Sweden

National progress report on the implementation of the Hyogo Framework for Action (2009-2011) - interim

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Outcomes for 2007-2009

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.

Outcomes:
Progress has been made towards increasing the awareness at all levels of the need for sustainable development, disaster risk reduction and climate adaptation policies. The Swedish Government had assigned several governmental commissions to investigate the consequences of natural hazards and disasters and to implement EU directives. Many examples of good practices have been identified and made available for use at the county and local level. More interaction with academia, the private sector and NGOs should be undertaken to capture the work they are doing with sustainable development, especially in regard to disaster prevention, mitigation, preparedness and vulnerability reduction.

The Swedish Government has a national strategy for sustainable development. The strategy covers economic, social and environmental aspects and sets a vision for sustainable development in a long-term perspective. Furthermore, the strategy states that sustainable development in Sweden can only be achieved in the context of global and regional cooperation. Sustainable development must be integrated into all policies. Additional efforts are needed to safeguard critical resources that form the basis for sustainable development in a long-term perspective. Four strategic challenges are in focus: building sustainable communities, encouraging good health for all residents, meeting the demographic challenge and promoting sustainable growth. In 2009 a sustainable energy and climate policy for the environment, competitiveness and long-term stability was adopted.

Sweden’s parliament has decided on a policy for global development. It describes how policies developed by the different Ministries in Sweden should work together for sustainable development and poverty reduction in a global perspective. It also is the framework for development policies and activities of the Swedish International Development Cooperation Agency’s (Sida) humanitarian work throughout the world

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.

Outcomes:
Agencies within the Swedish National Platform for DRR have promoted increased research and methods to assist municipalities to build resilience to disasters. New publications have been made available for use at the county and local level. Swedish municipalities are more active in their work to produce risk and vulnerability analyses.

New regulations on risk and vulnerability assessments were written in 2010 and guidelines for municipal risk management are under development. Guidance, training and numerous seminars and workshops have been conducted in order to support municipalities and provincial governments in identifying specific risks such as flooding and to investigate the impacts of climate change.

The Swedish government has increased the financing of risk mapping endeavours to assist municipalities in familiarising themselves with their risk and to take actions to prevent and mitigate them.

Financial assistance is granted for various methods to reduce vulnerability especially for landslides and flooding.

Sweden promotes disaster prevention at the European Union level, through training and projects in cooperation withregional organisations such as the Disaster Preparedness and Prevention Initiative (DPPI) in Southeastern Europe. Sweden also assists in the strengthening of institutions, mechanisms and capacities with countries in Africa, Asia, and the Americas through humanitarian aid capacity development projects and educational programmes. Sweden continues to develop and teach various national and international training courses related to DRR. Educational programs at the university level have increased the knowledge and capabilities within Sweden and for international partners. A new institute for natural disaster science has been established.

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.

Outcomes:
Government agencies continue to work towards the systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes for affected communities. Over and above the normal level of emergency preparedness at the local and county level, additional programmes aimed at the individual's awareness and ability to react during and after an emergency have been established. Efforts continue towards enhancement of strategic planning at all levels to promote resilience to disasters after events but even in the normal course of city planning.

Since the last review process the Swedish Natural Hazards Information System has been enhanced with updated information about disasters with specific details about the events including their causes and lessons learned.

Strategic goals

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:
The Swedish national strategy for disaster risk reduction involves dividing the responsibility for DRR between different agencies that specialize in particular aspects and provide guidance for the municipalities. In this way Sweden disaster risk can be managed throughout the entire spectrum including prevention, mitigation, vulnerability reduction, sustainable development, disaster preparedness, and response. Each agency and its associated government department, develops appropriate policies and programs. The Swedish Government determines which assignments each of the agencies in the Swedish national platform will receive.

The Swedish Government allocated 300 million SEK for climate adaptation between 2009 and 2011 and the budget proposal for 2011 noted that preventive measures against natural disasters need to be

prioritized, strengthened and coordinated. The Government has adopted several measures for climate adaptation and DRR such as: The Swedish Geotechnical Institute (SGI) has a mandate to improve the state of knowledge in terms of landslide risk along the Göta River. Thirty-five million SEK per year will be allotted for this work during 2009 to 2011.The County Administrative Boards have an overall regional coordination responsibility for climate adaptation and a budget of 25 million per year for 2009 -2011.
• The Lantmäteriet: The Mapping, Cadastral and Land Registration Authority will have 40 million per year from 2009 to 2011 to develop a new elevation database to improve the knowledge base for assessing risks and planning actions that minimize the risk of landslides.
• The Planning and Building Act that was reformed in 2008 requires municipalities to take into consideration disaster risks such as flooding and erosion. By 2011 the legal framework will provide further protection against natural disasters.
• MSB's allocation for grants has increased by 15 million SEK for a total of 40 million SEK over the coming three years. Grants are awarded to municipalities that seek financial assistance for prevention measures against natural disasters.
• Special funds are available from the budget for implementing the EU Flood Directive and for mapping natural risks. New investigations will be made in areas where there is a high risk of flooding to identify the risks and responsibilities for action.
• Extra financing will be made available in 2011 and beyond for cross-sector research related to natural disasters, urban planning and technical infrastructure.

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:
Institutions, mechanisms and capacities at all levels continue to develop and have been strengthened by a new government agency created in January 2009 called the Swedish Civil Contingencies Agency (MSB). It replaced the former Swedish Rescue Services Agency, the Swedish Emergency Management Agency and the Swedish National Board of Psychological Defence. The new agency has a greater capability to work with United Nations and European Union issues related to all aspects of the disaster management cycle because of increased resources and skills to meet the demands. The HFA Focal Point and the secretariat for the Swedish National Platform for Disaster Risk Reduction are located at MSB.

The principle of responsibility is fundamental to Swedish crisis management. The authority that is responsible for an operation during normal circumstances will also be responsible for that operation during a crisis. For serious crises that affect large parts of society, crisis management at the central government level may need to be coordinated. The MSB supports this coordination by providing methods and networks for the competent authorities during extraordinary events. The MSB will also support the Swedish Government Offices with documentation and information in the event of serious crises or disasters. The MSB promotes coordinated decision-making between competent actors during a crisis. The MSB also provides methods for crisis communication and the coordination of official information to the public. For this purpose the web site www.krisinformation.se has been established. One important task is to prevent unnecessary duplication and avoid contradictory information.

Another government agency came into being in 2010 called the Swedish Transport Administration. It replaced the former Railway Administration and the Road Administration. This new agency is represented in the Swedish national platform and works actively to assure risk reduction in building of roads and railways as well as protection of critical infrastructure against disasters.

The agency network for the national platform writtes an action plan and yearly activities both which are

approved by the platform's steering group. The Director Generals for the agencies comprise the national platform's steering group and have agreed to become more active with international activities related to DRR and climate change adaptation. Humanitarian efforts continue to be strong and new DRR projects sponsored by Sida, the International Development Cooperation Agency and the European Union have been undertaken.

At the local level MSB has provided support to municipalities by providing guidelines for preparing their risk and vulnerability analyses, by collecting and analysing data and by educating rescue operators for both national and international operations and by analysing lessons learned from disasters. Sweden is also active in promoting disaster prevention at the European Union level.

According to new instructions from the government, the Swedish Geotechnical Institute has taken on the task of supporting counties and municipalities by reviewing geotechnical safety issues relevant to city planning.

