

Sweden

EPR Fact Sheet

Decision making

In the event of an emergency at a nuclear installation, decision making rests with the organisations that are normally responsible for the sector and for administrative regions. In the case of protective actions that have an impact on the population (e.g. sheltering and evacuation), the responsible authority is the County Administrative Board. The Swedish Civil Contingencies Agency (MSB) has a mandate for coordination and supervision of emergency preparedness at national level and assists with the coordination of relevant authorities' response actions during crises. The Swedish Radiation Safety Authority (SSM) issues regulations applying to nuclear installations and supervises regulatory compliance. This includes provisions for licensees' emergency planning.

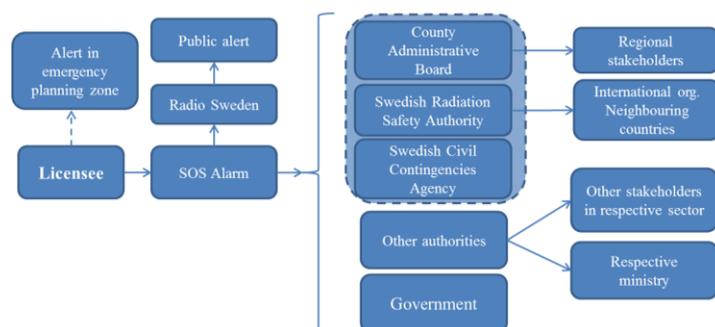
Advice

SSM provides advice and expert assistance to other government agencies. SSM operates a fixed radiation monitoring network and a network of air sampling stations. A national expert response organisation for radiological monitoring and sampling is also maintained by SSM. The Swedish Meteorological and Hydrological Institute (SMHI) assists SSM by providing weather forecasts and data for dispersion calculations.

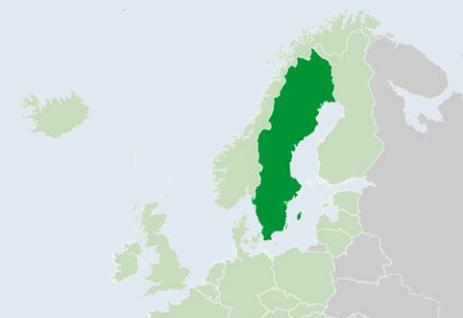
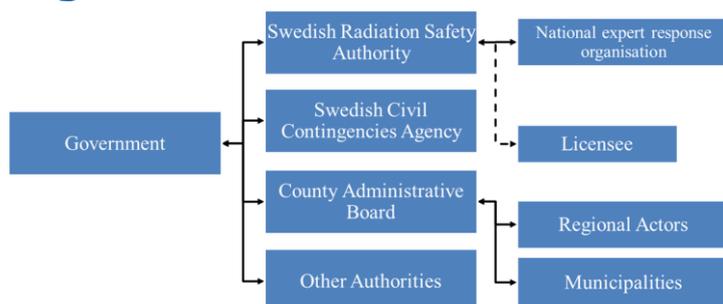
Licensee

In the event of an emergency, a licensee is required to take prompt actions in order to classify the event according to the alarm criteria, alert the facility's emergency response organisation and responsible authorities, assess possible releases and time-related aspect, and restore the facility to a safe and stable state.

Alarm sequence



Organizational structure



Country info

Capital	Stockholm
Official language	Swedish
Population	10.1 M
Area	447 000 km ²
Currency	Krona (SEK)
Time zone	UTC+1
Calling code	+46
Internet TLD	.se
NPPs /ele. share	3/40%

NWP*

Swedish Meteorological and Hydrological Institute (SMHI)

NCA*

Swedish Radiation Safety Authority (SSM)

Emergency website

www.krisinformation.se

Online measurements

<http://eurdepweb.jrc.ec.europa.eu/EurdepMap/Default.aspx>

Bilateral agreements

Denmark, Finland, Germany, Norway, Russia, Ukraine

RANET capabilities

- Source Search and Recovery
- Radiation Survey
- Environmental Sampling and Analysis
- Radiological Assessment and Advice

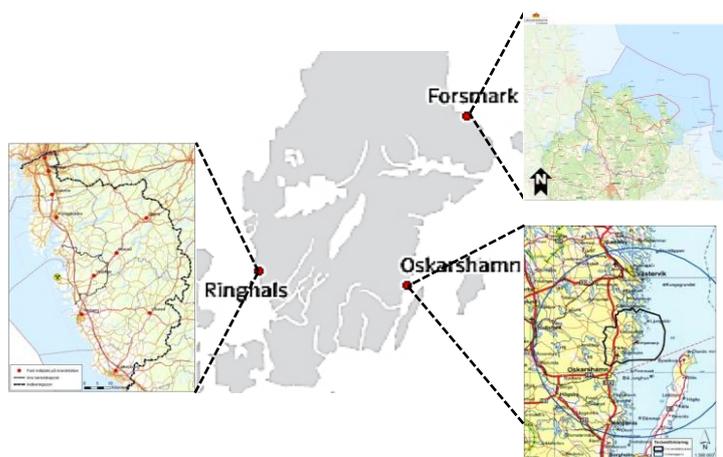
*National Warning Point and Competent Authority under the Emergency Conventions

Nuclear power plants and population

Facility	Type	MW _e	GPS coordinates	5 km pop.	20 km pop.	Comments		
Forsmark	F1	BWR	1000	60.405 N	18.161 E	60	9 100	Permanent residents
	F2	BWR	1200					
	F3	BWR	1200					
Oskarshamn	O3	BWR	1500	57.416 N	16.673 E	200	6 200	
Ringhals	R1	BWR	900	57.256 N	12.108 E	3 300	59 000	
	R2	PWR	1000					
	R3	PWR	1100					
	R4	PWR	1200					

* Gross electrical capacity reported in IAEA PRIS

Planning zones



Planning zones: In the maps, the inner (approx. 12-15 km) and outer (approx. 50 km) emergency planning zones are shown. The emergency planning zones are currently [under revision](#).

Protection strategy

The national protection strategy in Sweden is based on two different reference levels for the public in emergency exposure situations. In the case of an event at a nuclear power plant without functioning mitigation systems, SSM applies a reference level of 100 mSv residual effective dose. For all other events 20 mSv residual effective dose is used in accordance with the Nordic Flag Book. Dose criteria and intervention levels have been derived from the reference levels, and are described further in [this report](#).

Criteria

Protective Action	Comments
Evacuation	Precautionary evacuation of the innermost 5 km. Evacuation in areas where the projected effective dose is likely to exceed 100 or 20 mSv during one week, or in areas where prolonged sheltering is foreseen.
Sheltering	Sheltering in the inner emergency planning zone is recommended when a general emergency has been declared and in areas where the projected effective dose is likely to exceed 10 mSv during one week.
ITB	Predistribution of ITB in the inner emergency planning zone. Recommended intake of predistributed iodine tablets by children and adults (< 40 years of age) if the projected equivalent dose to the thyroid is likely to exceed 10 mSv.

Emergency classification

Site area emergency

The facility deviates from expected operation in such a way that at least two barriers have been compromised or threatened, the facility has been effected in such a way that the consequences have not yet been analysed, or for any other reason are not possible to foresee. No release of radioactive substances has taken place that warrants off-site protective actions.

General emergency

An event resulting in an ongoing release, or a situation where a release within 12 hours cannot be ruled out. The release warrants off-site protective actions.