



Strål
säkerhets
myndigheten

Swedish Radiation Safety Authority

Swedish Radiation Safety Authority
Central Authority for overall responsibility for
Radiation and Nuclear safety



We work to ensure radiation safety

- ➔ **Radiation protection** to protect people's health and the environment from the harmful effects of radiation
- ➔ **Safety** in all nuclear technology activities
- ➔ **Security** to prevent the unlawful proliferation of nuclear material and nuclear waste in order to prevent the proliferation of nuclear weapons





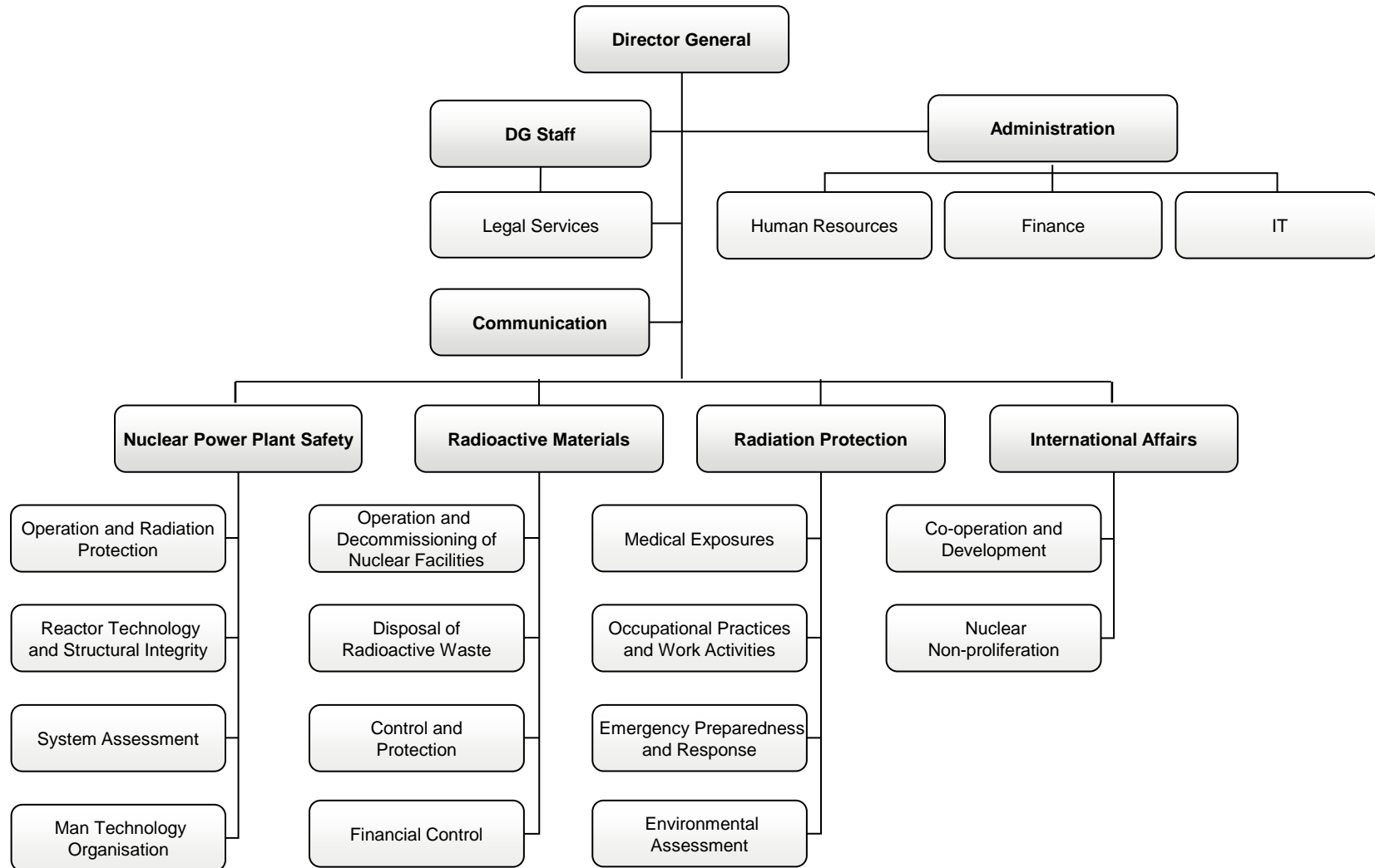
Our vision and activity idea

- Vision:
A radiation safe society.
- Activity idea:
To work proactive and preventive with the aim to protect people and environment from the undesired effects of radiation, in presence and in the future.