Regionally compiled climate information is provided by the Swedish Meteorological and Hydrological Institute and targeted for decision-makers who can implement risk reducing measures.

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:
Since 2008, no Swedish communities have needed to be reconstructed due to disasters. Municipalities are continually improving their ability to implement emergency preparedness, response and recovery programmes. Sweden has been increasingly active with strategic planning for protection of critical infrastructures. Several agencies work together providing information to municipalities on how to adapt to a changing climate. Climate adaptation is integrated into an increasing number of ways into the city planning process.

During major disasters the government can support municipalities with specific extra resources. These resources can also be available for support to other countries in the European Union and worldwide. The support can be requested via the MSB's duty officer.

The MSB supports the establishment of local river coordination groups working as forums for collaboration and coordination of concerned stakeholders in the drainage basin area of a river. These forums increase knowledge about which coordinated actions will be taken and who is responsible for each.

Every year MSB monitors the development of the spring flood by collating details from the County Administrative Boards about water discharges. This information is compiled and submitted on a weekly basis during the spring season to the Ministry of Defence. In this way early signals are received about the need for materiel and other resources in the event of high water discharges and flooding. The development of other high water discharges is also monitored. Several County Administrative Boards and municipalities have decided limitations and safety levels for building activities in flood prone areas.

A municipality that has incurred extensive costs during an emergency operation has the right to claim compensation from the state (MSB) for that amount of the cost that exceeds the municipality's insurance deductable. In order to avoid accruing damages from natural events, several municipalities are implementing action plans. Karlstad Municipality is participating in the UNISDR Making Cities Resilient

campaign and shares information internationally about the city's flood implementation programme. Many other cities and towns in Sweden work in a way that meets the standard of the UNISDR programme. Therefore, the Swedish National Platform for Disaster Risk Reduction plans to continue encouraging municipalities to participate in the UNISDR international campaigns for building resilience to disasters at the local level.

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

Is DRR included in development plans and strategies?
Yes

Means of verification:

* Yes: National development plan

* No: Sector strategies and plans

* Yes: Climate change policy and strategy

* Yes: Poverty reduction strategy papers

* No: Common Country Assessments (CCA)/ UN Development Assistance Framework (UNDAF)

Description:
The Swedish Civil Protection Act (2003:778) provides for equal, satisfactory and comprehensive civil protection for the whole country with responsibility given to local authorities. The law promotes protection of life, health, property and the environment from all types of incidents, accidents, emergencies, crises and disasters.

According to the national law regarding extraordinary events, the County Administrative Boards have a responsibility for DRR in their geographical regions. The County Administrative Boards is responsible for acting as a coordinator with regards to DRR within the geographical area. Twenty-one agencies operate under the legal requirements and responsibilities for crisis preparedness. The County Administrative Boards is responsible for coordination before, during and after a crisis within the geographical area. Each County Administrative Board is also responsible for performing a regional risk and vulnerability assessment each year. The County Administrative Boards are responsible for assuring that national priorities for city planning are carried out at the local level.

The Geological Survey of Sweden (SGU) is responsible for assuring good quality groundwater as one of

the sixteen environmental quality objectives put forth by the Swedish Parliament. Agencies work to assure that groundwater is safe, that there is a sustainable supply of drinking water and sustain viable habitats for plants and animals in lakes and watercourses. The Swedish Food Administration works together with SGU to assure the good quality and distribution of the drinking water even during and after a disaster.

As for the availability of energy during and after a disaster, the Energy Agency has analyzed the vulnerabilities of the energy supply. This is the basis for emergency exercises, information and other tools with which the Swedish Energy Agency has or will develop. However, the Swedish Energy Agency does not have a national development plan for the energy sector (public and private) that assures resilience to disasters.

The Mapping, Cadastral and Land Registration Authority of Sweden is the national coordinator for geodata and implementation of the EU INSPIRE directive. This agency has developed a geodata portal in response to this directive and the portal will ready to display data in 2011. At that time there will be signed agreements for sharing geodata between public authorities The Mapping, Cadastral and Land Registration Authority of Sweden coordinates both national and a Nordic agency network on spatial information for risk and crisis management.

SMHI is responsible for the national weather warning system (rain, snow fall, windstorms, thunder, fire risk, high river discharge, high/low sea level along the coast)

It is clearly stated in the laws and regulations for the health sector that they must manage a crisis or disaster. The laws have been clarified and broken down in the form of regulations and guidelines, particularly targeted to health care. Significant success in this work has been achieved.

Context & Constraints:
No constraints have been identified.

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

Is there a specific allocation of budget for DRR in the national budget?
No

Means of verification:

* N/A % allocated from national budget

* 0 USD allocated from overseas development assistance fund

* 0 USD allocated to hazard proofing sectoral development investments (e.g transport, agriculture, infrastructure)

* 0 USD allocated to stand alone DRR investments (e.g. DRR institutions, risk assessments, early warning systems)

* 0 USD allocated to disaster proofing post disaster reconstruction

Description:
There is no national budget specifically earmarked for DRR. However, many national agencies, primarily those included in the Swedish National Platform for DRR, have some funds allocated to activities that can be classified as DRR.

There are resources for health and welfare both at the national and county level that assure that laws are followed and that the necessary plans are written and implemented in hospitals, schools etc. Significant progress has been achieved in this work, although differences exist between regions. Each county has a special budget allocated for disaster prevention. The grant is part of each county's total budget for work on emergency preparedness. County Councils maintain their own budget and priorities for emergency management efforts.

Only if local resources are insufficient, is the management of the disaster taken over at the county or national level. It is, therefore, the County Councils themselves that are responsible for prevention and information. In a crisis, the functions of society as much as possible, work the same way as under normal conditions. The player that normally has responsibility for a matter also has responsibility during a crisis. In a natural disaster and other crises the County Administrative Board holds formal responsibility within the sector or sectors that may be affected by the event, for example, health services, protection against infection, social services and health.

The County Administrative Boards in case of emergency take the necessary measures to address the consequences of the event, interact with and support the County Council and other government departments and to cooperate with the national authority, MSB. As an expert authority it is also the responsibility of the County Administrative Boards to support other counties before, during and after a natural disaster. The authority monitors international events throughout the world, coordinating communications in the county, providing expertise, guidance, and recommendations as well as evaluating efforts to strengthen crisis management capacity. At the national level the MSB supports and coordinates, when needed, the actions taken by local, regional and national authorities during a serious crisis or disaster.

Within the national budget, funds are allocated to the County Administrative Boards for emergency preparedness according to the appropriations bill 2:4. Financing is also allocated to the municipalities through an agreement between the Swedish Civil Contingencies Agency (MSB) and the Swedish Association of Local Authorities and Regions (SKL).

This appropriation is intended primarily for short-term initiatives to stimulate risk-reducing activities measures to increase the ability to manage crises, for example, emergency preparedness. Secondarily, it can be used to improve the measures taken to increase resilience to disasters.

Context & Constraints:
There are economic constraints that limit the amount of money that can be allocated for disaster risk reduction activities. Implementation of the EU Floods Directive requires cooperation across borders. This is both a challenge and an opportunity.

Another challenge is also to incorporate climate adaptation issues into the work of the Swedish National Platform for DRR. However, it is clearly stated by the government that it is essential that the work of the national platform continues, especially in consideration to a changing climate and the need for a coordinated support to the County Administrative Boards and municipalities. It is also a challenge is to verify that actions taken to adapt to climate change are sufficient and cost effective.

