RÄDDNINGS VERKET
Swedish Rescue Services Agency

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Please contact
Janet Edwards, + 46 54 13 51 08
E-mail:
janet.edwards@srv.se

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To
Sálvano Briceño
ISDR, United Nations

National reporting and information on disaster reduction for the World Conference on Disaster Reduction, 18-22 January 2005, Kobe, Japan

1. Political Commitment and Institutional Aspects

1.1 Are there national policy, strategy and legislation addressing disaster risk reduction?

National policy, strategy and legislation concerning risk reduction are constructed in such a way, as to reflect Sweden's all hazards approach to emergency management. This means that each municipality must be capable of managing a spectrum of risks and crises, including natural disasters.

In the beginning of 2004 a new law went into effect that requires all Swedish municipalities to provide protection from all types of accidents (2003:778). There is no distinction made as to whether the risks are from the environment or whether they are man-caused. According to the law, all risks must by inventoried and evaluated prior to writing an action plan. This plan will describe the safety measures that will be taken to reduce the likelihood of an accident occurring. Measures that would reduce the potential damage of an accident will also be addressed in this plan.

According to Swedish Ordinance 3 § (2002:472), the Swedish Rescue Services Agency and other related agencies are required to assist municipalities and counties in preparing for extraordinary events in times of peace. It requires a risk and vulnerability analysis and a program for crisis management in peacetime.

Ordinance 1988:1040, as well as stimulating accident prevention activities, focuses on eliminating or limiting damage to health, the environment and property. The ordinance also mandates preparedness for humanitarian efforts in other countries when a disaster happens.

It is important to note that Sweden is not frequently burdened by severe natural disasters. Incidents of flooding, heavy snowfall etc. have resulted in neither high death tolls nor extraordinary economic losses. For this reason there are no specific laws relating to natural disaster reduction.

Sweden is engaged in climate change research. Should this research at some time in the future show that natural disasters might be eminent, national legislation and policies targeting these issues will then be a matter for discussion.

1.2 Is there a national body for multi-sector coordination and collaboration in disaster risk reduction, which includes ministries in charge of water resource management, agriculture/land use and planning, health, environment, education, development planning and finance?

The municipalities are responsible for coordination of all local authorities in an effort to reduce disaster risk.

The Swedish Emergency Management Agency (SEMA) is the national multi-sector coordination and collaboration agency for disaster preparedness. SEMA assists municipalities in preparing for severe peacetime emergencies. The agency focuses on six areas of society including technical infrastructure, transportation, prevention of the spreading of toxic substances, economic security, coordination and information, protection, rescue and care.

In addition various agencies have their own areas of responsibility that play a role in disaster risk reduction.

1.3 Are there sector plans or initiatives that incorporate risk reduction concepts into each respective development area (such as water resource management, poverty alleviation, climate change adaptation, education and development planning)?

The Swedish Environmental Protection Agency is the central environmental authority under the Swedish government. Water resource management is incorporated in the agency's national environmental objectives. Several authorities, among them the Swedish Environmental Protection Agency, also formulate climate change initiatives. Presently, there are no national plans or initiatives that specifically address disaster risk reduction.

1.4 Is disaster risk reduction incorporated into your national plan for the implementation of the UN Millennium Development Goals (MDGs), Poverty Reduction Strategy Paper (PRSP), National Adaptation Plans of Action, National Environmental Action Plans and WSSD (World Summit on Sustainable Development) Johannesburg Plan of Implementation?

Currently Sweden's disaster reduction and assistance activities are not incorporated in all of the national plans. This is due to the fact that disasters are very rare in the country. Plans for prevention, preparedness, response, and recovery for all types of risks are handled at the local level by the municipalities.

Ongoing efforts are made to assist other countries where disasters occur. The Swedish International Development Cooperation Agency, SIDA, finances Swedish humanitarian efforts throughout the world. The Swedish Rescue Services Agency (SRSA) has the authority to carry out these efforts during disasters. With SIDA's financial support, several operations have been undertaken by SRSA every year since the 1988 earthquake in Armenia.

