate Change Adaptation Research Plan (NARP) for Emergency Management has been developed to identify the information that decision makers may need in order to effectively respond and adapt to the impacts of climate change.

Research to develop models and tools is also being undertaken. For instance, the Torrens Resilience Institute is working on a practical tool that a community can use to assess resilience in the face of major disasters or emergencies. Through a Community Disaster Resilience Scorecard, a community will be able to self-assess its performance in areas such as community connectedness, preparedness and response, resources and vulnerability/risk.

Context & Constraints:

The National Strategy for Disaster Resilience notes the importance of improved information and data sharing on the costs and benefits associated with risk management and disaster impacts to build the evidence base for prioritising and targeting interventions. It also recognises the need to engage with research institutions providing advice on policy-driven research.

A number of government agencies, educational and research institutions are working in this area and contributing to the increasing body of knowledge and literature. Such research is over time being developed and strengthened and used to inform work in the disaster resilience and related sectors. It contributes to policy and program development and at an operational level.

Priority for action 3: Core indicator 4

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

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Do public education campaigns for risk-prone communities and local authorities include disaster risk? Yes

Public education campaigns for enhanced awareness of risk.	Yes
Training of local government	Yes
Disaster management (preparedness and emergency response)	Yes
Preventative risk management (risk and vulnerability)	Yes
Guidance for risk reduction	Yes
Availability of information on DRR practices at the community level	Yes

Description:

The National Strategy for Disaster Resilience emphasises the importance of developing continuous and consistent messaging about disaster resilience and the use of a variety of delivery mechanism and channels, including prospects for social media engagement.

To achieve a consistent message about disaster resilience, the Standing Council on Police and Emergency Management has developed a National Disaster Resilience Communication Strategy to provide a nationally consistent approach to deliver key resilience messages which are simple and action oriented to a range of audiences identified across all sectors of the Australian community.

The Federal Government, via the Attorney-General's Department (AGD), produces numerous public awareness raising publications, which are provided to the States for dissemination. AGD also publishes The Australian Journal of Emergency Management. The Australian Emergency Management Institute provides education, training and research

opportunities for local government and provides education, training and skills development courses, such as with its Advanced Diploma of Public Safety (Emergency Management) and Emergency Management for Local Government and Business Continuity Management for Local Government courses.

State-specific websites exist to inform local communities of the risks they face and provide them with the information they need to prepare and recover from natural disasters. Websites and other resources have also been developed by non-government organisations. An example of this is Green Cross Australia's Harden Up Queensland website, launched in October 2011 (<http://www.hardenup.org/>). The site provides information to encourage and help people to take practical steps to become more self-reliant in major weather events.

Examples of other State based communication initiatives to keep communities informed and aware of potential emergencies and disasters, include:

- the creation of a FloodSafe Guide aimed at the aged and people with disabilities in a flood prone area of the State of New South Wales;
- a 'Stay Safe' calendar and emergency preparedness booklet developed by the Australian Capital Territory government; and
- development of tropical cyclone messages and 'talking posters' in nine indigenous languages to prepare indigenous community residents in the Northern Territory to carry out necessary actions prior to, during and after a cyclone.

Context & Constraints:

State government authorities are responsible for coordinating and planning for the response to disasters and civil emergencies. Each has its own strategies to develop and maintain public awareness of particular hazards and disaster resilience generally with a particular focus on the role of the individual to be prepared to respond effectively in time of emergency.

Section 6: Priority for action 4

Reduce the underlying risk factors

Priority for action 4: Core indicator 1

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.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Is there a mechanism in place to protect and restore regulatory ecosystem services? (associated with wet lands, mangroves, forests etc) Yes

Protected areas legislation	Yes
Payment for ecosystem services (PES)	Yes
Integrated planning (for example coastal zone management)	Yes
Environmental impacts assessments (EIAs)	Yes
Climate change adaptation projects and programmes	Yes

Description:

While the Federal Government has broad powers to deal with environmental matters, the States have extensive powers to make legislation related to environmental matters in their own jurisdiction.

The Federal Government conducts a wide range of programmes in the areas of climate change and related risk assessments and capability development. The following are examples of such work.

The National Climate Change Adaptation Research Facility funds research projects under nine themes, including Emergency Management. US \$1.8 M funding has been provided to address the research priorities detailed in the National Climate Change Adaptation Research Plan for Emergency Management.

The Facility also manages the Emergency Management Adaptation Research Network which

fosters information exchange and seeks to support and facilitate research to inform the way the emergency management sector responds to climate change.

The Ministerial Select Council on Climate Change has been established, and is responsible for developing work plans for national adaptation priorities identified in the Government's Adapting to Climate Change in Australia position paper. Prevention, preparedness, response and recovery with regard to natural disasters are a national adaptation priority.

The 2009 Climate Change Risks to Australia's Coasts Reports presented the findings of the first national assessment of the risks of climate change for the whole of Australia's coastal region. It identifies the exposure of coastal infrastructure to inundation and erosion from a sea level rise of 1.1 metres.

The Coastal Urban Digital Elevation Modelling in High Priority Regions project has involved acquiring, processing and providing whole of government access to high resolution elevation data for priority coastal areas of Australia. The project has also developed information products to assist decision-makers to plan for the impacts of climate change, such as through a national portal (<http://www.nedf.ga.gov.au>).

Context & Constraints:

The National Strategy for Disaster Resilience notes that every year, Australian communities are subjected to the damaging impacts of disasters caused by destructive bushfires, floods and severe storms. The impacts of these disasters on people, the economy, our infrastructure and the environment are a reminder of the need to continue improving Australia's resilience to disasters. The predicted impact of climate change on sea level and the frequency and intensity of extreme weather events must be considered in an integrated approach to natural hazards in land use planning schemes, building code standards, and State based regulations.

The Strategy recognises the challenges in implementing such an integrated approach, with a long term approach involving government, the private sector and communities needed.