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

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

Means of verification:

* Yes: Legislation

* Yes: Budget allocations for DRR to local government

Description:
According to Civil Protection Act municipalities need to write local action plans for preparing for disasters but also identifying, assessing and mitigating risks. Municipalities and County Councils shall also make risk and vulnerability analysis and assess their ability to cope with disasters and crisis in accordance to the act on Municipal and County Council Measures Prior to and during Extraordinary Events in Peacetime and during Periods of Heightened Alert (2006:544)

As directed in the Swedish Planning and Building Act municipalities are responsible for taking into consideration climate change adaptation when planning. The authority and resources are delegated to local levels through legislation and budget allocations. The budget for these plans and activities is decided by the City Council. The County Councils also have budgets for civil protection, rescue services and disaster management at local level.

Context & Constraints:
Despite the fact that there is a system for governmental supervision, it is a challenge to assure that all municipalities in Sweden identify their risks and vulnerabilities and adequate measures are taken towards prevention, mitigation and preparedness.

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

Are civil society organisations , national planning institutions, key economic and development sector organisations represented in the national platform?
No

Means of verification:

* 0 civil society members (specify absolute number)

* 16 sectoral organisations (specify absolute number)

* 0 women’s organisations participating in national platform (specify absolute number)

Description:
The platform was established in 2007 and has a well-functioning HFA Focal Point and secretariat, procedures and governing documents. The agency network meets about 5 times per year to discuss, agree upon and disseminate the results of the various platform activities. There is a steering group for the Swedish National Platform for Disaster Risk Reduction that is made up of the Director Generals of the 16 member agencies. This decision-making body meets once each year to approve the working plan and national and international activities as well as other matters relating to the goals of the platform. Among the 16 members there are representatives from governmental agencies, including representative from the County Administrative Boards and from the Swedish Association of Local Authorities and Regions (SKL).

Awareness of the national platform and its responsibilities and activities should be increased outside the sphere of the platform but also within the individual agencies that make up the platform.

Context & Constraints:
The government and the leadership of the participating authorities must identify the platform as an important forum for interaction and work on disaster risk reduction. Resources and time should be allowed for the active participation of each of the authorities in the platform. Lack of continuity regarding participation in the agency network meetings and the absence of special earmarked funds and time for participation in workshops and activities are limiting factors. The representative and his or her alternate should be a senior level appointee. Cooperation between the national platform and universities, colleges, businesses and NGOs should be discussed and recommendations made regarding their interaction with the national platform.

A survey was made by the national platform’s secretariat during which time the following constraints were identified. Representation from the agencies in the national platform does not currently include all the players involved in the issues that the platform should handle. The authorities should perform more tasks with better quality and less money than if each authority undertakes the activity. However, there is no evidence that this is the case.

There must be a better dialogue with management within each agency and consensus at the management level about the goals and activities of the platform. There should be more external information about the activities of the Swedish National Platform for DRR. More resources (both personnel time and financing) should be available for the work of the platform.

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

Is there a national multi-hazard risk assessment available to inform planning and development

decisions?
Yes

Means of verification:

* Yes: Multi-hazard risk assessment

* N/A % of schools and hospitals assessed

* N/A schools not safe from disasters (specify absolute number)

* Yes: Gender disaggregated vulnerability and capacity assessments

* No: Agreed national standards for multi hazard risk assessments

Description:
Schools and hospitals are not assessed individually and, therefore, there is no procent provided under "means of verification" above.

The County Administrative Boards have worked systematically to help municipalities identify risks and vulnerability. Significant progress has been achieved already, although most counties have not yet reached the desired stage in their risk and vulnerability work. Nevertheless, there is a large consensus and a strong commitment within the health care sector regarding the issue. Even experience from past natural disasters are evaluated and taken into account.

The County Administrative Boards include water authorities that have a database that can be used for national and local risk assessments. This data includes physical, chemical, and biological data from observations, inventories of contaminated land as well as inventories of dams, environmentally hazardous activities conducted and regulated by permit, and documentation of experience from crisis events.

The County Administrative Boards perform regional risk and vulnerability analyses that can be used as a basis for their own and other players' prevention, mitigation and emergency preparedness measures. On the local level the risk and vulnerability analysis are required in accordance with law.

Inventory and mapping of various natural disasters, such as landslide, slope failure, flooding is accomplished. Inventories of beach erosion along coasts and rivers are made including a large project to assess stability in the Göta River which runs through Gothenburg. The Geological Survey of Sweden (SGU) maintains a database containing landslides, ravines, steep sandy river banks and active erosion. In addition the Swedish Geotechnical Insitute (SGI and MSB have databases with similar information). SGU coordinates a national groundwater monitoring network.

A national government investigation resulted in a comprehensive report called “Sweden facing climate change – threats and opportunities”. This and previous information campaigns, have contributed to an increased interest in climate change adaptation at the local level. The Swedish national platform coordinates the tasks related to climate adaption that have been assigned to member agencies by the government. Planning is in progress at the national level for assessing and maintaining good water supplies in a changing climate. These planning efforts are support adaptation at local and regional level.

Sweden has several systems for informing and alerting the public. The two most important ones are the IPA system (Important Public Announcement), and in regions with a nuclear power plant, a system for nuclear alerts. MSB has developed and supports a digital radio communications system used by public

policy, public security any public health entities. The MSB is also the focal point for co-ordinating Swedish national information security which includes the preparedness of media contributions to societal safety.

There is a legal requirement for various systematic security measures such as fire safety, medical care, and preparedness.

Vulnerable areas and systems have been identified where specific attention is needed. These include but are not limited to the following: MSB that is coordinating interagency work to develop a national strategy for protection of critical infrastructure. The Swedish Government will strengthen preparedness for future severe winter storms by examining ice storm risk scenarios. An analysis and assessment is in progress to determine the impacts of a flood in Sweden's third largest lake, Mälaren.

Context & Constraints:
There is an absence of responsibility and resources for inventorying erosion along coasts and rivers as is done for landslide, slope failure and flood prone areas.

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

Are disaster losses systematically reported, monitored and analysed?
Yes

Means of verification:

* Yes: Disaster loss database

* Yes: Reports generated and used in planning

Description:
All municipalities report annually to the MSB regarding emergencies that have occurred. Statistics are compiled for each municipality in the country and comparisons are made in the form of graphs and tables. The compilation of this data comprises the national emergency services statistics which is published every year. There is also a database where information about injuries is registered. The Civil Protection Act requires that investigations are conducted after emergencies. As a result of these investigations there is data about the types and causes of accidents and emergencies as well as how they can be handled. In addition the MSB has developed and updates a national natural hazards database which can be accessed from the UNISDR's Prevention Web site. The Swedish Geotechnical Institute maintains a landslide database.

The Swedish Forest Agency has decided on a national standard procedure for preparedness for events that can cause extensive damage to forests. This agency has also developed a standard procedure for an indicator system designed to capture trends in biological injury in the forest. The MSB has developed a national information system called, Fire risk - Forest and Land, for municipal fire brigades and County Administrative Boards. This is used to assess the risk of vegetation fires. The system is available on the Internet. It contains, for example, information about how the weather can affect the risk level for vegetation fires. The system provides basic data for prevention work and can also assist in

decision-making during emergency response operations.