Although the focus of disaster efforts has been on emergency operations, work is now underway to consider disaster reduction. In 2003 the government requested SIDA to propose a strategic direction and define the extent of financial support for natural catastrophes. This year activities are planned to increase preparedness and prevention of disasters in partner countries. Work to reduce natural catastrophes is regarded as an essential step in reducing poverty in the affected land. After a natural disaster families are often left without a home, possessions and, worst of all, loss of relatives who contribute economically to the family's livelihood and income.

SIDA cultivates development projects that will result in long-term effects that improve conditions in the partner country. SIDA will, in the coming year, identify methods to integrate disaster prevention measures in relevant programmes. Risk analysis will be incorporated.

Also of importance is the connection between natural disasters and climate change. Countries plagued by reoccurring natural disasters will be identified. Land strategies and regional strategies will be examined and, where relevant, risk management and disaster reduction will be emphasized. Such aspects as political decisions, city planning, environmental concerns, and natural resource management, play an important role in the activities that need to be undertaken.

As part of the initial steps in SIDA's strategy, seminars will be organised to illuminate the many perspectives of disaster management as well as the necessary participants from different sectors of society.

1. *Poverty alleviation, risk reduction and natural disaster prevention – an overview*.
2. *Environmental degradation and disaster risk – a focus on Asia*.
3. *Building safer cities – a focus on Latin America.* World Bank/ISDR.
4. *Livelihoods, coping strategies and risk reduction – a focus on Africa*.

1.5 Does your country have building codes of practice and standards in place, which takes into account seismic risk?

Sweden's building codes apply only to normal risks such as typical weather conditions or fires in buildings. Sweden has no mandated building codes for disasters such as earthquakes because they seldom occur and their magnitude is rated as mild.

1.6 Do you have an annual budget for disaster risk reduction?

In general Sweden adopts an all hazards approach to emergency management. Therefore, there is no separate budget for disaster risk reduction. The municipality's annual budget covers risk reduction activities for of all kinds of hazards, natural as well as man-made.

There is, however, attention given to risk reduction for landslides and floods. In 1986 the government introduced a grant of 25 million SEK per year for preventive measures for landslides and floods. This grant 7:2 is specifically for accident prevention against landslides and other environmental hazards. Municipalities with areas that have been built up without conducting sufficient surveys on ground and water conditions can apply for a subsidy from this government grant to finance preventive measures. The Swedish Rescue Services Agency, in cooperation with other authorities (the Swedish Geotechnical Institute and the Swedish Meteorological and Hydrological Institute), deals with the subsidy applications.

1. 7 Are there private sector, civil society, NGOs, academia and media participating in disaster risk reduction efforts?

The hydropower sector is engaged in dam safety work. The Swedish Meteorological and Hydrological Institute is active in dam safety assessments, weather forecasting and oceanographic forecasting.

The private sector has also been involved with disaster risk reduction efforts abroad. One example is the consultant company SSPA Sweden AB that was commissioned by the Swedish International Development Cooperation Agency to conduct a regional training programme for Latin America and the Caribbean after the Mitch hurricane. The programme covered the broad field of disaster reduction, with a focus on prevention and mitigation. Physical and strategic planning was introduced as the platform for preventive and mitigating work. Risk assessment was used as a tool during the planning process with the disaster cycle providing a structure for the work.

2. Risk Identification

2.1 Has your country carried out hazard mapping/assessment?

In an attempt to pave the way for municipalities and counties to inventory and assess all their risks, the Swedish Rescue Services Agency (SRSA) has published a number of reports and handbooks. The first book that presented a comprehensive look at risk management including the mapping of risks was called *The Risk Handbook: To protect and save life, property and the environment.* The report was published and distributed to all Swedish communities in 1989. Then in 2003 a new risk analysis handbook was written and distributed.