Priority for action 4: Core indicator 2

Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Do social safety nets exist to increase the resilience of risk prone households and communities? Yes

Crop and property insurance	Yes
Temporary employment guarantee schemes	No
Conditional and unconditional cash transfers	Yes
Micro finance (savings, loans, etc.)	No
Micro insurance	No

Description:

In Australia, government policies aim to reduce the vulnerability of communities by mitigating the risks posed by disasters, and providing comprehensive recovery assistance for disaster affected communities.

The Federal Government administers a broad range of social development programs, services, benefits and payments to reduce the vulnerability of Australian communities, including those affected by disasters. This assistance is targeted towards at-risk populations, including children and seniors, people with disabilities and their carers, unemployed people and Indigenous Australians.

It also administers disaster-specific assistance programs, such as the Australian Government Disaster Recovery Payment (AGDRP). The AGDRP is only provided when the impacts of a disaster are considered so severe that further Federal Government assistance in addition to that provided under the NDRRA is warranted. The AGDRP is a one off cash payment to eligible adults and children.

Broader post-disaster recovery and rehabilitation costs are shared between the federal and state governments under the Natural Disaster Relief and Recovery Arrangements (NDRRA). The NDRRA helps to alleviate the financial burden that natural disasters cause State governments and the community. NDRRA assistance is comprehensive and includes: emergency food, clothing and accommodation for individuals; clean up and recovery loans and grants for businesses and primary producers; recovery funds for communities; and the repair or replacement of essential public infrastructure.

Federal Government financial support also includes concessional interest rate loans to small businesses and primary producers, and recovery grants for small businesses designed to cover the cost of clean-up and reinstatement of businesses which have suffered direct damage as a result of a natural disaster.

Australian governments reduce the vulnerability of communities before disasters, such as through funding the National Emergency Management Projects program, and by improving access to emergency information.

Work is underway to develop national guidelines to assist emergency managers to communicate with people with a disability. The guidelines are being developed in consultation with the disability sector, and are intended to enhance the delivery of public information and emergency warnings to people with disabilities.

Context & Constraints:

Social development policies and plans are in place to reduce the vulnerability of populations most at risk. The National Strategy for Disaster Resilience recognises that assistance to vulnerable communities must not inadvertently reduce incentives for individuals to properly prepare for disaster events. As such, disaster assistance is often reviewed to ensure that it is structured in a manner that does not discourage individuals from taking responsibility for their own safety.

The Federal Department of Families, Housing, Community Services and Indigenous Affairs also develops broader social development policies and plans to reduce the vulnerability of populations most at risk. It supports families and children through programs and services and benefits and payments. Further support is provided through grants and funding for organisations providing services for families.

Priority for action 4: Core indicator 3

Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Are the costs and benefits of DRR incorporated into the planning of public investment? Yes

National and sectoral public investment systems incorporating DRR.	Yes
Please provide specific examples: e.g. public infrastructure, transport and communication, economic and productive assets	
Investments in retrofitting infrastructures including schools and hospitals	Yes

Description:

The National Strategy for Disaster Resilience recognises that businesses can and do play a fundamental role in supporting a community's resilience to disasters. They provide resources, expertise and many essential services on which the community depends.

Economic activities both within and across jurisdictional borders, are vulnerable to disruption from disasters. Accordingly, all Australian governments have roles to develop and implement policies and plans to reduce the vulnerability of economic activities.

Examples of work by the Federal Government to reduce the vulnerability of economic activities include:

- a national stocktake of small and medium sized business continuity planning programs and information relating to businesses across Australia has been conducted;
- the Natural Disaster Relief and Recovery Arrangements, described above in Priority for action 4: Core indicator 2 helps to alleviate the financial burden that natural disasters cause State governments and the community, including businesses. The Disaster Income Recovery Subsidy also may be activated to assist employees, small business people and farmers who have experienced a loss of income as a result of a disaster. Australian Government Wage Assistance may also be made available in some circumstances to employers, including businesses and primary producers; and
- the Critical Infrastructure Resilience Strategy which aims to achieve the continued operation of critical infrastructure in the face of all hazards, as this critical infrastructure supports Australia's national defence and national security, and underpins our economic prosperity and social wellbeing. Contributing to the Strategy, the Federal Government's Critical Infrastructure Program for Modelling and Analysis (CIPMA) has analysed scenarios on natural disasters to help enhance Australia's emergency management planning, preparedness, recovery and resilience in a range of locations. These analyses provide accurate and reliable information to the owners and operators of critical infrastructure, and assists in developing prevention and preparedness plans that will allow for an appropriate response and a quicker recovery in the event of a disaster.

More details in relation to the Critical Infrastructure Resilience Strategy and related activities are at Action 5 below.

Context & Constraints:

The risk reduction criteria and strategies adopted in the planning of public investment is a matter for each responsible government and its agencies. State governments have identified sites of economic and critical infrastructure significance within their borders and engage with the owners of such facilities on security and resilience measures.

Priority for action 4: Core indicator 4

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

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Is there investment to reduce the risk of vulnerable urban settlements? Yes

Investment in drainage infrastructure in flood prone areas	Yes
Slope stabilisation in landslide prone areas	Yes
Training of masons on safe construction technology	Yes
Provision of safe land and housing for low income households and communities	Yes
Risk sensitive regulation in land zoning and private real estate development	Yes
Regulated provision of land titling	Yes

Description:

The National Strategy for Disaster Resilience recognises the need for planning and management of human settlements to incorporate disaster risk reduction elements, including enforcement of building codes. Reducing risks in the built environment is one of the seven strategic objectives of the Strategy.

Australian governments have established a Land Use Planning and Building Codes Taskforce (the Taskforce), comprising planning officials from all States and federal agencies, and the Australian Local Government Association, is progress the Strategy's objectives regarding land use planning and building codes.