The Swedish Meteorological and Hydrological Institute collects observational data and climate model data nationally and is responsible for quality control. The Mapping, Cadastral and Land Registration Authority of Sweden, has established a national database of satellite data called Saccess. It provides data for non-commercial use at no cost and contains historical data sets from the 1970s, 1980s, and the millennium year 2005 as well as annual comprehensive national data sets from 2007. This government agency has also built up a new national elevation database with output from laser scanning, starting in 2009. The agency also participates in European Union projects for risk and crisis management, most recently in the SAFER project, starting in 2009.

Context & Constraints:
Limited resources but not fully adequate are available for monitoring systems, archives, and dissemination of data.

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

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

Means of verification:

* Yes: Early warnings acted on effectively

* Yes: Local level preparedness

* Yes: Communication systems and protocols

* Yes: Active involvement of media in early warning dissemination

Description:
In the area of local-level preparedness, there is ongoing education, exercises and information provided for the regional and local level, contributing to enhanced crisis management and prevention capabilities.

At the national level the ability to detect unusual pathogens in food and drinking water linked to climate change (e.g. floods) and antagonistic threats is under development. There is also a systematic effort to identify and evaluate risks, development of early warning systems, etc. to new hazards that can affect drinking water and foods. Conferences on the local, county and national level for early warning are carried out in light of the increased risk of natural disasters. Several large drinking water producers have warning systems upstream from water supplies, and can send alerts when there are changes in water quality

In the field of early warning work is in progress at the national level for building the capacity to detect unusual pathogens in drinking water. Also there is a systematic effort to identify and evaluate risks and develop early warning systems for new hazards that can affect drinking water and foods. There are

manuals and guides produced including tools and techniques, for developing risk and vulnerability analysis, etc. The products from the National Food Administration, branch organisations, and universities have all developed different kind of tools and methodologies.

SMHI provides a regular service of early warnings of hazardous meteorological, hydrological and oceanographic events. The warnings are distributed to the general public through radio and web pages, and further communicated to all other organisations and parties that need the warnings.

MSB is responsible for assuring that the municipalities have a VMA system with alarms to alert the public in case of a major emergency. The media has requirements for alerting the public to what they need to do for emergency preparedness.

Context & Constraints:
It is a challenge to assure that the public reacts as they should when a catastrophe or crisis arises.

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

Does your country participate in regional or sub-regional DRR programmes or projects?
Yes

Means of verification:

* Yes: Programmes and projects addressing trans-boundary issues

* Yes: Regional and sub-regional strategies and frameworks

* Yes: Regional or sub-regional monitoring and reporting mechanisms

* Yes: Action plans addressing trans-boundary issues

Description:
The County Administrative Boards are working for regional cooperation on risk reduction through regular meetings between the different counties, as well as through sector-specific cooperation, for example within water quality and prevention of floods.

The Haga agreement written in 2009 increases cross-border cooperation within the emergency management field, and this will also affect cooperation in the field of drinking water supplies. Today there is some interest in collaboration in emergency management and drinking water in Norway, Denmark and Finland. (SLV)

In 2010 the Mapping, Cadastral and Land Registration Authority of Sweden together with a Nordic network for geodata for risk and crisis management initiated a process aimed at facilitating access to geodata across borders in the Nordic countries. There are cross-border projects with Finland and Norway involving the use of geo-information for natural disasters.

The County Administrative Boards collaborates with municipalities in innovative ways such as the

multi-sector river groups to assure effective river basin water management.

Municipalities and County Administrative Boards are the primary target groups for the Swedish Energy Agency's information about risks to energy security and advice on how interruptions can be handled. The Swedish Energy Agency published a paper on thermal breaks, which have been distributed widely. The annual risk and vulnerability assessments analyse cross-border problems in energy supply. The import of oil products, natural gas and bio-energy is important for the energy system and this network is physically connected across borders.

SGU is participating in a European Union pilot project called Marsumo. It supports the policy-making process of the EU to create a common information sharing environment for the EU maritime domain.

There is a Nordic rescue agreement, international Barents Rescue drills, and a Baltic Sea Strategy (which has been agreed upon by all 10 countries with a border along the Baltic Sea).

Context & Constraints:
Not all sectors are involved in such trans-boundary cooperation as described above. Some sectors in Sweden are better and more active than others.

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

Is there a national disaster information system publicly available?
Yes

Means of verification:

* Yes: Web page of national disaster information system

* Yes: Established mechanisms for accessing DRR information

Description:
A new Internet site has been developed by the MSB to provide information about risks that are caused by humans, mainly in the home and the leisure environment (www.dinsakerhet.se). The MSB’s Internet site has a page about the individual’s safety and security including DRR. Individuals can find out what they can do, where to turn for help, how to react to different events (before, during, after) and what areas in Sweden are most vulnerable or are at high risk.

Information that is developed by the Swedish Delegation for Landslides and the Government Network on Beach Erosion both led by the Swedish Geotechnical Institute is available to the public. The public can gain access to landslide or flood risk maps on MSB’s web site.

The County Administrative Boards and the municipalities have the responsibility to keep both the public and media informed. The County Administrative Boards maintain a well-developed system of information called the WIS. This is a national, Internet-based information system, created to facilitate information sharing between entities working with one or more phases of emergency management.

The National Food Administration has for over ten years informed, practiced, and supported risk and vulnerability analysis, etc. to enhance local and regional knowledge, skills and abilities.

The Swedish Natural Hazards Information System provides historical data since 1950 for major natural disasters that have occurred in Sweden. Documents have been gathered by public authorities and organizations. MSB has made a compilation of data about the causes of accidents and events. Prevention measures, the impacts of the disaster and lessons learned are also incorporated where this information is available. The database is on the Internet and is updated annually. Some of the data is in English and can be assess through UNISDR's PreventionWeb.

The Swedish Meteorological and Hydrological Institute (SMHI) issues public warnings and information about climate and weather on the website. MSB operates together with SMHI to produce and maintain the national forecast service for forest and vegetation fires.

Several agencies within the Swedish National Platform for DRR are working on climate issues, including the Swedish National Board of Housing, Building and Planning, the Swedish Civil Contingencies Agency (MSB), the Swedish Meteorological and Hydrological Institute (SMHI) and the Swedish Geotechnical Institute (SGI). These provide a research and information base for climate adaptation work, such as climate analysis, flood risk mapping, slope stability mapping, beach erosion, as well as guidelines for risk and vulnerability assessments. They also decide on the information that will be added to the Swedish climate adaptation portal. The purpose of the portal is to disseminate knowledge and information on climate adaptation. The portal maintains information about how climate change affects different sectors of society and examples of adaptation measures.

The RIB - Integrated Decision Support System is a system, created and maintained by the MSB for prevention and emergency management, includes an extensive digital library, a chemical database with dispersion models, risk management tools and a command and control system.MSB received a government mandate to establish a crisis information web site www.krisinformation.se to coordinate national information and to link to all sectors of society in the field of crisis management. The Mapping, Cadastral and Land Registration Authority of Sweden maintains a geodata portal as a gateway to web-based geo-information and services. The portal is developed over a period of time and is now in its first version. The geodata portal contains metadata that makes it possible to search, find, view and download geographical data from different sources and are physically stored in different environments. The portal will also become the main node for Sweden's cooperation in Europe under the EU INSPIRE directive.

