



The Swedish Rescue Services Agency's work with natural disasters



RÄDDNINGSSVERKET

Swedish Rescue Services Agency

The vision of the Swedish Rescue Services Agency is "A whole life in a world with a continuous decrease in accidents and injuries". This vision means that the task of the SRSA (Swedish Rescue Services Agency) is to support and develop emergency prevention work. Working together with others we can create a safer society and thereby contribute to an accident free life for everyone. And when emergencies do happen our aim is to reduce their consequences.

About the Swedish Rescue Services Agency

We are a national government authority working for a safer society. Our work covers all types of emergencies, from everyday accidents up to disasters and war. We concentrate on prevention work to reduce the number of emergencies that occur and thereby also their consequences. As a safety authority we are a leading conveyor of knowledge within our areas of responsibility. We take an active part in international cooperation and maintain a high level of preparedness for overseas humanitarian operations. Our work is characterised by collaboration and consideration for the environment; and is carried out in a way that gains us the trust of those who commission us for tasks as well as the world around us.

The SRSA should create good conditions to enable stakeholders concerned to cooperate and take preventive measures for natural disasters, so that emergencies, injuries and damage are reduced. The SRSA is also responsible for providing support to the municipalities during extensive emergency response operations for natural disasters. In the long-term we also have a responsibility to ensure that necessary measures are taken to meet the expected risk scenarios caused by climate changes.

What is a natural disaster?

The definition of natural disaster varies depending on context. The United Nations' definition is "natural events or phenomena that occur in the biosphere and that can cause damage".

The SRSA primarily works with the following natural disasters: floods, landslides, forest fires and storms.



Flooding

Flooding means that water covers areas that are usually dry and beyond the normal boundaries of lakes or water-courses and the sea. Flooding, as a result of e. g. heavy rainfall or snowmelt, can affect areas of land not close to water in areas where the water doesn't drain away.

Often during flooding the infrastructure of a community can be severely affected. Cut-off roads and washed away bridges can mean that several kilometres of roads

and railway lines have to be closed to traffic for long periods of time. The evacuation of people may be delayed as may the transportation of equipment and materials for repair. Bridges often carry power lines for electricity supply and telecommunications, and if these are disabled then the situation can become serious because the areas affected become isolated.

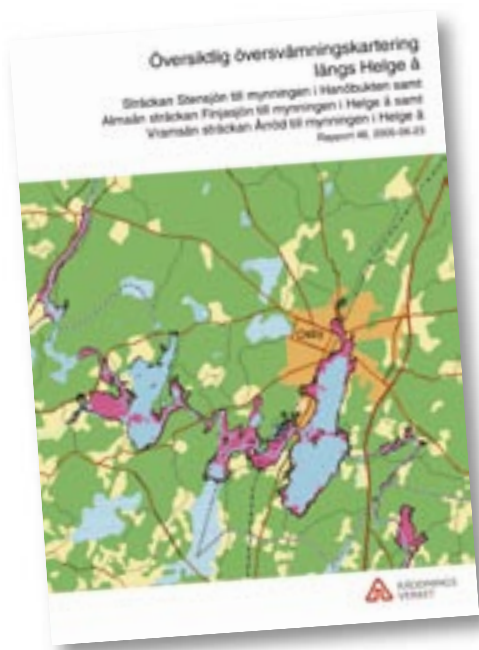


The SRSA's work with floods

General flood inundation mapping

Almost every year Sweden is affected by floods resulting in damage. Damage can be limited through prevention planning and effective response operations during flood emergencies. For this purpose the SRSA (Swedish Rescue Services Agency) compiles and maintains general flood inundation maps. These are created as basic data for prevention work with the help of a watercourse model for those areas close to watercourses that are at risk of flooding. The maps are intended for use during the planning of emergency and rescue services work and as a foundation for land use planning by municipalities. They can also be used as basic data for various risk and vulnerability analyses.

The 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.



River groups

The SRSA works towards the establishment of river groups. These groups are a forum for collaboration between and coordination of concerned stakeholders located within the drainage basin of a river. Collaboration increases knowledge about the responsibilities, function and capacity of the stakeholders concerned. The relevant county administrative board or boards convene.