The Taskforce has undertaken a comprehensive review of land use planning and building policies, regulations and codes across Australia and finalised an Enhancing the Built Environment Roadmap (the Roadmap). The Roadmap provides a clear action plan to influence and effect land use planning and building codes so that they integrate consideration of priority natural hazards. The Taskforce is currently developing a template

that will guide implementation of the Roadmap and provide some consistency in approach across the jurisdictions. States are currently examining the issues surrounding implementation of the Roadmap in their respective jurisdictions.

Context & Constraints:

Planning and management of human settlements to incorporate disaster risk reduction elements, including enforcement of building codes are the responsibility of State and local governments, with a number of non-government organisations also playing important roles. While an all-hazards approach is needed, the risks specific to a particular hazard, or area, need to be considered in a fit-for-purpose manner. Population increases, and movements out of major cities present challenges for State governments to facilitate land development approvals for housing in a disaster resilient way.

Bushfire is one example of a particular hazard that affects many areas in several States of Australia. Australia's building code requires residential buildings in designated bushfire-prone areas to be constructed to reduce the risk of ignition from a bushfire while the fire front passes. Measures are prescribed for assessing the level of bushfire attack and for the design and construction of buildings in order to improve their resistance to ember attack, radiant heat or flame generated by a bushfire.

In early 2009 a series of devastating bushfires swept through parts of Victoria resulting in significant loss of life and property. As a result, the Australian Building Codes Board has published a 'Performance Standard for Private Bushfire Shelters' and is working with Standards Australia to expedite the review and ongoing development of Australian Standard on the Construction of Buildings in Bushfire-prone Areas.

Flooding is a further example of a particular hazard that affects many areas across Australia. As reported in the previous progress report, the town of Grantham in the State of Queensland was devastated in the extensive floods in January 2011. Following the floods, an extensive consultation process revealed that local residents wished to remain in Grantham, but in a relocated community. The resulting relocation and rebuild has been a joint effort between State and local (area) governments. Ninety new homes have been constructed, with another 284 now under construction.

Relocating flood prone buildings is an opportunity for planning and management of human settlements to incorporate disaster risk reduction elements, including enforcement of building codes. However, the cost of relocating more properties in larger communities is a constraint on further initiatives of this type being undertaken.

Priority for action 4: Core indicator 5

Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Do post-disaster programmes explicitly incorporate and budget for DRR for resilient recovery? Yes

% of recovery and reconstruction funds assigned to DRR	N/A
DRR capacities of local authorities for response and recovery strengthened	Yes
Risk assessment undertaken in pre- and post-disaster recovery and reconstruction planning	Yes
Measures taken to address gender based issues in recovery	Yes

Description:

As described at Priority 4: Core 2, Australian governments share post-disaster recovery and restoration costs under the Natural Disaster Relief and Recovery Arrangements (NDRRA). NDRRA assistance is designed to complement disaster risk reduction strategies, and is not to supplant, or operate as a disincentive for, self-help by way of either insurance or other mitigation measures. In order to receive assistance with restoring or replacing essential public assets, states must develop and implement mitigation strategies to address likely or recurring disasters, and encourage local governments to do the same.

Under changes introduced in 2011, states must also submit independent assessments of their insurance arrangements for State and local government assets to the Federal Government, which then reviews those arrangements to ensure they are appropriate, cost-effective for both the State and the Federal Government and minimise the financial exposure borne by all taxpayers.

The NDRRA includes provisions for the 'betterment' of an asset following a disaster, that is the restoration or replacement of an essential public asset to a more disaster-resilient than its pre-disaster standard.

Effective measurement of floods also contributes to the selection of effective post disaster recovery and rehabilitation processes. The Federal Government agency Geoscience Australia conducted post-disaster surveys in Queensland following the 2010/2011 floods. These surveys gathered data on flood hazard (e.g. water depth) and the damage caused by the flood. This data was provided to the Queensland Government in March 2012. This data can be used to validate flood models as well as to develop flood vulnerability models for specific building classes.

Geoscience Australia maintains the national archive of satellite data, which can provide

historical mapping and help inform frequency and extents of floods across Australia thereby supporting emergency response efforts for flood events.

Context & Constraints:

Australian governments continue to consider how to best integrate disaster risk reduction measures into the NDRRA and other forms of recovery assistance, and ensure that the manner in which recovery assistance is provided actively encourages the building of more disaster-resilient Australian communities.

Priority for action 4: Core indicator 6

Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Are the impacts of disaster risk that are created by major development projects assessed? Yes

Are cost/benefits of disaster risk taken into account in the design and operation of major development projects? Yes

Impacts of disaster risk taken account in Environment Impact Assessment (EIA)	Yes
By national and sub-national authorities and institutions	Yes
By international development actors	Yes

Description:

The procedures adopted to identify and assess project risks, including the risk of disasters, is the responsibility of the government agency or the private sector organisation owning or managing the project.

For instance one of the criteria by which applications for funding under the Federal Government’s Regional Infrastructure Fund are assessed is the need for projects to demonstrate they meet established standards in implementation and management, including that project risks have been analyzed and strategies developed to mitigate risks. The identification of any risk of disaster, and its possible cost, will be one of many risks assessed

as part of that process.

Specific risks to the environment, including disasters, from the project may also require identification and mitigation, under Federal and/or State legislation, such as the Federal Government Environment Protection and Biodiversity Conservation Act 1999 which provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places.

State legislation may also require an environment assessment of the potential environmental impacts or effects of a proposed development. This may require an environmental impacts or effects statement to provide a description of the existing environment that may be affected, predictions of significant environmental effects of the proposal and relevant alternative, proposed measures to avoid, minimise or manage adverse environmental effects and a proposed program for monitoring and managing environmental effects during project implementation. Criteria by which assessments are made vary between States.

The Federal Government also has a range of programmes in place to support decision-makers in considering the impacts of major development projects.