Risk assessments financed by the Swedish Rescue Services Agency date back to 1987 when the first general stability maps were prepared. By 1998 general flood risk mapping were beginning to be produced.

Floods

Almost yearly some part of Sweden suffers from floods that cause major damages. However, through preparedness and effective operations during serious floods, damage can be limited. General flood risk maps are an aid in this work and highlight the areas that are under threat from floods during periods with high water levels and discharges.

On commission of the Swedish government, the Swedish Rescue Services Agency (SRSA) is responsible for general flood risk maps of parts of Sweden's waterways. The mapping began in 1998 with the goal of mapping approximately 10,000 km (approx.10%) of Sweden's waterways. The general maps are intended for the overall planning of fire and rescue service work and as information for land-use planning.

The flood mapping covers natural floods in both governed and ungoverned waterways, but not floods that occur, for example, as a result of a dam break or an ice-dam.

The general flood risk maps are presented, partly as a report with printed maps (e.g. 1:50,000) and partly as GIS-layers on a CD-ROM for further work by users in the municipalities and the County Administrative Boards. The flood risk map overlays show where floods can occur. They can be combined with other map layers for risk analysis within the affected area, thereby presenting information about e.g. roads, railway lines, bridges and buildings.

Landslides

A gigantic landslide occurred in Tuve in 1977, where 65 houses were ruined, 500 persons became homeless and fatalities occurred. After that incident politicians and decision-makers began to worry about how many similar areas exist. There are areas that have been built-up without enough geotechnical investigations. Knowledge about these questions is

complicated and may not always be available in the municipalities. After the landslide in Tuve, the government decided that municipalities should be mapped generally regarding stability in built-up areas. The government also decided to introduce a governmental grant from which municipalities could apply for subsidies to take preventive measures against landslides and floods in built-up areas.

The purpose of general mapping of stability conditions is to make a general map of the slope stability in developed areas. The maps are intended to support the County Administrative Boards and the municipalities by indicating where there are areas at risk of landslides.

Together with the maps, the SRSA provides a written description of how to interpret the results and also how they could and should be used. This is always presented as paper copies. Since 2001 they are also delivered in digital form as pdf-documents. These landslide maps in scale 1:5,000 are also presented in digital layers for GIS applications.

2.2 Has your country carried out vulnerability and capacity assessments?

According to Ordinance 2002:472, during times of peace, responsible agencies shall prepare a risk and vulnerability analysis for the purpose of strengthening the ability of municipalities to handle emergencies. The analysis, which deals with the agency's respective sector or geographical area responsibility, is submitted to the government once a year. The purpose of doing these analyses once a year is to create a systematic and continuous process on a national level, to identify risks and vulnerabilities in society. The Swedish Emergency Management Agency is responsible for putting these risk- and vulnerability analyses together and formulating an overall analysis concerning these matters.

Those events that are addressed in the analysis are situations that are unexpected, that occur rapidly and without warning. They are also situations that require immediate decisions in coordination with several public institutions. Such situations are those that can seriously affect the functions in one or more municipalities as well as the accessibility of resources.

Sweden is taking the following measures in order to reduce vulnerability and increase the municipalities' capacity to handle large accidents. Guidance is provided from the Swedish Rescue Services Agency for municipalities regarding expansion of emergency operation site headquarters, effective communication systems, and reliability of electricity, water and sewage services.

The availability of reinforcement personnel will also be strengthened. Increased training programmes both in the classroom and in the field are designed. The Decision Support System (RIB) is available to all

municipalities and will be enhanced each year. Two research projects will be funded in 2004 that focus on decision making for large accidents.

The nationwide standard warning system for large accidents will also be enhanced. A common radio system called RAKEL will be developed for use by police, ambulance, and rescue services.