Identity work and values

- Identity work of the new organization is ongoing with the following key values:
- Reliability (Trustworthy)
- Integrity
- Transparency





About the Swedish Radiation Safety Authority

- ➔ under the Ministry of the Environment
- ➔ Acting DG Fredrik Hassel
- ➔ budget approx. 400 million SEK
- ➔ ca 250 employees



Secretariat for International Development Cooperation

- ➔ Nuclear and radiation safety in Eastern Europe and Russia
- ➔ Cooperation started in 1991 with the Baltic countries
- ➔ With RF cooperation started 1996



Section for Cooperation and Development

- 12 employees
- Areas of cooperation
 - Reactor safety
 - Nuclear and radioactive waste management
 - Radiation protection and Emergency preparedness
 - Nuclear non-proliferation



Countries of cooperation

- ➔ Russian Federation
- ➔ Ukraine
- ➔ Georgia
- ➔ Belarus
- ➔ Moldova

Sweden has cooperated also with:

- ➔ The Baltic countries
- ➔ Kazakhstan
- ➔ Armenia
- ➔ Belarus



Forms of cooperation

- Project
- Defined with start point at needs of the beneficiary
- Seminars, Workshops, Trainings, Courses
- Expertise, Transfer of Know-how
- SSM gets use of both internal and external experts resources
- Procurement of Hardware, Software
- Study visits



Financiers

- **Ministry of Environment** (Radiation Safety in Nuclear Power Field and Emergency Preparedness, Cooperation with RF)
- **Ministry of Foreign Affairs** (Nuclear Proliferation with Eastern Europe)
- **Swedish International Development Agency (Sida)** (Radiation Protection and Emergency Preparedness in Ukraine)
- **EU** (Lithuania)



Co-operation with Russia

Aim: To contribute to

- Strengthening of radiation protection of people and environment,
- Strengthening of reactor safety,
- Strengthening of safety of SNF and RW management
- Development of national emergency preparedness and response to radiological incidents and accidents
- Nuclear security, physical protection of nuclear facilities, NMA&C
- Combating of illicit trafficking in nuclear materials and radioactive sources
- Development of legislation and regulations



Co-operation in RF

- Rosatom
- Rosenergoatom, LNPP, KNPP
- Authorities: RTN, FMBA
- RosRAO
- SevRAO
- Rosatomflot
- Atomprof
- CMP, TVEL
- IPPE, RTMC
- Atombezopasnost
- IBRAE
- Univ. in Ural and Tomsk



Bilateral and Multilateral co-operation with RF

- Policy of SG for neighbouring country co-operation with RF in the field of Radiation Safety and Environmental Protection
- Implementation: SSM and Swedish Agency for EP
- Increasing importance for relations in the field of EP:
- HELCOM: RF presidency 2008-2010, Sweden 2010-2012
- Increasing focus on Northern Region:
- Barents Euro-Arctic Council 2009-2011 and in Environmental Working Group of BC 2010-2011
- Swedish presidency in Arctic Council 2011-2013
- Council of the Baltic Sea States CBSS
- Global Partnership
- IAEA - CEG



Overall objectives in co-op. with RF

- ➔ Mutual interest and usefulness
- ➔ Contribute to Swedish Environmental Goals and strengthen int. Co-op.
- ➔ Russian priorities (compatible with Swedish priorities)
- ➔ Long-term effects and high effectiveness
- ➔ Introduce high env. standards and effective implementation of national legislation and international agreements
- ➔ Contact network with the gov. authorities and civil society on federal, regional and local level
- ➔ Strengthen synergies and compatibility between authority cooperation and multilateral investment projects
- ➔ Co-ordination with other co-operation programs, bilateral, G-8 Global Partnership, EU (NSCI), MNEPR, NDEP



Areas of cooperation with RF

- Financed by MoE, Budget ca. 4.5 M EUR/y
- Reactor safety
- RW Management (RWM system at LNPP & SWM at KNPP, rehabilitation of Andreeva Bay, cooperation with SevRAO, WM strategy with IBRAE)



Reactor Safety

- Reactor safety at KNPP & LNPP
- Improvements of safety related systems
- Ultrasound safety tests
- Inspection manipulator
- Fire protection ventilation
- Transformers,
- Pumps
- Diesel generators, electrical safety,
- TV-system surveillance, etc.