The Federal Government's Critical Infrastructure Program for Modeling and Analysis (CIPMA) described in Priority 4, Core Indicator 3, has analysed scenarios on natural disasters to help enhance Australia's emergency management planning, preparedness, recovery and resilience in a range of locations. These analyses assist in developing prevention and preparedness plans that will allow for an appropriate response and a quicker recovery in the event of a disaster.

Context & Constraints:

The Federal Government, through the National Strategy for Disaster Resilience, and other programs, is aiming to provide State governments with enhanced tools to assist their assessments of environmental and disaster risk impacts of projects. This is necessarily a long term body of work, involving multiple agencies at Federal and State Governments levels. This makes achieving changes and improvements to standards and procedures to assess the disaster risk impacts of major development projects, especially infrastructure, challenging and time consuming.

Section 7: Priority for action 5

Strengthen disaster preparedness for effective response at all levels

Priority for action 5: Core indicator 1

Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Are there national programmes or policies for disaster preparedness, contingency planning and response? Yes

DRR incorporated in these programmes and policies	Yes
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The institutional mechanisms exist for the rapid mobilisation of resources in a disaster, utilising civil society and the private sector; in addition to public sector support.	Yes
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Are there national programmes or policies to make schools and health facilities safe in emergencies? Yes

Policies and programmes for school and hospital safety	Yes
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Training and mock drills in school and hospitals for emergency preparedness	Yes
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Are future disaster risks anticipated through scenario development and aligned preparedness planning? Yes

Potential risk scenarios are developed taking into account climate change projections	Yes
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Preparedness plans are regularly updated based on future risk scenarios	Yes
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Description:

At the national level, there is a range of plans and committees to coordinate effort across the policy, institutional and technical space. Some of the plans address specific hazards such as animal and plant diseases; pandemic influenza and marine pollution. Others such as the Federal Government Disaster Response Plan (COMDISPLAN) and Defence Assistance to the Civilian Community arrangements outline how Federal Government assistance will be provided to the States.

With respect to capabilities, the Australia-New Zealand Emergency Management Committee is working towards the development of the first national emergency management capability development framework for Australia. This aims to identify and address national capability gaps in the emergency management sector.

There are also a number of specific technical initiatives currently in place or under development, that assist Australia's public safety agencies' preparedness, prevention, response and recovery efforts for all types of disasters.

These include:

- the development of a nationally interoperable mobile broadband communications capability for public safety agencies across Australia (the Public Safety Agency Mobile Broadband capability); and
- the Critical Infrastructure Program Modelling and Analysis Capability (CIPMA) referred to in Priority 4, models different scenarios to provide 'virtual insight' into disruptions to services whether caused by natural or human disasters.

Context & Constraints:

Under Australia's constitutional arrangements, State Governments have responsibility for emergency management within their jurisdiction and have the laws, funding mechanisms and organisational arrangements in place to deal with such emergencies.

In most emergencies, State and local resources provide the first line of emergency response and incident management support. As the scale of impact and complexity of an emergency increases, States have the option to request assistance from other States, or from the Federal Government where national coordination efforts need to be invoked.

One example of the context in which policy, technical and institutional capacities and mechanisms for disaster risk management exist, is in the aged care facility sector. While such facilities are located in the States, and subject to State legislation, in regard to those facilities subsidised by the Federal Government, national programmes and policies are in place for the safety of such facilities in emergencies.

Federal legislation requires approved providers of Federal subsidised residential aged care homes ('providers') to:

- comply with Accreditation Standards, against which all residential facilities are regularly assessed;

- develop and enact plans in consultation with local emergency service agencies to protect the health, safety and wellbeing of care recipients, including to identify and ensure compliance with all relevant legislation, regulatory requirements, professional standards and guidelines about physical environment and emergency management planning and response; and
- exercise key elements of their emergency management plans.

Providers are reminded every year to update plans, and as noted above are expected to work closely with local emergency service agencies in developing and exercising their plans. The Standards are currently being reviewed, to take an 'all hazards' approach.

Priority for action 5: Core indicator 2

Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Are the contingency plans, procedures and resources in place to deal with a major disaster? Yes

Plans and programmes are developed with gender sensitivities	Yes
Risk management/contingency plans for continued basic service delivery	Yes
Operations and communications centre	Yes
Search and rescue teams	Yes
Stockpiles of relief supplies	Yes
Shelters	Yes
Secure medical facilities	Yes
Dedicated provision for disabled and elderly in relief, shelter and emergency medical facilities	Yes
Businesses are a proactive partner in	Yes

Description:

The Federal Government works to enhance plans and arrangements and test readiness through a rolling-program of multi-agency and multi-jurisdictional exercises. These exercises cover the full spectrum of events including counter-terrorism, mass casualty and major natural disasters.

By way of example, in 2011, the Federal Government's Critical Infrastructure Program held its inaugural All Sectors Desktop Exercise which focused on Cross-Sectoral Dependencies. The Exercise conducted in partnership with owners and operators of critical infrastructure, and Federal and State Government agencies, considered how critical infrastructure would be impacted by and respond to a rolling blackout scenario.

The Federal Government maintains a range of plans (see Priority for action 5: Core indicator 1) and operates a number of facilities to assist with the monitoring and response to hazards across the all hazard spectrum and exchange of information. These include facilities that operate 24 hours/7 days a week:

- the Crisis Coordination Centre (see Priority for action 5: Core indicator 4) and
- the Department of Health and Ageing's National Incident Room. The Room enables efficient coordination of emergency response personnel, and facilitates communication between Federal Government agencies, State health authorities and international organisations, such as the World Health Organisation.

Search and rescue teams exist around Australia, within the police and emergency services agencies.

Context & Constraints:

Under Australia's constitutional arrangements, State Governments have responsibility for emergency management within their jurisdiction and have the laws, funding mechanisms and organisational arrangements in place to deal with such emergencies. State and local governments are also responsible for having disaster preparedness plans, contingency plans and related training drills and rehearsals in place.

Contingency plans are in place in the relevant Federal Government agencies to meet State requests for federal assistance arising from any type of emergency or disaster.