Context & Constraints:
National and county authorities provide much information about risk, however this information should be coordinated in a better way to make it easier for the public to learn and understand what they can do. The level of useful information, facts, tools etc. for DRR for local planning vary a lot. Circumstances are not the same across Sweden, so it is important to note the special conditions that exist in different geographical areas. Information to the public needs to become much more detailed. It also should be easier to find, and the national and regional level should more actively assist the local level in balancing and weighing together the facts. It is often difficult to know how to make priorities and which level to plan for.

There are still many details that need to be worked out regarding the production and spread of disaster

information including adequate engagement by decision-makers.

The Swedish Natural Hazards Information System can be improved. More Information should be made available and recorded in the system. Government authorities should help to strengthen the capacity to absorb information about risks and to act appropriately and timely.

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

Is DRR included in the national educational curriculum?
No

Means of verification:

* No: Primary school curriculum

* No: Secondary school curriculum

* Yes: University curriculum

* Yes: Professional DRR education programmes

Description:
Training at all levels, as indicated above, is a critical instrument in order to enhance a society's coordinated capacity to respond to accidents and crisis. The Swedish Civil Contingencies Agency (MSB) has receive the task from the government to ensure that training for crisis/emergency/disaster preparedness is available to all relevant actors within the national crisis management system. The Mapping, Cadastral and Land Registration Authority of Sweden offers educational courses to define the need for geographic data during a crisis.

The MSB publishes and distributes basic educational materials about natural disasters for children from ages of 6-11 and more information for children between the ages of 12-19. For those children younger than 12 years old, it is the parents' responsibility to ensure that children have the correct information about large scale risks and disasters. There is no law or policy in Sweden that requires that disaster risk reduction issues should be included in the curriculum of all education at any level. However, there are specific university and higher education programs in which these issues are included. At universities in Sweden there are courses in risk management and a few programs at the master level. There is collaboration between Lund University in Sweden and the University of Copenhagen in Denmark whereby students can earn a Master's Degree in Disaster Risk Reduction. There is also a 2 year course at Karlstad University. In primary and secondary schools risks are occasionally discussed in geography classes, but the DRR is not generally part of the curriculum.

The Swedish National Platform for DRR has added an activity to its work plan to conduct an inventory of the courses and programs in the country related to DRR.

In addition to the national mandate, MSB has a broad international mandate and responds to calls for assistance within the fields of humanitarian operations, civilian crisis management, early recovery,

disaster risk reduction, and mine action under the umbrellas of the EU, UN as well as other organisations. In this regard, MSB provides pre-deployment training courses from a basic level up to highly specialised level, within all of the fields listed above.

Context & Constraints:
The main challenges for MSB within all fields of training at all levels, includes:
1) Strengthening the tools available to conduct needs assessments
2)´Targeting the correct audience
3) Strengthening of the evaluation methods to ensure that quality training is delivered, whether conducted by MSB or by other actors.

An analysis of society's needs versus available training also should to be undertaken, as there may be areas where Sweden needs to develop new course curricula to strengthen society's ability to respond to crises.

Education directed at younger ages has not been a priority for schools since the probability of life-threatening disasters in Sweden is low. However, it is increasingly common for Swedish families to travel to other countries on holiday. Therefore, there is a need to expand the teaching of DRR and including information about risk in other parts of the world.

Since it is not self-evident that disaster information is included in school curriculum, MSB will continue to develop and offer interesting teaching materials that can motivate teachers to introduce risk management issues.

Priority for action 3: Core indicator 3

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

Level of Progress achieved:
3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

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

* Yes: Research outputs, products or studies

* Yes: Research programmes and projects

* Yes: Studies on the economic costs and benefits of DRR

Description:
National authorities such as MSB, the Swedish Geotechnical Institute and the Swedish Transport Administration finance and decide on appropriate research projects related to natural disasters, climate adaptation and DRR. MSB partially finances the Center for Climate and Safety at the University of Karlstad. A decision has been made to establish the Centre for Natural Disaster Science in Uppsala, Sweden.

There are some universities and research institutes involved in research or at least have research expertise in the area of natural disasters, for example, the universities of Uppsala, Karlstad, Stockholm and Lund. Research is also conducted by scientists employed at the Swedish Geotechnical Institute, the Swedish Meteorological and Hydrological Institute and the Swedish Environmental Research Institute,

IVL.

The Swedish International Development Cooperation Agency (Sida) funds research on natural disasters. Sida has also supported regional research cooperation for the prevention of natural disasters in Central America.

Context & Constraints:
More knowledge about ongoing research throughout the country is needed. The Swedish National Platform for DRR needs to identify areas within DRR where there are gaps in the knowledge base.

Priority 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

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

Means of verification:

* No: Public education campaigns.

* Yes: Training of local government

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

Description:
The County Administrative Boards' responsibility towards the public with regards to awareness and resilience in case of emergency is regulated by law and regulations. The general population shall be given information on the ability of authorities to act in an emergency, and on the way that warnings and information will be given in case of serious accidents.

Several training courses and seminars occur on a regular basis including an annual coastal conference on erosion and flooding, seminars on landslide and erosion (2008) and floods (2010). Seminars on climate adaptation have been arranged by the Swedish Geotechnical Institute (SGI) and the Swedish Meteorological and Hydrological Institute (SMHI). The Geological Survey of Sweden and MSB collaborate with the training/education of local emergency services on groundwater vulnerability.

Seminars for officials at the municipal level on the effects of flooding were undertaken in the fall of 2010 by the Swedish National Platform for DRR.

Context & Constraints:
No constraints have been identified.

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

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

Means of verification:

* 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

Description:
Supported by environmental legislation, the County Administrative Boards work towards sustainable development by protecting natural areas (nature reserves, water protection areas etc). Through the planning and building legislation, the County Administrative Boards can forbid unsuitable city planning in risk areas. These and other measures are positive steps towards disaster risk reduction.

The County Administrative Boards are responsible for the regional coordination of adaptation to climate change. One of the key issues within this area is the aim of increased resilience and risk reduction in case of disasters related to extreme weather events.

The Swedish Forest Agency is building up knowledge and information and is continuously working on the adaptation of forest management for long-term prevention and mitigation of the adverse effects of storms and other natural events. The Swedish Environmental Code is also an instrument to protect natural environments. For ecosystem services there is work done within a number of so called “environmental quality objectives” including for instance plans and actions regarding restoration, protection, preservation of endangered species, and wise use of the overall landscape. These plans and actions will undoubtedly together increase the resilience of natural environments and different regulatory ecosystem services. Payment of ES is partly in place in Sweden in the form of certain agricultural activities.

Integrated planning: The Planning and Building Act states that it is the responsibility of all municipalities to have updated comprehensive plans for the entire land and water area. The municipalities have had problems in fulfilling this task especially for the marine areas. The shoreline protection regulations are important in fulfilling this goal.

Environmental Impact Assessments: There are two kind of environmental assessments in Sweden, EIA (Environmental Impact Assessment) and SEA (Strategic Environmental Assessment). Both are based on EU regulations and have been implemented in chapter 6 of the Environmental Code. The official name of

the EIA directive is Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, and the official name of the SEA directive is Directive 2001/42EC on the assessment of the effects of certain plans and programs on the environment. Sweden has also ratified the Espoo convention on the environmental impact assessment in a trans-boundary context and the protocol on strategic environmental assessment. The Swedish Government is planning to make amendments that will reduce the number of EIS (environmental statements) produced in Sweden each year. Sweden is one of the countries that are writing the most EISs in the EU (3.500 – 5.000/year).

