

The Swedish remediation expert group NESAs

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Swedish Board of Agriculture: Lotta Andersson, Malin Hartvigsson

Swedish Radiation Safety Authority: Pål Andersson, **Anna Maria Blixt Buhr**

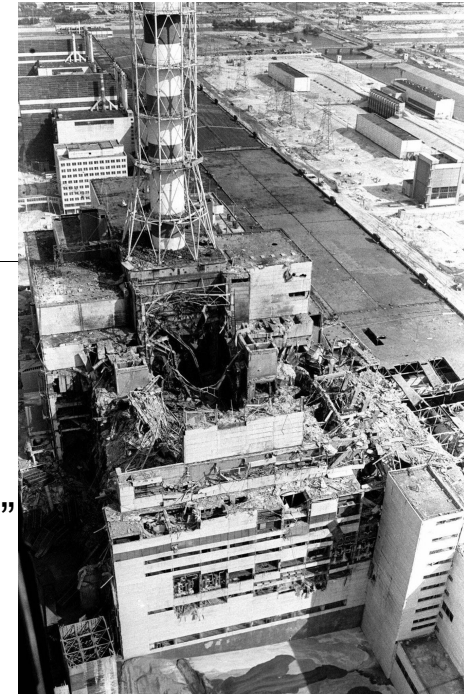
Swedish Defence Research Agency: Petra Appelblad, Annika Tovedal

NESA - FROM THE BEGINNING



History

- June 1987: The Swedish Government appointed a committee with the task of reviewing nuclear power preparedness in the aftermath of the Chernobyl accident.
- November 1989: Final report “Public measures against serious accidents”
 - The County Administrative Board in the affected county should be responsible for the remediation/decontamination planning
 - SSI (~Swedish Radiation Safety Authority) should establish a national expert group for remediation/decontamination of radioactive materials from a nuclear facility
 - The Principle of Responsibility - whoever is responsible for an activity under normal conditions retains that same responsibility during a crisis.
- June 1993: The NESAs group became established and affiliated to SSI’s crisis organization.
- July 2018: Mutual agreement to transfer responsibility and chairmanship from Swedish Radiation Safety Authority to Swedish Civil Defence and Resilience Agency.



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NESA - TODAY



A group of experts from authorities in Sweden that have responsibility, or perform research, in the field of remediation, including decontamination, of radioactive fallout.

With the purpose to compile and value knowledge, to collect and share information, to support regional and central authorities in their training and development in the field.

NESA:



**Swedish Civil Defence
and Resilience Agency**



Länsstyrelserna



Livsmedelsverket
Swedish Food Agency



FOI



**Strål
säkerhets
myndigheten**
Swedish Radiation Safety Authority



**Jordbruks
verket**

Swedish Board
of Agriculture



Involvement in guidances documentation

- Reviewing national strategy concerning remediation (following the release of radioactive substances from a nuclear facility)
- Involved in drafting of handbook on remediation to support the regional plans from the county administrative boards
 - First version in 2007
 - Revised guidance in 2022 (additional modules on its way)
- Involved in drafting the guidance on food production and handling following radioactive fallout
 - First version in 2002 (translated into Japanese)
 - Revised version in 2020



Building competence

- By study visits and invited speakers to NESA regular meetings
- By international guidance's/experiences from previous events
- By developing technical documents

Direkta kostnader för sanering

Resultat av delprojekt inom MSB-projektet "Återställning av förorenade områden efter en radiologisk eller nukleär olycka"



2025-04-03

- Sport
 - Djup schakt
 - Minska inträngande vatten
 - Intakt grundvattennivå utanför
- Staket
 - Insyn
 - Säkerhet

jönköpings.se JÖNKÖPINGS KOMMUN

Kostråd efter Tjernobyl 1987

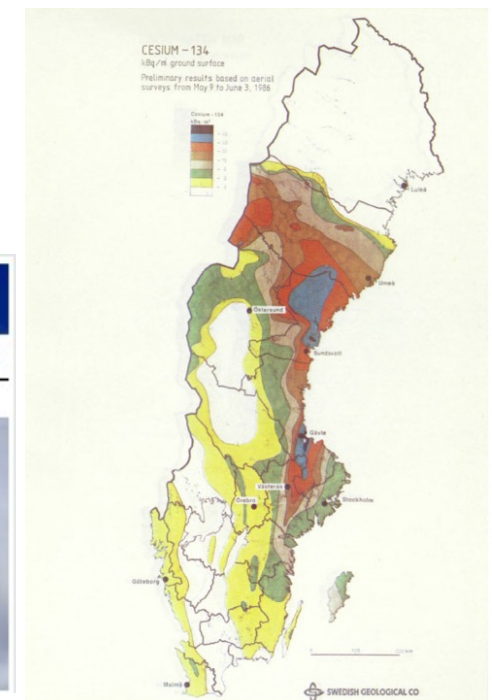
Gränsvärde och stråldos

En extra stråldos på 1 mSv per år innebär en ökad risk för cancer. Enligt internationella rekommendationer kan en sådan stråldos tolereras om den inte överstiger 100 mSv per år. Detta innebär att förädlade livsmedel som innehåller radioaktiva ämnen inte får innehålla mer än 100 Bq per kg.