There are increasing linkages and coordination between all levels of government, industry sectors, and not-for-profit organisations with a view to increased disaster resilience, both within and between jurisdictions and nation-wide. In some jurisdictions there are also regulatory requirements for particular organisations in certain sectors or locations to prepare such plans. (132)

In regard to the security of medical facilities specifically, such facilities are the responsibility of the State government or a private sector owner and operator. States are supported by the

Federal Government, both with funding for the operation of hospitals, and with measures such as the:

- National Health Disaster Management Capability Audits - conducted regularly to provide an up-to-date snapshot of Australia's health disaster response assets;
- National Critical Care and Trauma Response Centre, which maintains a state of readiness to respond to a major incident both within the region and for national priorities in the event of a major incident; and
- National Medical Stockpile, which includes counter-terrorism medical counter-measures and pandemic influenza related antimicrobial medicines and immunisations, and a range of personal protective equipment.

Priority for action 5: Core indicator 3

Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Are financial arrangements in place to deal with major disaster? Yes

National contingency and calamity funds	Yes
The reduction of future risk is considered in the use of calamity funds	Yes
Insurance and reinsurance facilities	Yes
Catastrophe bonds and other capital market mechanisms	Yes

Description:

Federal Government financial reserves and contingency mechanisms are in place to support effective response and recovery when required. Australian and State governments share post-disaster recovery and rehabilitation costs under the Natural Disaster Relief and Recovery Arrangements (NDRRA). A description of the NDRRA is provided in response to Priority for action 4: Core indicator 2. The Government provided considerable assistance to State governments under the NDRRA for a total of 84 disaster events during the 2010/2011 and 2011/2012 disaster seasons.

Under changes introduced in 2011, the states must submit independent assessments of their

insurance arrangements to the Federal Government, which then reviews the adequacy of these arrangements. The changes are designed to ensure that the states put in place appropriate arrangements that are cost-effective for both the State and the Federal Government and minimise the financial exposure borne by all taxpayers.

The National Strategy for Disaster Resilience emphasises that households and businesses should mitigate against the effects of disasters by taking out insurance. Following the independent Natural Disaster Insurance Review, the Federal Government implemented new regulations to ensure that a standard definition of 'flood' is used in home building, home contents, small business and strata title insurance policies. The Federal Government is also in the process of introducing regulation that requires insurers to provide consumers with one page fact sheets that set out key information about the coverage provided under home building and home contents insurance policies.

In the international arena, Disaster Risk Management (DRM) was included for discussion amongst Finance Ministers as part of Mexico's G20 agenda for 2012. As part of this work stream, Australia contributed a chapter to a joint World Bank/G20 publication on country DRM experiences, which was released during the Los Cabos G20 Leaders' Summit in June 2012. Australia is also providing input to a voluntary framework (developed by the OECD and World Bank) focused on DRM risk assessment and risk financing, to be delivered to G20 Finance Ministers by November 2012.

Context & Constraints:

Under the Australian federal system, State governments have primary responsibility for emergency management, including by ensuring that sufficient financial reserves and contingency mechanisms are in place to fund recovery efforts.

The States have specific responsibilities in relation to applying for Australian Federal Government assistance through the Natural Disaster Relief and Recovery Arrangements, including the provision of information to the federal government on assets repeatedly damaged by disasters.

Priority for action 5: Core indicator 4

Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews

Level of Progress achieved: 4

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

Key Questions and Means of Verification

Has an agreed method and procedure been adopted to assess damage, loss and needs when disasters occur? Yes

Damage and loss assessment methodologies and capacities available	Yes
Post-disaster need assessment methodologies	Yes
Post-disaster needs assessment methodologies include guidance on gender aspects	Yes
Identified and trained human resources	Yes

Description:

The Federal Government has established an all-hazards Crisis Coordination Centre to provide a central point of coordination and management.

The Centre operates 24 hours, 7 days a week and provides whole-of-government information, coordination and decision support to the Australian Government Crisis Committee, and other committees and agencies during a crisis.

The Centre has the ability to manage major events concurrently across the all hazards spectrum.

The Centre also coordinates Australia's response to international disaster events, by sending expert teams comprising search, rescue, medical and engineering specialists. The coordinated deployment of such teams to the affected countries has proven effective and the use of the Centre ensures that whole of government situational awareness and monitoring is achieved.

Procedures are in place for Federal Government agencies to provide warnings, information and support to States during hazard events. Some of the support provided includes mapping support for major bushfire events and other natural disasters and weather and flood related information during and after events.

Procedures are also in place at both the federal and state level for conducting post-disaster reviews. The Federal Government conducts post-event reviews of its response to disaster events. It also contributes information to post-event reviews conducted by State governments, such as the Queensland Floods Commission of Inquiry, the Victorian Bushfires Royal Commission and the Victorian Floods Review and considers recommendations from these reviews when developing national policies.

A nationally consistent approach to the way organisations manage lessons and knowledge is being developed. The outcome of this work will support cross-jurisdictional and agency planning at the strategic, operational and tactical levels.

The private sector also shares lessons learned with government. Critical infrastructure organisations shared their experiences and the challenges they faced during the 2010-11 summer disaster season in maintaining essential service delivery to the community, other business and to governments. The information they provided has proven to be useful to both business and government stakeholders in identifying and understanding the types of issues that inhibited response and recovery activities during that event.

Context & Constraints:

State governments conduct post-event reviews of the response to hazard events within their jurisdictions. Examples include recent fires and floods in the State of Victoria and recent floods in the State of Queensland.

It is important to note that post-event reviews are generally a matter for the government of the State where the event occurred to decide what, if any review will be conducted, and if so, the form it should take. It is also a matter for that State's government to consider and accept the findings and recommendations from it. For example, in response to the Victorian Bushfires Royal Commission Report into the devastating bushfires in the State two years ago, Victoria has made significant progress in implementing the Commission's recommendations. The Federal Government is also implementing a number of recommendations from the Report, both directly and through the Australia-New Zealand Emergency Management Committee, described elsewhere.