The National Board of Housing, Building, and Planning is the central government authority for planning and management of land and water resources, urban development, building and housing. A fundamental requirement in the Planning and Building Act is that land has to be suitable for building development. In examining building permits, the municipality has to take into account whether the land is suitable for development in consideration of the health and safety of the residents. The Board is responsible for ensuring that ecological, cultural, and social aspects are taken into account in the planning process. The focus of planning is increasingly turning to regional development and sustainable urban development by introducing new planning methods. In the field of building, the Board is responsible for developing design and building regulations and other regulative measures for construction as well as implementation measures concerning EU directives. The Board supports the development of cost and energy efficient, robust and sustainable buildings as well as accessible public spaces.

The National Board of Housing , Building and Planning is responsible for the Environmental Quality Objective that cities, towns and other developed areas must provide a good, healthy living environment and contribute to a good regional and global environment. Natural and cultural assets must be protected and developed. Buildings and amenities must be located and designed in accordance with sound environmental principles and in such a way as to promote sustainable management of land, water and other resources.

The MSB assists municipalities with land use planning, natural environmental protection and climate change adaptation in a number of ways. For example, the MSB has the task of implementing EU’s Floods Directive in Sweden. The aim is to reduce the negative consequences of flooding on human health, the environment, cultural heritage and financial activities. The MSB assists municipalities and County Administrative Boards with general slope stability and flood mapping in developed areas. The Swedish government has earmarked financing for prevention measure to be taken in developed areas in case the risk for landslide or flooding is high.

The risk and vulnerability analysis done by all the Swedish municipalities has the purpose of reducing the vulnerability of society and increase the ability to handle crises. MSB has written guidelines on how risk and vulnerability analysis can be carried out. However, here is no accepted standard. Risk analysis has often focused on identifying hazards and assessing the probabilities of adverse events and the immediate consequences of these. Several municipalities have already developed strategies, plans or programs on climate change adaptation.

Context & Constraints:
Due to the great variations in the Sweden’s natural landscape, and the high level of decentralization, the plans, strategies and inventories vary in type and detail.

There are defects regarding the scoping process and lack of quality regarding the Strategic Environment Assessment SEA process and reports. In some cases no screening is made but in other cases no SEA process are performed although it is required by the legislation. One problem regarding the quality of the SEA report is the handling of proposed alternatives.

The need for coordination between the Planning and Building Act and environmental legislation should

be addressed.

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

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

Means of verification:

* Yes: Crop and property insurance

* Yes: Employment guarantee schemes

* No: Conditional cash transfers

* No: DRR aligned poverty reduction, welfare policy and programmes

* No: Microfinance

* No: Micro insurance

Description:
Within the health sector, some projects have been started to study natural disasters and climate change. The government has instructed the National Board of Health and Welfare together with the Swedish Institute for Infectious Disease Control (SMI) and the Swedish National Veterinary Institute to monitor and analyze the development of new and known infectious diseases due to climate change and propose measures to maintain a high level of preparedness regarding protection against infection and other counter measures.

There is a government commission to study the effects of heat waves and the need for contingency measures. The goal is to describe and quantify what kind of health effects that arise and dominate at different times after an event "SOD" (Sudden onset disaster - a sudden catastrophe).The research project on climate change, disasters and health started in 2010.

There will be retrospective data collection on illness and mortality due to earthquakes, typhoons, and tsunami. Qualitative and quantitative work is undertaken for database and literature searches and this is complemented by interviews with professionals.

Undergraduate studies are ongoing related to a correlation analysis between climatic variables and health effects (including GIS technology). It is linked to indicators for local vulnerability to climate change (socio-economic, demographic, epidemiological, and land use).

Based on known relationships between climate and disease, together with projections of local vulnerability factors, future health risks of climate-related disasters are being made.

Context & Constraints:
No constraints have been identified.

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

Are the costs and benefits of DRR incorporated into the planning of public investment?
No

Means of verification:

* No: National and sectoral public investment systems incorporating DRR.

* No: Investments in retrofitting infrastructures including schools and hospitals

Description:
There is a certain institutional commitment and capacity to work towards reducing the vulnerability of economic activities in case of disasters, but progress is not substantial or significant.

Agreements with private health care providers are aimed to ensure the availability of resources in the event of a disaster.

Context & Constraints:
No constraints have been identified.

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

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

Means of verification:

* Yes: Investment in drainage infrastructure in flood prone areas

* Yes: Slope stabilisation in landslide prone areas

* No: Training of masons on safe construction technology

* No: Provision of safe land for low income households and communities

Description:
Funding for preventive measures against natural disasters is provided by MSB.For this the Swedish Geotechnical Institute and other consultants provide technical expertise.

The National Board of Housing, Building and Planning has produced publications on the following topics: building safely in a changing climate, security measures in city planning, flood issues in planning, and landslides hazards in land use planning.

The County Administrative Boards works with local governments in the process of city planning, where one of the topics discussed is resilience and disaster risk reduction within new exploitation areas. The County Administrative Boards has the authority and and does act against unsuitable development plans.

Context & Constraints:
Financial resources and guidance for the prevention of erosion is lacking. There is a need for such financial support to the municipalities.

Priority for action 4: Core indicator 5

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

Level of Progress achieved:
3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

Do post-disaster recovery programmes explicitly incorporate and budget for DRR?
No

Means of verification:

* N/A % of recovery and reconstruction funds assigned to DRR

* Yes: Measures taken to address gender based issues in recovery

Description:
Risk reduction measures continue to be promoted to minimise the consequence of natural disasters primarily due to flooding, storms, and landslides.

Severe storms during the last years have resulted in major power failures. When repairing and rebuilding the local networks, measures to secure the networks such as cabling and trenching, have been taken.

Solutions, such as lowering the water level in Sweden’s largest lake Vänern, have reduced the vulnerability of cities on the shoreline. Rules and advice on regulation of dams and locks for high discharge in connection with extreme precipitation has been developed.

Context & Constraints:
Risk reduction measures are often extensive. They may take considerable time to implement, are complex, costly and often require legal action (e.g. environment impacts, land use plans, individuals).Efforts have been made in the past two years to increase the knowledge about what can and should be done at the local and county levels.

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

Are the impacts of major development projects on disaster risk assessed?
Yes

Means of verification:

* Yes: Assessments of impact of projects such as dams, irrigation schemes, highways, mining, tourist developments etc on disaster risk

* Yes: Impacts of disaster risk taken account in Environment Impact Assessment (EIA)

Description:
There are no specific regulations within the Environmental Code regarding EIA or SEA that focus on risk management or risk reduction. However, during the screening process for a SEA and when assessing significant environmental effects of implementing a project, plan or program, addressing even risk reduction issues is expected.

All administrative levels are engaged in climate change adaptation projects and programmes. Municipalities are working towards integrating climate change adaptation into their spatial planning process including impacts of building projects. The Swedish Civil Contingencies Agency has made two publications regarding planning that takes risks into consideration. The National Board on Housing Planning and Building has written reports about building with climate change adaptation in mind.