Cancerrisken

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Study visit to Japan

- Authorities (Ministries in Tokyo MHLW, MAFF, RA, MOE, Fukushima prefecture, Kawauchi village)
- Information centres (TEPCO's information centre in Tomioka, MOE's Environmental Regeneration Plaza in Fukushima)
- Researchers and projects (Tokyo and Hokkaido University, NARO, FFPRI, JAEA's CLADS)
- Waste facilities and projects (Interim Storage Facility, the Environmental Regeneration Project)
- NGO's (Saisei No Kai)

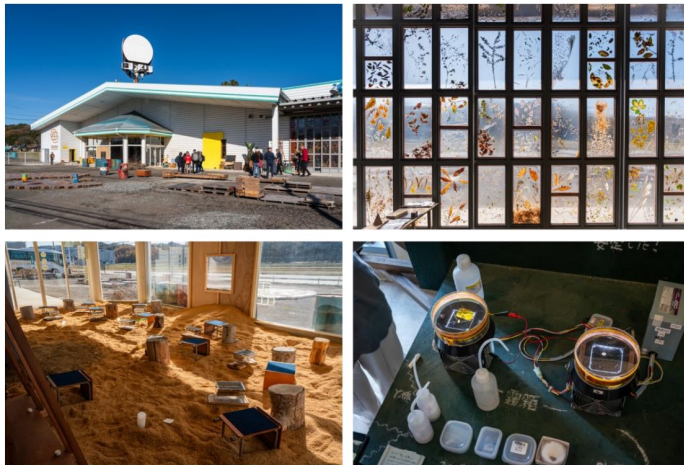


Photos: Anders Landgren (MCF)



Study visit to Japan cont.

- The study visit resulted in reports, seminars and presentations as well as inputs to guidance and plans.
- Recovery much more than remediation/decontamination
 - Cultural aspects
 - Citizen involvement



Photos: Anders Landgren (MCF)



Långsiktiga konsekvenser av kärnkraftsolyckan i Japan – myndighetshanderingen och lärdomar kopplade till svenska förhållanden



- En långsiktig beredskapsplanering underlättar dels en effektiv start av saneringsarbetet efter en kärnkraftsolycka, och dels nödvändiga anpassningar efter de rådande förutsättningarna.
- Sanering är till och med kostbar. Det behövs finnas en tydlig målsätt med saneringen och återställningen, för att det inte ska bli en översiktlig. Saneringsmetoder som genererar stora avfallsmängder, till exempel genom borttagning av det översta jordlagret, bör övervägas noggrant innan de eventuella efterverkningarna avskattas och lägs under en lång tid.
- Kommunikation och transparens kommer att spela en stor roll. Medborgarna behöver involveras i hela processen. En förutsättning för en lyckad sanering och återställning är att medborgarna har och bärar förtroende för myndigheterna.



Exercises & Seminars

- OECD/NEA INEX-6 in 2024
 - NESA was involved in the National Planning Committee and as Exercise Players in Module 3 (Remediation) and Module 4 (Waste Management)
 - Proposed actions: review current regulatory frameworks, streamline the licensing process incl. waste management.
- Seminar series in 2017-2018 on nuclear fallout from NW – focus on remediation and food production
- Distributed seminar exercise on remediation in 2021, part of nuclear power plant exercise *Falken 2021*



Photo: Alireza Sadeghi Shahriary (SSM)



Valuable lessons

- Emergency preparedness in Sweden is decentralized; this distributed responsibility requires strong **cooperation**, facilitated by platforms like **NESA**.
- Representatives in the group are appointed via **formal requests** to the authorities or through agreements; because these appointments are long-term, they ensure **continuity** and a built-in **institutional memory** within the group.
- The group need, however, to **set aside time** and **find financing** for projects, exercises and study visits.
- NESA's **role** and **responsibilities** need to be communicated with regional and local authorities.



NESA - FUTURE



Future activities

- Invite possible new members/authorities to join the group
- Review NESA's steering document
- Investigate the role of NESA in case of a radiological emergency (members are not on duty 24/7/365 or are already involved in in other crisis organization roles)
- Incorporate civil defence aspects in the guidances (again!)
- Prepare for a national remediation exercise (with experiences from INEX-6)
- Promote NESA to the County Administrative Boards and Municipalities



Thank you!
Questions?