State government agencies also exchange relevant information during hazard events and disasters, either through the Federal Government Crisis Coordination Centre, or bilaterally between State police, fire and emergency service organisations.

Section 8: Drivers of Progress

a) Multi-hazard integrated approach to disaster risk reduction and development

Levels of Reliance:

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

Do studies/ reports/ atlases on multi-hazard analyses exist in the country/ for the sub region?: Yes

If yes, are these being applied to development planning/ informing policy?: Yes

Description (Please provide evidence of where, how and who):

Work by the Federal Government continues towards an 'all-hazards' and integrated approach to disaster risk reduction and development. This approach is largely driven through implementation of the National Strategy for Disaster Resilience. The Strategy emphasizes there is no end point to such a process; rather it is a long term continuing process which should pay more dividends over time.

This is reflected in the various activities to build disaster resilience underway; the evolution of the critical infrastructure protection program to one of critical infrastructure resilience; and the closer cooperation and linkages between national security and non-national security elements in the government sector.

Necessarily this work requires close consultation with all stakeholders, particularly the governments of the States and their agencies, as well as the local government sector, private sector and the not-for-profit sector.

The multi-hazard integrated approach to disaster risk reduction and development is exemplified by the research and other work of Geoscience Australia, the Bureau of Meteorology and Critical Infrastructure Program Modeling and Analysis work described in this report.

b) Gender perspectives on risk reduction and recovery adopted and institutionalized

Levels of Reliance:

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

Is gender disaggregated data available and being applied to decision-making for risk reduction and recovery activities?: No

Do gender concerns inform policy and programme conceptualisation and implementation in a meaningful and appropriate way?: Yes

Description (Please provide evidence of where, how and who):

Gender concerns do form part of the considerations of the Standing Council on Police and Emergency Management with its terms of reference requiring that in pursuing its priority issues of national significance, the Council will take into account the cross-cutting issues of, amongst other things, gender equality.

The National Strategy for Disaster Resilience does emphasize that Australian communities are varied in their composition.

Consideration of gender issues are taken into account as appropriate during the policy development and program development processes.

A consideration of gender may also be relevant in the implementation of certain risk reduction and recovery measures adopted by State or local government agencies, for instance the local demographic of the populations of areas may be taken into account in disaster planning.

Initiatives that include a gender perspective are also undertaken at a local level. One specific example involves the South Australian Country Fire Service delivering a series of fire safety workshops to women residing in rural areas of the state of South Australia. The workshops provide women with a safe non-threatening setting to learn new skills to protect their families and livelihoods.

In a regional context, Australia is committed to integrating gender concerns into disaster risk reduction. AusAID's Philippines program funded a publication that compiled stories of women's resilience in disasters. AusAID also contributed funding to the Global Facility for Disaster Reduction and Recovery's Gender Action Plan and guidance notes. In 2012 Australia tripled its funding to SPRINT, a Sexual Reproductive Health (SRH) in Emergencies Initiative that provides policy recommendations and SRH field guidance to national governments. This ensures better mitigation of life-threatening SRH risks before and during an emergency.

c) Capacities for risk reduction and recovery identified and strengthened

Levels of Reliance:

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

Do responsible designated agencies, institutions and offices at the local level have capacities for the enforcement of risk reduction regulations?:
Yes

Are local institutions, village committees, communities, volunteers or urban resident welfare associations properly trained for response?: Yes

Description (Please provide evidence of where, how and who):

The National Strategy for Disaster Resilience emphasizes the need for capacities for risk reduction and recovery to be identified and strengthened. It notes that relevant capacities will exist in a range of government agencies, the private sector and the not-for-profit sector, and decision-makers in all these bodies need to be conversant with the importance of disaster resilience principles.

As discussed throughout this report, capacities for risk reduction and recovery are primarily the responsibility of the government of the relevant jurisdiction. However cooperative arrangements are in place to share knowledge, information and experience, within and between governments, their agencies and in the private and not-for-profit sectors.

Volunteers, properly trained for response, are a crucial component of Australia's capacity to prepare for and respond to emergencies. Capacities are under continuous development including through the provision of nationally consistent training curriculum and delivery of training; support for the peak body representing emergency management volunteers, the Australian Emergency Management Volunteer Forum; and the implementation of the National Action Plan for the Attraction, Support and Retention of Emergency Management Volunteers.

Advances in technologies that support effective emergency management are being achieved. These include Emergency Alert (telephone based emergency warning system), the Triple Zero Kids Challenge Smartphone and Tablet Application, improvements in flood mapping and the increasing use of social media sites by State emergency authorities.

d) Human security and social equity approaches integrated into disaster risk reduction and recovery activities

Levels of Reliance:

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

Do programmes take account of socio-environmental risks to the most vulnerable and marginalised groups?: Yes

Are appropriate social protection measures / safety nets that safeguard against their specific socioeconomic and political vulnerabilities being adequately implemented?: Yes

Description (Please provide evidence of where, how and who):

As stated in the previous Hyogo Protocol progress report, Australia has a comprehensive social security program to support people in times of need, including in the aftermath of disasters. These programs, described in detail elsewhere in this report, were applied in the aftermath of natural disasters such as the Victorian bushfires and Queensland flood disasters in recent years.

Social equity considerations are taken into account in the development and administration of the programs and their application after particular events.

e) Engagement and partnerships with non-governmental actors; civil society, private sector, amongst others, have been fostered at all levels

Levels of Reliance:

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

Are there identified means and sources to convey local and community experience or traditional knowledge in disaster risk reduction?: Yes

If so, are they being integrated within local, sub-national and national disaster risk reduction plans and activities in a meaningful way?: Yes

Description (Please provide evidence of where, how and who):

Engagement and partnerships with non-governmental actors, civil society, and the private sector, is a critical element of the National Strategy for Disaster Resilience. Protecting communities from the impact of disasters is a shared responsibility that cannot be borne by governments alone.

