Swedish Civil Contingencies Agency

Natural hazards and Disaster Risk Reduction in Sweden

If vulnerable elements as population, property, infrastructure or environment comes in the way of natural events it can cause serious consequences and disasters.

The vulnerability of society in the face of natural disasters is expected to increase as a result of climate change, population increase, and urbanisation. Collaboration on all levels, nationally and internationally, between sectors and actors working with land use planning, risk management, natural disasters and climate adaptation
is a pre-requisite to reduce underlying risk factors and enhance society´s ability to cope with natural hazards. In this respect Sweden established in 2007 a national platform for Disaster Risk Reduction in accordance with the Hyogo Framework for Action. The Swedish national platform for Disaster Risk Reduction are coordinated by the MSB and serves as an arena for cooperation between authorities and organisations. The work is carried out in close cooperation with the UN-ISDR, European Commission and other European National Platforms and Focal Points. The overall aim is to prevent and reduce the consequences of natural disasters for society as a whole.

Sweden has a high level of safety awareness and since there are socioeconomical advantages to prevent natural disasters MSB works in several ways with preventive actions for example, research, general risk mapping, fire weather prognoses, subsidies for preventive measures, education and information. A vital task is also to draw up guidelines and strategies for the adaptation of society to a changed climate. MSB supports the County Administrative Boards and the municipalities with adaptation measures.

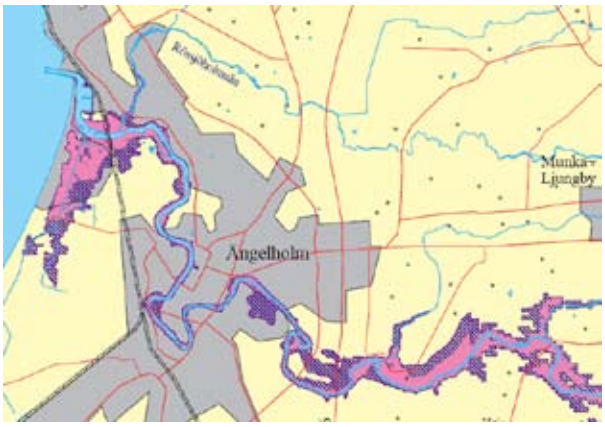
Extra resources for major emergencies

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

Floods

General flood inundation mapping

Almost every year Sweden is affected by floods that cause damage. These can be limited through preventative measures, planning and effective response operations during floods.



Example, flood inundation map

For this purpose the MSB compiles and maintains general flood inundation maps for built areas at risk close to watercourses. The maps are used for various risk and vulnerability analyses, emergency preparedness and in land use planning by municipalities. This watercourse model can also be used during the emergency stage of a flood to calculate probable water levels and the development of water discharges during the flood.

The MSB works with the entire emergency cycle, in other words, before, during and after the occurrence of emergencies, crises and disasters, which provides good opportunities to adopt a holistic perspective and to gain experience from incidents. Regardless of whether it is one person that is affected, for example, in an accident in the home, or if it is a serious emergency that could have consequences for the entire country or even other countries as well.

The objective of the Swedish Civil Contingency Agency (MSB) is to strengthen society's ability to prevent and handle accidents and severe peacetime emergencies. Society can learn from past experience by evaluation and follow-up in a continuous process where experience is being used to organise and develop tasks for the actors in the civil emergency planning system. Evaluation and learning from accidents and disasters, supervision and monitoring, need for new research and support for civil emergency planning activities are important tasks in order to strengthen societal security and to support prevention, preparedness, response and recovery throughout the disaster management cycle.

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River groups
The MSB support the establishment of local river co-ordination groups working as fora for collaboration and coordination of concerned stakeholders in the drainage basin area of a river to increase knowledge about responsibilities coordinated actions.

Reporting of high water discharges
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 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.

Extra resources for major floods
The extra resources for floods consist of e. g. sandbags, temporary flood barriers and water pumps.

Landslides

General stability mapping
In Sweden, the location, topography, and the nature of the ground of some areas makes them susceptible to landslides. Some buildings have been built in landslide sensitive areas. As support for municipal risk management the MSB carries out general stability mapping in areas with existing buildings. The maps show areas that are susceptible to landslides and those that are in need of a detailed geotechnical survey to determine ground stability. Many municipalities with uncertain ground conditions have access to this type of survey mapping.

Forest fires

Information System: Fire-risk - Forest & Land
The MSB has developed a national information system called, Fire-risk - Forest & 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 vegetation fire risks. The system provides basic data for prevention work and can also assist in decision-making during emergency response operations.

Extra resources for major forest fires
The MSB has set up regional resource depots for forest fires, primarily to provide support for municipal fire brigades. Materiel resources are contained in modules spread around the country. The modules can easily be relocated in the event of a major incident. Equipment, for the most part, consists of motor pumps, hoses, monitors, nozzles and branch pipes of varying sizes.

Storms

Extra resources for major storms
The MSB's depots for major storms contain, for example, generators that can be lent out to storm-hit areas that have lost electric power.

Government subsidies and compensation

For built-up areas, in which the consequences of natural disasters can be especially serious, the government at present allocates 40 million Swedish kronor per year for preventive measures. Municipalities carrying out preventive measures can apply for a subsidy from these allocated funds. Flood prevention can include embankments and dykes, pumping equipment or shutting-down devices for water supply and sewage systems. Landslide prevention can entail slope stabilisation measures.

A municipality that has incurred extensive costs during an emergency operation has the right to claim compensation from the state for that amount of the cost that exceeds the municipality's excess.