The Geological Survey of Sweden has government instructions to provide society with the geological information needed in planning in both the short and long-term perspective. SGU has a shoreline model that shows the future distribution of the land and sea. The government has given the Swedish Geotechnical Institute (SGI) the task of supporting the counties and municipalities with the review of geotechnical safety issues in planning documents.

Context & Constraints:
All major development projects need to take into account the risks associated with a changing climate and assure that measures are taken to protect people, the environment and property. It is desirable to develop guidelines on how to build in a changing climate. Some work has already been done by the Swedish National Board of Housing, Building and Planning.

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

Are there national programmes or policies to make schools and health facilities safe in emergencies?
No

Means of verification:

* No: Policies and programmes for school and hospital safety

* No: Training and mock drills in school and hospitals for emergency preparedness

Description:
There is currently no system today that provides reliable information or a periodic check on the progress made towards prevention measures, emergency plans, and support for exercises at the local level. School and hospitals are subject to the same safe building requirements as other structures.

Context & Constraints:
There is no identified need to development of national programme or policies to make schools, hospitals and other health facilities safer.

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

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

Means of verification:

* Yes: Contingency plans with gender sensitivities

* 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 women in relief, shelter and emergency medical facilities

Description:
The County Administrative Boards are responsible for supporting the system of contingency plans and disaster preparedness plans at the county level. This is done with, for example, through regular training drills often designed with the purpose of identifying measures to reduce vulnerability. The county supports the local government in their development of disaster response programmes.

At national level there is now a national emergency water team to aid in crises affecting drinking water supplies. At the national level there are also stocks of equipment designed to supply emergency drinking water at the county and local level. The MSB has materials for forest fires, floods and chemical emergencies. There is a list of resources submitted by the municipalities which show the items that can be shared with other municipalities if needed during or after a disaster.

Representatives from the national water catastrophe group (VAKA) participate in international observation tours to learn from the crises of others. Experience of national crises, which includes such events as floods, are systematically followed up. International observation is coordinated by MSB.

Exercises have been carried out by the central authority at local level in about half of the municipalities in Sweden. A follow-up assessing the level of emergency preparedness is conducted.

MSB and local rescue services work continuously with gender issues. Gender objectives are included in action plans. Sweden has effectively cooperation between municipal rescue services, communication centres and medical facilities in case of emergency.

MSB, in cooperation with other relevant authorities, will present by April 2011 a proposal for performance targets for emergency preparedness and how these should be followed up.

Cross border co-operation is ongoing regarding the management of forest and grassland fires in the Baltic Region and between the Nordic countries. MSB has resources such as flood containment equipment for supporting large scale national responses. Sweden is also involved in developing EU modules with equipment for floods and forest fire. We also have various development projects in co-operation with companies.

The MSB’s mandate is to support the coordination of measures taken by local, regional and national authorities during a serious crisis or disaster. For serious crises that affect large parts of society, crisis management at central government level may need to be coordinated. The MSB supports this coordination by providing methods and networks for the competent authorities during extraordinary events. The MSB will also support the Swedish Government Offices with documentation and information in the event of serious crises or disasters. The MSB also provides methods for crisis communication and the coordination of official information to the public.

Moreover, the MSB offers external actors, both national and international, an overview of societal resources, such as, access to power reserves, modules for various types of operation in the event of serious emergencies etc.

MSB’s coordinating role is also highly relevant for managing a crisis or disaster in Europe or elsewhere in the world. Swedish authorities meet and coordinate their actions when the Joint Response Team is deployed to international disasters and when Sweden needs to accept or offer assistance to other countries.

MSB, in line with its mandate from the Swedish Government to provide international assistance to other countries, supports the development of national contingency plans, preparedness plans, continuity plans, response plans and recovery plans. Furthermore, MSB also supports disaster management capacities in other countries by development of search and rescue services, and coordination mechanisms, and post-disaster needs assessments.

Context & Constraints:
Sweden has many years of experience effectively managing rescue services and crisis management

systems. Coordination between different organizations can, of course, always be improved.

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

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

Means of verification:

* Yes: National contingency funds

* No: Catastrophe insurance facilities

* No: Catastrophe bonds

Description:
According to Chapter 7, § 3 of the Civil Protection Act, if a disaster operation in the municipality has resulted in substantial costs, the municipality has the right to compensation from the national government for the portion of the costs that exceed the deductible. A prerequisite for eligibility is that the costs are directly attributable to the intervention phase. The purpose of the municipality's right to reimbursement for emergency expenses is to protect the municipality from the expenses which may result from a large, long-term emergency that could affect an individual municipality's economy.

Sweden is working on a proposal for a coherent system of payments to municipalities that work with civil protection activities.

VAKA, the national water catastrophe group, solicits feedback from actors involved in national and international drinking water crises. This information is used to strengthen management capacity at the central, regional and local levels.

MSB has a financial agreement with the Swedish International Development Coordination Agency (Sida) that ensures the possibility of quickly financing international operations in response to disasters, or in support of disaster risk reduction activities.

Context & Constraints:
No constraints have been identified.

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

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

Means of verification:

* 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

* No: Identified and trained human resources

Description:
The County Administrative Boards are responsible of coordinating information during hazard events and disasters, and to keep the government informed. The County Administration Boards also are required to undertake post-event reviews.

MSB has included gender aspects (training and implementation of UNSCR 1325) in the Memorandum of Understanding with UNDP which involves post-disaster needs assessment. Gender aspects have been identified as an area for cooperation. MSB induction training courses include post disaster assessments and gender aspects.

MSB has adopted the internationally accepted methods and procedures for post-disaster needs assessments as utilized in MSB's collaboration with international partners such as UNDP, the World Bank and the EU. In order to be able to support assessments, MSB has a number of highly qualified staff members that are available and can be deployed nationally and internationally under short notice.

Context & Constraints:
New methods need to be development. Emergency operations conducted at the local level are effective, however, the socio-economic losses are not always assessed. Some methodological developments have occurred in the area but the results of such socio-economic damage analyses are not always used.

Follow-up studies and evaluations are carried out. However, there are no guidelines on what data should be collected after disasters. Therefore, it is difficult to study trends in damages and losses based on these evaluations.

Drivers of Progress

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

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.

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):
There is a multi-hazard integrated approach to disaster risk reduction and development. There are many engaged stakeholders both in the Swedish National Platform for Disaster Risk Reduction and within networks engaged with disaster management. The assessment of hazards and vulnerability has been implemented by some of the municipalities in Sweden and the degree of disaster risk reduction varies from municipality to municipality largely due to the amount of resources available for such endeavours.

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.

Description (Please provide evidence of where, how and who):
MSB includes training in gender and diversity perspective in international assistance in all induction trainings. The roster staff also receives a gender mission specific brief prior to deployment. About half of the roster staff is positive towards both the training/briefing and the effect of how the mission includes and answers to the needs of men, women, boys and girls. Gender and DRR training components are included in the more ambitious DRR projects that MSB has.

MSB has developed methods for and worked actively with a gender perspective in the following DRR project components: Gender/risk analysis, contingency planning, early warning systems, gender awareness facilitation and pedagogy in DRR training, urban search and rescue, and flooding (to a smaller extent).

Key areas that MSB are working with following our mandate and UNSCR 1325 involves: Increasing the number of women on missions, pre-deployment gender training, strengthening local women’s participation and the security of women and girls. The participation aspect is one of the key areas that MSB is trying to improve and which is essential for DRR projects where gender specific vulnerability and capacity aspects linked to gender roles and power relations are crucial factors.