Reporting of high water discharge

The SRSA always monitors the development of the spring flood across the country by collating details from the county administrative boards about the water discharge situation. 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

During major floods the state can, through the SRSA, support municipalities with specific extra resources, which consist of e. g. sandbags, temporary flood barriers and water pumps. The incident commander can requisition materiel via the SRSA's duty officer

Landslides

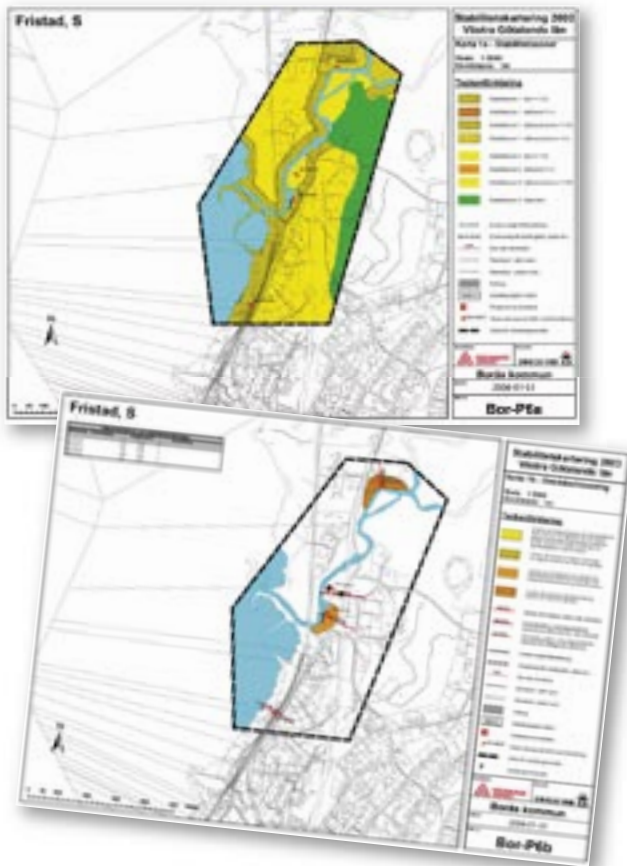
Landslides are examples of rapid movements of soil or rock. They can cause major damage to land and buildings in the affected area, and within the area where the soil or rock mass comes to rest. In many cases, landslides happen as a result of the natural process of erosion, but can also be triggered by human interference with nature and both can occur without warning. Floods can also trigger off landslides.



The SRSA's work with landslides

General stability mapping

There are areas in Sweden that because of their location, topography and the nature of the ground are susceptible to landslides. A large number of buildings were constructed before careful consideration of the risks for natural disasters became common practice during physical planning by municipalities. Therefore, some buildings have been built in landslide sensitive areas. As support for municipal risk management the SRSA carries out general stability mapping in areas with existing buildings. The maps show areas that are susceptible to landslides and areas that are in need of a detailed geotechnical survey to elucidate ground stability. Many municipalities with uncertain ground conditions have access to this type of survey mapping.



Forest fires

Sweden has summers that occasionally lead to major forest fires. The speed of the spread of a fire can be about 20 metres per minute. The most common causes of forest fires are human activities, such as tree-felling, camp fires and children playing with fire. Natural phenomena such as lightning also contribute to large areas of woodland burning up. Additionally, the causes of many forest fires are unknown. The behaviour of a forest fire is controlled by three fundamental aspects: fuel, the weather and the topography.

Forest fires result in economic and aesthetic damage to woodland and in certain cases also to parts of the infrastructure and to buildings. The smoke from a forest fire can affect people and communities far away.