Not all municipalities have the resources to handle a large accident or disaster. Therefore, government agencies are working together to find a way to provide extra resources when needed. There is already a resource list available in the Decision Support System (RIB) so that municipalities can find and acquire expertise, vehicles, and equipment in case of an emergency.

Special attention will be given to coordination and systematic studies at the national level for accident prevention and emergency response where serious consequences to health and the environment are anticipated. This includes even combination accidents such as a flood where chemical compounds from nearby sites are washed into lakes, rivers, or drinking water reserves.

2.3 Does your country have any mechanisms for risk monitoring and risk mapping?

Floods

The Swedish Rescue Services Agency (SRSA) has the responsibility of producing general flood risk maps in Sweden. Hydrological consultants who are commissioned by the SRSA produce the maps. The general flood risk maps are given to the County Administrative Boards and the municipalities along the waterways as basic information for land-use planning. For the time being there is no plan for updating the general maps due to the fact that there is a long list of rivers that ought to be mapped first. The County Administrative Boards and the municipalities must take into consideration that the maps and databases are general. Experts at the municipality level should enhance the general maps with more detailed local information.

An effective cooperation, called River Groups, between the communities, counties, water regulation enterprises and other interested parties has been established. Adequate information for all the parties involved along a river system, increases knowledge about responsibility, function and capacity of the concerned parties. This knowledge develops a better understanding between the concerned organisations and contributes a tangible base and support for decision making and thus reducing the risk of flooding. The cooperation of the concerned parties is also advantageous in accident preventive works. A well-coordinated operation reduces the problems of late forewarnings of high flows of water and increases the possibilities of timely planning and setting appropriate preparatory measures.

The coordinating authorities within the river group constitute a forum for cooperation and coordination of all interested parties along a river system.

Landslides

The Swedish Rescue Services Agency has the task of producing general stability maps. Geotechnical consultants, who are commissioned by the SRSA, make the maps. The general stability maps are given to the County Administration and to the municipalities as part of the ordinary risk management program. When changes are made, i.e. detailed investigations or strengthening measures, it is the municipality's responsibility to update the maps. If a detailed investigation show instability, the municipality may apply for a subsidy to take preventive measures.

Sweden comprises many different natural geographic regions. Therefore, there are different methods and different ways of doing the general stability mapping. The map shows areas where detailed stability investigations are needed or where a review of earlier investigations and measures ought to be made so that they are accordance with the recommendations from the Commission on Slope Stability. The result of the mapping is given to the County Administration and to the municipalities as part of ordinary risk management.

The survey covers the whole country, but is carried out at a municipal level and only in developed areas. In 1978 the national government began financing surveys in the most vulnerable municipalities. Currently, the municipalities that were surveyed first are being re-surveyed because the methods for surveying have improved over the years. The new survey is mainly carried out because of changes in guidelines regarding what is stable ground and what ground is unstable. The Swedish Commission on Slope Stability issued these instructions and guidelines. About 5-10 municipalities are being mapped per year.

Forest Fires

On the basis of orders from the Swedish Rescue Services Agency (SRSA) the Swedish Meteorological and Hydrological Institute (SMHI) has developed HBV and FWI models for fire risk in forests and other open or undeveloped areas. They are used by the local fire and rescue staff or in order to assist provinces and municipalities with prevention and response endeavors.

The system primarily supports the local organisation (fire and rescue services) and includes meteorological data, the extent of the grass fires season and forest fire risk. Ground moisture levels are calculated. An updated weather prognosis is incorporated as well as warnings, lightning strikes, wind, and humidity. The strength of the fire prognosis model lies in the numerous variables that are calculated.

Pilot studies have been completed in special areas for forest fires, but no national mapping has been done.

2.4 Is there a systematic socio-economic and environmental impact and loss analysis in your country after each major disaster?

Should a major disaster occur, a Board of Accident Investigation would be appointed to investigate the causes and the damages including economic and environmental impacts.

