

Switzerland

EPR Fact Sheet

Decision making

Decisions on protective actions are basically taken by the Federal Council on the basis of application of the Federal NBCN Management Board. The heads of all concerned federal offices (ministries) and other representatives are members of this board. The meetings of this board constitute an accelerated consultation mechanism similar to the one in normal situation.

For urgent protective actions the competence is delegated to the National Emergency Operations Centre (NEOC).

The implementation of the protective and other response actions is in the responsibility of the local authorities (cantons).

Advice

Advice to the decision-making bodies and the responding organisations is provided by the competent federal offices and some specific technical support organisation. The assessment of the plant conditions and the possible off-site consequences is performed by the Nuclear Safety Inspectorate ENSI (regulatory body). The radiological situation is monitored and assessed by NEOC and the Federal office of public health (FOPH), where NEOC is leading the actions in areas under emergency exposure situation and the FOPH those under existing and planned exposure situation

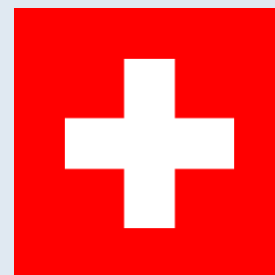
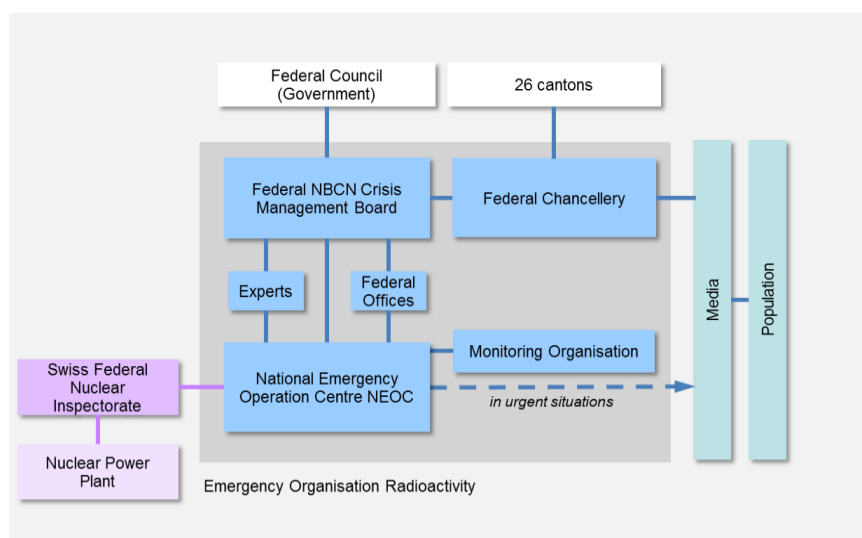
Licensee

The licensee is obliged to notify the Regulatory Body with no delay of any event fulfilling defined criteria. It is obliged to make information available to the Regulatory Body needed to assess the situation and to determine the necessary protective actions for the public

Alarming

The alarming and the instructions regarding urgent protective actions and other response actions is triggered by NEOC. The sirens are activated by the local authorities and the instruction is broadcasted by national and private radio stations.

Organizational structure



Country info

Capital	Bern
Official language	German, French, Italian, Romansh
Population	8 M
Area	40 000 km ²
Currency	Swiss franc (CHF)
Time zone	UTC+1
Calling code	+41
Internet TLD	.ch
NPPs /ele. share	5/40%

NWP and NCA*

National Emergency Operations Centre (NEOC)

Nuclear regulatory body

Swiss Federal Nuclear Inspectorate (ENSI)

Radiation protection

Federal Office of Public Health (FOPH)
Swiss Federal Nuclear Inspectorate (ENSI)

Emergency website

None

Online measurements

<https://www.naz.ch>
www.ensi.ch/en/topic/measured-value-about-swiss-nuclear-power-plants/

Bilateral agreements

Austria, France, Germany, Italy, Liechtenstein

RANET capabilities

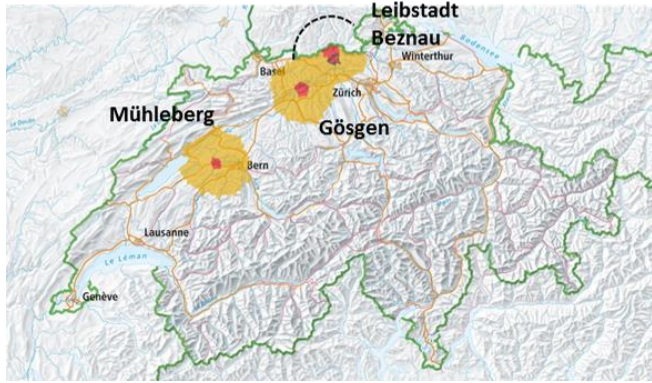
- Source Search and Recovery
- Radiation Survey
- Environmental Sampling and Analysis
- Radiological Assessment and Advice
- Medical Support
- Dose Assessment
- Decontamination

Nuclear facilities* and population

NPP	Type	MW _e	GPS coordinates	5 km pop.	20 km pop.	Comments
Beznau I	KKB I	BWR	1130	47.552192° N 8.231454° E	25 000	250 000
Beznau II	KKB II	PWR	1130	47.552192° N 8.231454° E	25 000	250 000
Gösgen	KKG	BWR	3000	47.366494° N 7.972052° E	30 000	420 000
Leibstadt	KKL	BWR	3600	47.602285° N 8.184662° E	25 000	250 000
Mühleberg	KKM	PWR	1100	46.969160° N 7.269328° E	3 500	580 000

*The IAEA emergency preparedness category 1 and other relevant facilities

Planning zones



Planning zone 1 with radius 3 to 5 km and zone 2 with radius of 20 km, divided in 6 overlapping sectors of 120 degrees

Emergency classification

The emergency classes are triggered by specific plant parameters

Alert

Situation where special measures have to be taken by the operator to insure the safety of the power plant but without any actual threat offsite.

Site Area Emergency

Loss of defense in depth in the plant requiring an activation of off-site emergency organisations but still without an actual threat off-site.

General Emergency

Situation with a potential threat off-site requiring protective actions for the population and other protective actions.

Protection strategy

For each type of radiological or nuclear events a predefined strategy is defined. For a nuclear accident this predefined strategy is based on a reference level of 100 mSv. From this protection goal the generic criteria and the operational intervention levels are derived. The generic criteria are given in the table below. The predefined strategy will be implemented in concepts of operations describing the actions to be taken by the different responding organisations (including e.g. special instructions for schools, access control, traffic deviations, etc.)

As soon as the consequences can be assessed the strategy is adapted by a process of justification and optimisation. The new strategy will lead to an optimised Reference Level which will be used to derive new generic criteria and operational intervention levels.

Criteria

Protective Action	Generic Criteria	Comments
Precautionary evacuation	100 mSv eff., 2d, ext.+inh.	Zone 1 as an urgent protective action and if safely feasible, in a second step endangered sectors of zone 2 if necessary
Stay indoors for children and pregnant women	1 mSv eff., 2d, ext.+inh.	
Sheltering	10 mSv eff., 2d, ext.+inh.	If not enough information zone 1 and zone 2 (endangered sectors)
ITB	50 mSv thy., 2d, inh.	Pre-distributed to the households up to 50 km
Precautionary harvesting and grazing ban	---	No Generic Criterion defined. Specific criterion: Where protective actions were ordered and up to the Swiss border and up to the alps

Comments

For protective actions not listed in the table a dose level of 100 mSv is set as a criteria. This criteria will serve as a criteria for an evacuation as an early protective action.