MSB:s ambition is to include a gender analysis and a subsequent gender action plan and specific reporting in all long term DRR projects. It has been concluded that specific resources such as clear recommendations, assistance of a designated gender advisor and accessible methodology are major success factors in the DRR projects when it comes to applying a gender perspective, adapting project activities accordingly and contribute to gender equality.

The main challenges for MSB include reaching a common level for gender and diversity mainstreaming, where systematic consultations with marginalized groups in society, internal training and more advanced project templates are needed.

MSB has developed a gender handbook for all international assistance which among other things. highlights women’s participation and gender-disaggregated data. Gender and diversity are integrated into more large scale international DRR projects through analysis, education/training, specific activities and recommendations within the project. However, gender and diversity are not yet fully integrated into the Logical Framework Process (LFA) in MSB projects in West Africa, Tajikistan, South Eastern Europe, Pakistan, or Haiti.

c) Capacities for risk reduction and recovery identified and strengthened

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.

Description (Please provide evidence of where, how and who):
Sweden provided international support for progress with the HFA by hosting and serving as chair for the European Forum for Disaster Risk Reduction. The roll as chair involved several international engagements where the work with the Swedish and other national platforms was highlighted. During the planning process for the 1st meeting of the European Forum for Disaster Risk Reduction several countries voiced their priorities for meeting topics.

During the planning of the forum meeting, the issue of deciding about indicators for a new HFA model was put forth. It is difficult to reach consensus on such indicators since the European countries and even sub-regions have different views about it. There is also a challenge associated with including indicators in a new HFA model, that is, how the progress with capacity development in each country could be monitored in a realistic way.

MSB is responsible for developing a communication system, RAKEL, which is intended to be used by all emergency organizations such as police, fire brigade, ambulance, etcetera to improve inter-organizational cooperation. We also support local authorities by developing rescue services equipment, methods and tactics and also providing equipment at large scale responses.

Probably the smallest municipalities have the greatest needs of informing their population. Also, the parts of the nation that do not have noticeable climate change effects such as floods, probably are not as far along in informing people and adapting.

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

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.

Description (Please provide evidence of where, how and who):
National Food Administration (NFA) has since 2009 had the responsibility for the coordination of the food and drinking water supply, which must meet standards even during emergency or disaster situations. NFA has also been contracted to coordinate inter-agency discussions and activities involving national drinking water issues. These assignments include networking and collaboration groups with national, regional, and local actors as well as private parties and businesses.

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

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.

Description (Please provide evidence of where, how and who):
Every Swedish municipality has to make action plans for disasters. Three out of four municipalities in Sweden include adaptation to climate change in their disaster risk analyses.

Effective disaster risk reduction requires effective community participation. Participatory approaches can more effectively capitalize on existing coping mechanisms and are effective at strengthening community knowledge and capacities. Equally, public-private partnerships are important for disaster risk reduction. Such voluntary associations may involve public organizations such as government agencies, professional and/or academic institutions and NGOs, together with business organizations such as companies, industry associations and private foundations. Public-private partnerships can offer opportunities to combine resources and expertise to act jointly to reduce risks and potential losses. They can in turn improve the resilience of communities.

Both at a national, regional and local level there are public-private partnerships in various areas and working in different capacities. In several EU-projects in which Swedish actors participate, public-private cooperation is carried out. A challenge when working with the private sector from a governmental authority's point of view is that it is forbidden to favour any particular private company.

f) Contextual Drivers of Progress

Levels of Reliance:
No/ little reliance: no acknowledgement of the issue in policy or practice; or, there is some acknowledgement but nothing/ little done to address it

Description (Please provide evidence of where, how and who):
There is some reliance achieved through the combined efforts towards DRR where disasters have occurred or are likely to occur. However, the level of knowledge about the HFA throughout the country is low and the implementation of DRR policies and practices is a long process. The national level needs to do more work particularly in climate adaptation measures to protect an ever-expanding infrastructure within the country. The national government also needs to support the collaboration of many actors working together on geographically large climate adaptation projects, such as around major lakes. Also more economic support is needed for DRR since actions can be very expensive for the local level and are, therefore, postponed reducing a municipality's resilience.

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:
One of the biggest challenges of effective integration of disaster risk reduction is to increase the awareness for the need to consider DRR in all planning and development projects. It is also necessary to define what is considered the desired level of sustainable development. After awareness-raising comes the challenge of commitment through systematic processes, allocation of resources and follow-up on the effectiveness of measures towards reducing vulnerability.

Another challenge is interfacing with academic institutions. All of the agencies within the Swedish National Platform for DRR have contact in some way with the academic world, however, there could be a way to synchronise the work done in the academic spheres and the public sector.

There should be an integral approach so that disaster risk reduction, climate change adaptation,

sustainable development efforts complement each other and build greater resilience to disasters. Connected to this effort should be clearly defined common goals, adequate resources and qualified and experienced personnel.

Future Outlook Statement:
The national authorities will continue to support the county and local municipalities in identifying risks and offering methods and techniques for identifying vulnerability, preventing disasters, mitigating the consequences of possible disasters, and preparing for disaster. Much focus will be placed on the integration of disaster risk reduction and climate change adaptation. Sweden, in its capacity as a Member State of the European Union, will continue to support policy development that leads to prevention and mitigation of disasters especially by knowledge of local risks and how to reduce their underlying causes.

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:
The knowledge of natural disasters, their impacts and the need for DRR increases. Climate change and vulnerability are visible issues in Sweden, and the introduction of the EU Floods Directive has brought to light the need for adaptation. Discussions are ongoing about how to bring together DRR, climate adaptation and sustainable development, but so far relatively little has been done to coordinate these efforts. The problems are fairly well identified. The solutions are left be discussed and decision made about effective implementation. These issues stretch across sector boundaries and, therefore, collaboration on the part of all affected actors is critical for successful results. Public-private partnerships are relatively untested and would be a major challenge for the future.

Future Outlook Statement:
The government agencies in Sweden comprising the national platform for DRR will continue working towards strengthening institutions, mechanisms, and capacities not only at the national level but also at the county and local levels. The national level will enhance knowledge and promote the development of methods and techniques that can be used by the counties and municipalities for disaster risk reduction. The platform will promote cities that are building resilience to hazards and encourage the dissemination of successful methods so that other municipalities can enhance their plans and practices.

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:
Fortunately Sweden is not a disaster prone country and, therefore, there have been few opportunities to implement reconstruction policies. The challenges include a more structured coordination of the actors who are working towards a risk reduction approach when recovery and reconstruction is required. In addition, there is insufficient knowledge about the best methods and techniques for recovery. If that knowledge exists, it does not always reach the decision-makers who need to implement it. Many useful ideas can come from the private sector but this possibility has only lightly been explored. There is a lack of resources to take all the measures that could be necessary to make municipalities resilient against disasters.

Future Outlook Statement:
The Swedish Government will continue to assist municipalities in their risk management programmes and measures to identify, prevent, mitigate and respond to disasters but also to build back in a manner as to create resilience to future disasters. Experience with humanitarian capacity building programme will provide for effective cooperation intended to enhance the foreign partners' ability to manage all phases of the disaster management cycle.

Stakeholders

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