2.5 Are there early warning systems in place?

The Swedish Meteorological and Hydrological Institute issue warnings when necessary. Weather warnings are given for strong winds, heavy snowfall, and hard weather in mountain regions, high water levels and floods. Local authorities responsible for the site at risk can issue landslide warnings.

Sweden has a control system for effective outdoor warning. This geographic information system guides sirens located in the municipalities that warn the public that there is an important announcement. These signals are used in the event of public hazards. The control system can be installed in such a way that the equipment in one municipality can be controlled by an operator in another organisation, for instance, the emergency services switchboard or the fire and rescue service in a neighbouring municipality.

3. Knowledge Management

3.1 Does your country have disaster risk information management systems (governmental and/or non-governmental)?

At present there is no homogeneous disaster risk information management systems for natural disasters. The municipalities and the County Administrative Boards are asked to build up a system for information to the public, but so far every municipality has its own solution for how to spread information within its geographical area.

Cooperation with other European countries allow for new types of research in the field of risk information systems. Sweden is a member of the consortium for the European Union's research and service development project called RISK-EOS. This project is tied to EU's global monitoring initiative for environmental security (GMES) and involves interpreting satellite data for use in risk management. RISK-EOS is a link in a chain of projects that are related to the development of risk management information systems.

In conjunction with other European countries, Sweden submitted another proposal for GMES in the spring of 2004. EURORISK PREV.I.EW involves research and service development for a broad spectrum of risks including flooding, forest fires, and landslides. The services proposed include a methodology for working with digital maps and other data that can be used for prevention, preparedness (early warning), response, and recovery (including lessons learned).

The European Union's Joint Research Centre, Institute for the Protection and Security of Citizens, is working with NEDIES, the Natural and Environmental Disaster Information Exchange System. The intention is to register information on prevention, preparedness, response and information to be given to the public. The principal aims of NEDIES include the publication of lessons learned reports from natural and non-Seveso disasters. Recommendations will also be written for how to face future disasters. A workshop is scheduled in 2004 at the Swedish Rescue Services Agency Office in Karlskoga to discuss NEDIES.

The Swedish Rescue Services Agency examines accident statistics that are retrieved from information systems. The Swedish Centre for Lessons Learned from Incidents and Accidents, NCO, plans and conducts these analyses based on gaps in the information.

3.2 Are the academic and research communities in the country linked to national or local institutions dealing with disaster reduction?

The Swedish Rescue Services Agency finances a variety of research projects relating to risk management and emergency operations. In 2004 one of the Agency's research projects entails the development of methods for a national flood forecasting system.

The 1980's and 1990's were decades with high precipitation in Sweden. It led to a number of floods, causing damage in and around the affected rivers. Although no lives were lost, the economic costs were high. Reliable forecasts on river flow and water levels are important for the Rescue Services, in order to plan their work and to minimise the damage. The vision of the forecasting system is to covers the entire country. The current research project aims at developing methods that can be applied in such a system. It will result in more reliable forecasts that also include estimates of the uncertainty.

The project will focus on the following areas:

- The use of meteorological ensemble forecasts will enable specialists to estimate the probability for a certain flow to be exceeded. Ensemble forecasts provide a number of alternate predictions that will take into account the uncertainty in the current meteorological conditions.
- Radar measurements have a high temporal and spatial resolution and are available in real time. However, there is a lack of accuracy in the estimation of the total amounts. In a flood situation, it is essential to know the amount of precipitation that has fallen within the catchments over the last few days and even hours.
- The uncertainty in the hydrological (runoff) and hydraulic (water levels) models will be evaluated and minimised. In a national system, the models will be run for catchments that lack all information required to properly define the model parameters. Thus, we need to develop and evaluate methods for the selection of parameters in such catchments.