The SRSA's work with forest fires

Information System: Fire-risk - Forest & Land

The SRSA has developed a national information system called, Fire-risk - Forest & Land, for the municipal fire & rescue services and the county administrative boards. This is used to assess the risk of vegetation fires. The system is available on the Internet. It contains, for example, relevant information about how the weather can influence the risk of vegetation fires. 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

During major forest fires the state can, through the SRSA, support municipalities with specific extra resources. The SRSA has set up regional resource depots for forest fires, primarily to provide support for the municipal fire & rescue services. The incident commander can requisition materiel via the SRSA's duty officer. Materiel resources are contained in 24 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

During a storm the wind blows at more than 24.5 metres per second. The wind is then so powerful that trees can be uprooted and serious damage caused to buildings and forests. Because of trees falling onto power lines electrical power is often severed to large areas with serious consequences as a result.

The SRSA's work with storms

Extra resources for major storm emergencies

During storms resulting in serious damage the state can, through the SRSA, support municipalities with specific extra resources. The SRSA's depots contain, for example, generators that can be lent out to storm-hit areas that have lost electric power. The incident commander can requisition materiel via the SRSA's duty officer.

Support for the fire & rescue service

The SRSA's duty officer is the agency's point of contact for support and materiel. The duty officer can be reached round the clock on +46 54-150150. Duty officers have fire officer training and experience of command at major incidents. And functions as support for municipalities requesting help. The duty officer is aware of the SRSA's resources and how to get access to them; and also maintains contact with other authorities and ministries that can be involved during operations at which the state has provided assistance.



Government subsidies and compensation

Government subsidies for preventive work for natural disasters

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 that have carried out or are going to carry out preventive measures can apply for a subsidy from these allocated funds. Flood prevention can take the form of embankments and dykes, pumping equipment or shutting-down devices for water supply and sewage systems. Landslide prevention can take the form of the following slope stabilisation measures, i.e. the excavation of masses, stabilising berms, erosion protection measures, drainage measures, or ground-strengthening with lime cement columns. In certain cases the only economically defensible method to prevent an emergency is to remove the threatened object i.e. to buy up and demolish a building, for example.

Information about government subsidies and application forms can be found on the SRSA's home page www.raddningsverket.se/naturolyckor.



Compensation for emergency and rescue services costs

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. The aim of compensation is to protect municipalities from the type of costs that can be incurred as a result of major and long-term emergency and rescue operations. If a municipality has carried out an emergency operation that could be the subject of state compensation the SRSA ought to be informed about it as soon as possible; and if possible, during execution of the operation in question.

Information about compensation and application forms can be found on the SRSA's home page www.raddningsverket.se

Research and development

Knowledge development plays a vital role in the work aimed at achieving a safer society. Research is the most important tool for such development and is the foundation for the exchange of knowledge that is needed to develop the knowledge and competence of the SRSA and individual citizens. The kind of research that the SRSA funds within the field of natural disasters contributes to more effective preventive measures and support to the fire & rescue service.

Examples of projects are:

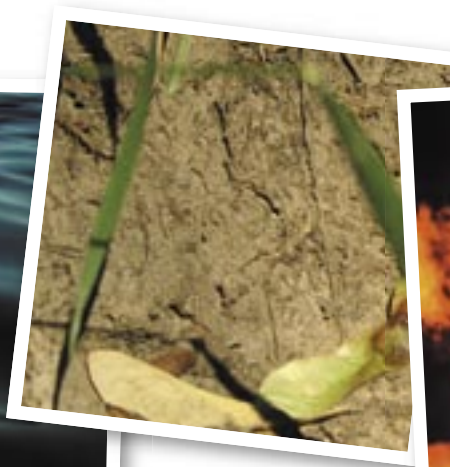
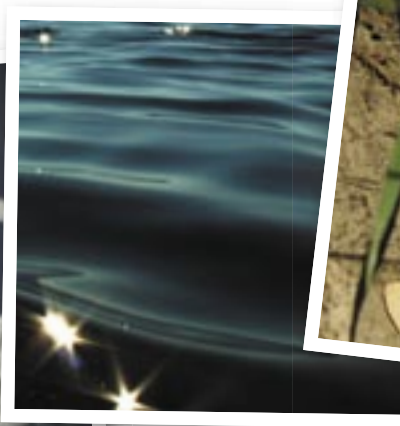
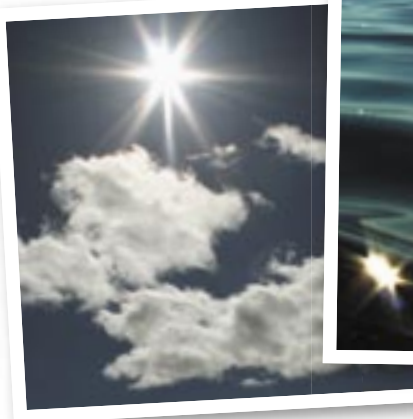
- *Flood forecasting – development of methods for a national forecasting system.*
- *How vegetation can be used to strengthen the ground*
- *Tension conditions in mud slopes.*
- *Slope safety in times of climate change.*
- *New findings, more reliable methods and better dimensioning of sulphide soil.*
- *Extreme rainfall, and its significance for municipal planning.*