The Federal Government recognizes that non-government and community organizations are at the forefront of strengthening disaster resilience in Australia. For example, businesses including critical infrastructure providers play a fundamental role in supporting the community's resilience to disasters, by understanding the risks they face and ensuring that they are able to continue providing services during or soon after a disaster.

Federal Government emergency management programs, such as Inclusive Emergency Management with Culturally and Linguistically Diverse (CALD) Communities programs focus on building capacity through increased engagement and the building of partnerships with non-government and private multicultural organizations including peak national organisations and CALD community leaders and members.

Two specific examples of engagement and partnerships with non-governmental actors, civil society, and the private sector are the Trusted Information Sharing Network for Critical Infrastructure Resilience (TISN) and the National Volunteer Action Plan.

As noted under Priority for Action 1, Core Indicator 4, the TISN involves both major private sector companies as well as industry groups. The TISN is business-government engagement mechanism and provides a forum in which owners and operators of critical infrastructure can work together on security and resilience issues.

The National Volunteer Strategy also aims to support and recognize the many contributions of volunteers across Australia, including in emergency management and recovery. The National Emergency Management Volunteer Action Plan for the attraction, support and retention of emergency management volunteers has recently been updated, to improve the preparations, coordination and operations of the emergency management volunteer effort. A Regional and Remote Volunteer Leadership Development Program will facilitate the development, delivery and evaluation of an off-campus leadership training and learning module that will be tailored to enhance leadership capability within the volunteer emergency management sector. The course is being rolled out across Australian regional areas during 2012.

Contextual Drivers of Progress

Levels of Reliance:

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

Description (Please provide evidence of where, how and who):

Australia has always had extreme weather events. Demographic changes and the increasing reliance on technology are making communities more vulnerable to such events.

Australian cities are growing, with more people living in rural, regional and peri-urban settings – often areas prone to more frequent and severe disasters. Businesses and communities rely heavily on technology to function.

While the concept of resilience is not new, the endorsement of the National Strategy for Disaster Resilience in February 2011, marked a significant shift in Australian emergency management policy. This shift followed several devastating disasters, as it became clear that the Australian community needed to reframe its thinking and commit to a more sustainable approach.

Applying a resilience based approach is not solely the domain of emergency management agencies. Many of the actions needed to improve Australia's disaster resilience sit well outside the emergency management sector. The Strategy emphasises the principle of shared responsibility between governments, business, communities and individuals. This is distinct from relying on increasing government intervention, which is unsustainable and may actually undermine community resilience. It also acknowledges that achieving a shift to disaster resilience will require long term behavioural change.

Australian governments will continue working together to achieve the goals of the Strategy.

Section 9: Future Outlook

Future Outlook Area 1

The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.

Overall Challenges:

The more effective integration of disaster risk considerations particularly in the areas of disaster prevention, mitigation, preparedness and vulnerability reduction will continue to be a major focus of work under the National Strategy for Disaster Resilience. There will be continued efforts towards effective risk identification and mitigation in cooperation with State governments, and building capability at the local government level.

Implementing the Strategy and building disaster resilience involves a number of significant challenges. These include the range and number of stakeholders, within and across jurisdictions and beyond the emergency management sector.

The availability of the necessary expertise to complete a number of the Strategy's action items is also important, particularly when disaster events are experienced and all efforts to be focused on response and recovery.

Jurisdictions need to balance adequate operational preparedness and recovery while ensuring investment in far-sighted systematic disaster resilience is maintained. While assessing, managing and treating risk is not new to emergency management authorities in Australia, a coherent national resilience based approach to disaster risk continues to break new ground and has wide ranging policy implications. Building disaster resilience is also contingent on the outcomes of work underway in other areas of government, across federal, State and local levels.

Future Outlook Statement:

Continued progress towards implementation of the National Strategy for Disaster Resilience will be maintained, involving gradual cultural change, including managing increasing public expectations and managing an expected increase risk in the severity and frequency of disasters.

Work will continue to develop or refine a number of initiatives to more effectively integrate disaster risk considerations into sustainable development policies, planning and programming.

These include:

- development of a community engagement framework, supported by key disaster resilience messages, to guide emergency management practitioners in effective engagement approaches, thereby assisting the community to better understand risks and use risk

information to inform decision making;

- endorsement and implementation of a land use action plan;
- revision of the National Emergency Risk Assessment Guidelines, which provide the consistent methodology for future use by Australian governments to assess risk for priority hazards;
- the establishment of the National Flood Risk Information Portal to enhance community awareness of flood risk and improve decision making;
- release of the National Emergency Management Volunteer Action Plan 2012; work to improve business continuity planning for small and medium sized businesses; and
- the review of the National Partnership Agreement on Natural Disaster Resilience (which establishes the mechanism through which the Federal Government provides the States with approximately US\$27 million per annum to invest in disaster mitigation projects prioritised in accordance with their respective state-wide natural disaster risk assessments).

Work to progress the Strategy will also continue to take account of other relevant developments, such as the work on climate change adaptation, the report of the Natural Disaster Insurance Review and outcomes of significant commissions of inquiry, such as the Queensland Floods Commission of Inquiry and the Victorian review of the 2010-11 Flood Warnings and Response.

In the international arena, Australia will continue to work to integrate disaster risk reduction into the future sustainable development agenda. This is particularly to maintain progress and protect development investments.

Future Outlook Area 2

The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.

Overall Challenges:

As indicated in the previous progress report, the development and strengthening of institutions, mechanisms and capacities at all levels, that can systematically contribute to building resilience to hazards is a key element of the National Strategy for Disaster Resilience. The complexity, interconnectedness and evolving nature of the threats Australia faces has demanded this shift to a resilience based approach. Individuals need to know and understand their risks and feel empowered to take responsibility for their own decisions and actions, with information and support from appropriate sources.