Research on slope stability is carried out at the Swedish Geotechnical Institute (SGI) and at technical universities. An expert advice group at SGI is established to deal with slope stability and landslide issues in emergency cases, city planning and preventive measures.

3.3 Are there educational programmes related to disaster risk reduction in your public school system?

Educational programmes in Sweden focus on the common risks in the country such as fires in homes and other buildings. Sweden, with its glacial-sculptured landscape, has an abundance of lakes which explains the efforts made for water safety and safety on ice. All elementary school children receive several years of swimming lessons as part of the curriculum. General information about water safety for boating and life saving techniques are also provided in the schools.

There are also educational programmes at the university level that prepare students for, among other professions, a career in risk management. Sweden's technical schools such as Chalmers University of Technology, The Royal Institute of Technology, and Lund Institute of Technology offer special degrees in civil engineering such as road and water engineering. Degrees for land survey engineering and environmental engineering are also offered. Even the fire engineer programme of studies at Lund Institute of Technology includes courses in geology and slope stability. During their studies, engineering students learn about assorted environmental risks and associated preventive measures.

Because of the relatively small probability of natural disasters in Sweden, no established programmes for natural disaster reduction currently exist in the schools lower than the university level.

3.4 Are there any training programmes available?

Accident prevention is the new focus for the training of fire personnel. In the new two-year educational program, there is a block of information about environmental hazards including the causes and effects. In addition there are workshops relating to preventive measures performed at the municipal level.

Sweden's risk and safety colleges offer courses in supervision and accident prevention. In the advanced course, lesson plans include flood risk and slope stability problematic.

The Swedish Geotechnical Institute offers courses and seminars for municipalities and counties. One course is geared for those who do inspections and another for those responsible for follow-up after an incident of slope instability has occurred.

3.5 What kind of traditional indigenous knowledge and wisdom is used in disaster related practices or training programmes on disaster risk reduction in your country?

A major focus of risk management endeavours in the country is multi-disciplinary communication. Professionals at the national level encourage local authorities to build a team of experts from several departments who can be active in risk management. Those municipalities who work in an interdisciplinary risk management group have been able to share critical information that could be essential in preventing or responding to an accident. Such an example is Arvika, a municipality in western Sweden that worked very effectively during a flooding incident. Experts from the fire and rescue department, the environmental office, the technical office, and the planning office had discussed and mapped risks for a few years prior to the incident. Because of their work, numerous digital maps had already been prepared and were available for use. The locations of hazardous sites were also available on digital maps and showed that none would be flooded. This cross-sector cooperation was the basis for effective communication during the incident.

3.6 Do you have any national public awareness programmes or campaigns on disaster risk reduction?

Together with the Swedish Geotechnical Institute and The National Board of Housing, Building and Planning, the Swedish Rescue Services Agency has undertaken an information campaign to all municipalities and County Administrative Boards in the country about planning rules, general stability mapping, the causes of landslides and possibilities to get some governmental help.

When the general flood risk maps and general stability maps are delivered to the municipalities by the Swedish Rescue Services Agency, an information meeting is held. The maps are available to the public.

4. Risk Management Applications/Instruments

4.1 Are there any good examples of linking environmental management and risk reduction practices in your country?

There are some areas along rivers which have low stability and where the ground is very contaminated because of old factory discharge. Decontamination of the soil has to be done to eliminate the dissemination of harmful particles. There is also a need for ground stabilising measures to prevent a landslide. The stabilising measures can prevent harmful particles from spreading into the water in case of a landslide.

4.2 Are financial instruments utilised in your country as a measure to reduce the impact of disasters?

Each year about 1.9 bn SEK are allocated to support preparedness for severe peacetime emergencies. A large number of authorities and all the municipalities and County Administrative Boards receive financial support. Measures taken with this financing are supposed to reduce the risk and strengthen society's capability for handling all kind of crises including disasters.