Collaboration

The work of the SRSA entails close collaboration with a large number of other authorities. Additionally the SRSA participates on many delegations, networks and collaboration groups, for example, the Emergency & Rescue Services Committee, the Landslide Delegation, the collaboration group for water quality and water supply, and river groups.

Education

The SRSA provides training and holds information campaigns, which answer the needs of concerned parties for competence in the field of natural disasters. The Civil Protection Act has provided municipalities and authorities with an unambiguous responsibility to work with emergency prevention. The SRSA's comprehensive programme of training courses meets the conditions contained in the Civil Protection Act.





Observer missions

In the event of major incidents or emergencies of particular interest the SRSA despatches observers, both in Sweden and overseas. This is in order to learn how cooperation and preventive measures have worked during emergency response operations. Observer missions are documented and can be ordered from the SRSA's publications service on www.raddningsverket.se Observations from these missions are entered into the RIB database (Integrated decision-support for civil protection and emergency response during operations).

Learning from natural disasters

One commission of the SRSA, in collaboration with other concerned authorities, is to maintain a database of statistics that provide an overall picture of natural disasters in Sweden. The contents of the database should be based on lessons learned by authorities at natural disasters. The background to this commission is that there is currently no coordinated information in Sweden about natural disasters, their consequences or observations and lessons learned from the various bodies involved.

European Union and international work

Collaboration

The SRSA actively participates in a number of EU and international contexts, such as, political forums, collaboration and expert groups, and various projects, with the aim of developing work with natural disasters.

On an international level the SRSA collaborates on the UN's International Strategy for Disaster Reduction work. As a result of this collaboration Sweden is expected to establish a national platform for the coordination of natural disaster issues in Sweden. The SRSA also actively collaborates with a number of regional cooperation projects which, for example, aim to exchange experiences and develop the management of natural disasters within our immediate surroundings. There is also development cooperation which focuses on prioritised countries to improve their capacities to prevent and deal with emergencies. The export of specialist services is another area in which the SRSA puts its expertise at the disposal of other countries.



As a result of recent natural disasters within the EU, work to improve the EU's emergency management has intensified. This work covers everything from prevention to emergency preparedness and the emergency and rescue services. The SRSA is involved with the development of the EU's role and the ways in which the EU can support member states with their work on natural disasters. The SRSA, for example, offers its expert knowledge during the drawing up of various pieces of EU legislation. The Flood Directive is an example of this. Operational cooperation and the Community Mechanism have also been set up by the EU's member states. The aim of the Community Mechanism is to facilitate mutual aid between member states in the event of major emergencies and disasters.

International humanitarian aid work

Since 1988 the SRSA has carried out over 180 aid missions and emergency and rescue operations in approximately 60 countries, most of which have been financed by Sida. The tasks vary, from direct humanitarian aid missions to a population in distress, to search & rescue teams following earthquakes, to support for other organisations. Other types of missions include long-term development work and reconstruction and recovery work following disasters or conflict.





Further information

The SRSA's home page www.raddningsverket.se contains information about the agency's tasks both nationally and internationally. And also functions as a service for other authorities and the general public. Additionally, you can order educational material, download statistics and forms, search databases and find the latest facts.

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