In the face of a likely escalation in extreme weather events, protecting Australia from the impacts of a range of threats is a shared responsibility. It cannot be borne by any single agency, organisation, or sector in isolation. Rather, an integrated, whole of nation effort is required to make Australia better able to withstand a crisis and have an enhanced ability to recover from impacts.

Strengthening Australia's disaster resilience is not a stand-alone activity that can be achieved in a set timeframe, nor can it be achieved without a joint commitment and concerted effort by all sectors of society. By working in partnership with all levels of government and the non-government sector, we can build on our current strengths and capabilities, better understand the risks we face and allocate our resources accordingly.

This work must continue to recognise trends in society such as movements of population; new areas of residential development, particularly in urban fringe and coastal areas; and an increased reliance on critical infrastructure that supports the provision of essential services to the community.

Work will continue in a number of initiatives arising from the National Strategy for Disaster Resilience to strengthen institutions, mechanisms and capacities at all levels, including development of a national impact assessment framework for natural disasters to enable consistent collection of data and information across jurisdictions and the development of a monitoring and evaluation framework to measure the effectiveness and value-for-money of relief and recovery assistance.

Future Outlook Statement:

Progress to implement the National Strategy for Disaster Resilience, and to look at other initiatives that might be undertaken, will continue.

One of the key capacities, particularly at the community level that can systematically contribute to building resilience to hazards is through the effective use of volunteers. The intensive work already underway to attract, train, and retain the services of volunteers in the emergency management sector will be maintained.

In addition a wide range of emergency management and disaster resilience work is underway in the States and Territories, especially in the areas of risk assessment and communicating risk to decision-makers and communities generally. This includes improved approaches to risk communication and then publishing of risk assessment information; further work to develop and apply risk registers; ongoing implementation of the National Work Program for Flood Mapping; and further action to influence and effect land-use planning and building codes to better consider priority hazards.

In the international arena, there is a continuing responsibility for governments to consider the evidence and drivers of disaster risk in decision-making and planning processes. This will require commitment and risk governance mechanisms across levels of government – through sub-national and district levels – as well as greater encouragement for inter-sectoral coordination, planning and budgeting for disaster risk reduction efforts. Continued commitment to climate change adaptation policies and programming will also be needed.

Future Outlook Area 3

The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.

Overall Challenges:

The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programs in the reconstruction of affected communities is at the core of the National Strategy for Disaster Resilience. Work will continue to incorporate risk reduction approaches into all stages of the design and implementation of the reconstruction of disaster affected communities. Potential escalation in the frequency and magnitude of hazards and our increasing vulnerability to disasters presents Australian governments with unprecedented calls on their

resources and expertise. Government's desire to help communities in need, and pressure to help those affected may be creating unrealistic expectations and unsustainable dependencies and pressure on available resources. Work will continue towards empowering communities to take shared responsibility for coping with disasters.

The balance between expenditure towards disaster mitigation and recovery will need continuing attention. It is important to ensure that Federal Government financial support to assist in the reconstruction of disaster affected communities does not lead to reduced efforts to prepare for disasters by State governments or by communities and individuals.

Future Outlook Statement:

Australia is continuing to reform its approach to managing disaster risk to improve the resilience of individuals, communities, businesses and countries in our region.

Such resilience will enable communities to adapt to change, reduce their exposure to risks, and allow them to bounce back from disasters. State governments have primary responsibility for managing domestic disaster risk. The Federal Government will continue to provide national leadership, funding and coordination for State governments, so the nation can better manage disaster risks, and ensure the costs of disasters are shared equitably. Work will continue in a number of risk related initiatives arising from the National Strategy for Disaster Resilience including the completion of disaster risk assessments of priority hazards by all states and territories, publication of relevant risk assessment information and the use of these assessments in informing key decisions and planning. As an example, in the flood risk arena future work includes the development of the capability to publish more, and improved, flood risk mapping and modeling data on the National Flood Risk Information Portal for community and business use, agreement on associated guidelines, and ongoing implementation of the national Work program on Flood Mapping and reform of recovery arrangements.

With a new standard for emergency messaging now available for use around the country with the release of the Australian Government standard for the Common Alerting Protocol - Australia Profile (CAP-AU-STD), further work will be undertaken to promote its use by warning agencies. Work is also required on measuring the effectiveness of warnings and warning systems.

Future Outlook Area 4

The United Nations General Assembly Resolution 66/199, requested the development of a post-2015 framework for disaster risk reduction. A first outline will be developed for the next Global Platform in 2013, and a draft should be finalized towards the end of 2014 to be ready for consideration and adoption at the World Conference on Disaster Reduction in 2015

Please identify what you would consider to be the single most important element of the post-2015 Framework on Disaster Risk Reduction (2015-2025).:

A successor to the Hyogo Framework for Action should underpin:

- At the domestic level, the identification and communication of risk to relevant stakeholders and the integration of disaster risk reduction into the decision-making processes across all levels and areas of governments, business, the non-government sector and communities.

- At the regional level, the integration into the mainstream development agenda (including an actionable framework to ensure that targeted disaster risk reduction investments are not lost in the broader sustainable development agenda; consideration of the evidence and drivers of disaster risk in decision-making and planning processes; and appropriate high level targets, which would allow countries to then set more detailed targets specific to their development context, increasing ownership of these goals.)

Section 10: Stakeholders

Organizations, departments, and institutions that have contributed to the report

Organization	Type	Focal Point
Attorney-General's Department	Gov	Chris Collett
AusAID	Gov	
Bureau of Meteorology	Gov	
Department of Climate Change and Energy Efficiency	Gov	
Department of Families, Housing, Community Services and Indigenous Affairs	Gov	
Department of Foreign Affairs and Trade	Gov	
Department of Health and Ageing	Gov	
Department of Sustainability, Environment, Water, Population and Communities	Gov	
Department of the Prime Minister and Cabinet	Gov	
Geoscience Australia	Gov	
Geoscience Australia	Gov	