For example, the work of the County Administrative Boards is strengthened by SEMA equipping special premises for emergency management. SEMA also supports the municipalities in their work to improve management in a crisis situation by, for example, providing economic support for certain technical investments.

There is no national catastrophe fund in Sweden. After major flood damage to the infrastructure, the government has given subsidy to the affected municipalities on a case-by-case basis.

If an accident occurs and the rescue service costs are above a certain amount, the responsible municipality can apply for subsidy. The amount of reimbursement is based on the municipality's deductible. The amount of deductible is proportional to the municipality's tax base, that is, 0.02% of the total tax base. Therefore, the smaller the municipality, the less they are required to pay before subsidies can be granted. Swedish municipalities can receive reimbursement for rescue services expenditures that exceed the amount of the deductible. The most common request for subsidy that the Swedish Rescue Services Agency receives is for forest fires.

4.3 Please identify specific examples of technical measures or programmes on disaster risk reduction that have been carried out in your country.

Municipalities in Sweden are responsible for carrying out risk inventories within their own borders, using technical measures, establishing emergency plans, and responding during flood events. This applies to all kinds of accidents including natural disasters.

Floods

A noteworthy aspect of technical measures for disaster reduction is the nationwide programme for upgrading the hydrological safety of all major Swedish dams. Flood risk mapping has been accomplished in order to identify the most exposed sites along Swedish rivers.

Landslides

The municipalities work systematically with the areas pointed out in the general stability map. They make detailed investigations to define how big

the problem is. When the problem is defined and preventive measures are suggested, the municipality can apply for subsidy to take the preventive measures. The Swedish Rescue Services Agency administrates these subsidies with help from the Swedish Geotechnical Institute who take part in the technical investigation. Many preventive measures are taken in built-up areas every year because of the mapping and the possibility to apply for subsidies.

Forest Fires

A fire risk handbook for forest and other landscapes in Sweden, guides municipalities through a computerized decision support system. This system with its tables and maps is design to provide a fire risk prognosis.

The forest fire prediction models are operated on the Internet. In this way all municipalities have access to the local data and the resulting maps with the best resolution as 22 x 22 km.

5. Preparedness and Contingency Planning

5.1 Do you have disaster contingency plans in place? Are they prepared for both national and community levels?

Yes, Sweden has disaster contingency plans especially at the local and regional level. There are no disaster contingency plans at the national level; however, there is good cooperation between the different counties.

5.2 Has your government established emergency funds for disaster response and are there national or community storage facilities for emergency relief items-mainly food, medicine, tents/shelters?

There is no established fund for disaster response; however, the Swedish government can appropriate money after a disaster has occurred. Some medicines are reserved in case of a disaster. Tents stored for use during international operations, can also be used for the Swedish population in case of a disaster.

5.3 Who is responsible for the coordination of disaster response preparedness and is the coordination body equipped with enough human and financial resources for the job?

On a local level, the Swedish municipalities have overall geographical area responsibility for the coordination of disaster response preparedness. This means that they should ensure that crisis management and planning are coordinated between all the parties involved. Cooperation between fire and rescue, police, and health care are well established.

Each municipality selects a person, often from the fire and rescue department, who will coordinate planning as well as activities related to preparedness. Their role is to consider all aspects so that the municipality can function even during a disaster.

On a regional level, the County Administrative Boards have overall area responsibility and should ensure that the corresponding coordination is put into effort. Each county has a defence director who is in charge of all resources needed for disasters. The counties select different scenarios that might occur in their geographic area and participate in training exercises. On a national level, the government has the responsibility for coordination of disaster response.

At the European Union level, the EU Mechanism for Civil Protection, adopted in 2001, plays an important role in preparedness. Sweden is active in the committee work of the EU mechanism.

The EU Mechanism is designed to assist a Member State or a neighbouring country when an emergency exceeds the nation's capability to respond. The Monitoring and Information Centre (MIC) in Brussels is permanently linked-on a 24 hour basis to the civil protection crisis centres of the participating countries. This assistance takes the form of materials and intervention teams (search and rescue, fire fighters, etc). Currently, the annual budget of the EU Mechanism is €3 million. These funds are dedicated to actions such as training, exchange of experts and the sending of coordination or assessment teams on site to disaster-struck countries.

The EU Mechanism aims at enhancing the response to disasters. But training and exercises are carried out with a view to improve the preparedness and the response. A budget of € 1.5 million is earmarked annually for such activities, under the Civil Protection Action Programme. The EU Mechanism can assist in minimizing the consequences of such disasters.

6. Call for good practices in disaster risk management

Here are a few good practices that Sweden would like to share.

Encourage participation at the local level

Sweden believes in a bottom-up approach meaning that prevention, preparedness and early warning should begin at home and extend to neighbour communities. It should also apply to cross-border cooperation in order to assure that all parties are capable of dealing with potential disasters. With such a structure in place, any further assistance, for example from international bodies such as the UN, EU, or NATO, will be most effective. Sweden is advocating this position in the regional cooperation in the Baltic Sea, the Barents and the Mediterranean region as well as with parties involved in the Disaster Prevention and Preparedness Initiative of the Stability Pact for South Eastern Europe.

Special legislative grants for preventative measures

As mentioned early, Sweden offers a grant for prevention measures including the mapping of zones that are prone to environmental hazards.

This provides critical information needed for prevention of natural disasters. This knowledge can be spread among professionals dealing with risk management, but also to politicians and property owners.

International Observers

Sweden, as a common practice, sends observers to disasters occurring in other countries. For example, in 2002 Sweden sent observers to the major flood in The Czech Republic. Following all such assignments, a report is written so that Sweden can benefit from the lessons learned.

International Experts

Often experts from other countries can assist those plagued by a natural disaster. Sweden's chemical experts arrived in Venezuela in 2002 after a severe flood and were able to investigate containers with dangerous goods. These required attention before chemicals would be washed into the ocean, thereby contaminating the environment.

Several disaster prone countries such as Japan, Yemen, and Moldova have requested information from Sweden regarding, prevention activities, research programmes, and data systems for registering national statistics.

Exercises and Training

Sweden prioritizes exercises and training in the field of accident prevention and emergency response. This is an effective way to encourage cooperation between countries. In addition active participation increases competence and broadens the knowledge of new techniques.

7. Priorities you want addressed at World Conference on Disaster Reduction.

Here are the priorities that Sweden would like addressed**.**

Empowering Local Authorities

A session with good examples that show how local authorities can become active in all phases of disaster management including preparedness, prevention, response, and recovery (lessons learned).

Human Activities that Trigger Natural Catastrophes

There is a growing awareness that the deeds of man contribute to what was once believed to be entirely "natural" caused disasters. As this affects all countries of the world no matter how disaster prone they may be, it would be useful to have a review of current knowledge. An agenda for the continued research on human activities that trigger natural catastrophes is critical.

Sharing of Knowledge and Resources

How can developed nations assist the developing or undeveloped nations that do not have the resources to reduce the impacts of natural disasters?

Those nations interested in assisting developing or undeveloped nations should be active in relevant committees in order to obtain information about the needs and stimulate international cooperation. If it does not already exist, a register could also be maintained of those experts worldwide who could be called upon when expertise is required.

In addition, research results and new methodologies from the European Union should be shared at the UN level.

Achieving a Better Evaluation System

How can we better assess what has happened during accidents and evaluate the results? It is important to look at the whole spectrum of accident types and gain experience about how they should be handled in the future. Simply stated, it is called lessons learned. Information about the number or persons killed or injured is most important, but information about damage to the environmental is also essential. In some cases prevention of these accidents should also be a part of the evaluation process. In disaster prone countries a responsible agency or organisation needs to be appointed to develop a strategy so that lives are not lost when a similar disaster occurs.