RW Management

- Rehabilitation of Andreeva Bay - contract is for the design of Building 153, the SNF retrieval facility, with UK
- Near surface repository at Andreeva Bay (VLLW) (project cancelled after the new Federal Law on RWM, pending new regulations)
- WM strategy development with IBRAE (final repository and legislation issues)
- Solid state WM at KNPP, activity scanning, plastic mill
- Cooperation with Rosatom on SFM – optimization analysis (reprocessing vs. direct disposal)



RWM system at LNPP

- ➔ Pilote program in WM, 3-years project
- ➔ Training in software SAFRAN
- ➔ Exchange of experience in WM with Ignalina NPP and Chernobyl NPP (RBMK)
- ➔ Procurement of equipment for waste sorting



RTG Lighthouses in the Baltic See

- Finland and Norway signed Agreement on replacement on replacement of Russia's radioactive RTG lighthouses (Sr-90) in the Baltic See (71).
- 3-yrs project on totally 10 MEUR (1.5 MEUR from Finland)
- Swedish participation 2010-2012, ca 2 MEUR.
- RTGs removed to the central storage and replaced by solar panels



Radiation protection & Emergency preparedness

- Emergency preparedness regional cooperation with Rosatom Crisis Centre (Finland, Norway)
- Early warning agreements
- Mutual Radiological Emergency Exercises
- Calibrator for personal dosimetry at KNPP
- EIA and development of regulations concerning occupational protection and inspections with RTN and FMBA



Ongoing projects in the field non-proliferation

- NMAC system at Chepetsk MP (CMP)
- Development of the computerized NMAC system
- Gamma-spectrometer delivered and installed for measuring of the enrichment of incoming uranium.
- Contract signed with IPPE for development of measurement methodologies and training of staff.



Ongoing projects in the field non-proliferation cont.

- Technical assignment for computerized NMA&C system developed through contract with Luch Podolsk
- Ongoing contracting with CMP on implementation of the computerized NMA&C system at CMP.



Ongoing projects in the field of combatting of illicit trafficking in nuclear materials and radioactive sources

- Combating of illicit trafficking at Kola peninsula
- Partner Atombezopasnost Rosatom
- Measurement equipment
- Mobile laboratory with detectors and measurement equipment for search of orphan sources
- Start of the similar project with Kaliningrad Region



Ongoing projects in the field of PP

- ➔ PP at nuclear facilities
- ➔ Institute for Applied Chemistry, St. Petersburg, finalized
- ➔ Serbryanka PP, Atomflot, under contracting
- ➔ PP at Nerpa Shipyard in preparation of transfer of SNP and RW from the Lapse vessel



Ongoing projects in the field non-proliferation education

Education/Training in Non-proliferation

- Universities at Ural and Tomsk
- Partners Atomprof Rosatom, and SIPRI Stockholm, Univ. of Stockholm
- New training program started with Atomprof in Leningrad Region



Co-operation with RTN on legislation issues

- Nuclear Safety Analyses (methods, trainings PSA, DSA methods)
- Legislation in MPC&A and PP area, Analysis, Comparison with International, Harmonization
- CVD technique,
- Int. Conventions: Amendment to the Convention on PP, Code of Conduct on Safety and Security of Radioactive Sources
- Cooperation in other RW, RP&EP



Future bilateral co-operation with RF

- Annual Decisions from the MoE with annual budget, but
- Current Intentions are to put focus
- more on Emergency Preparedness, Combating of Illicit Trafficking, Nuclear Security and Waste Management and Nuclear Legacy issues and
- less to Reactor Safety.
- Time perspective – no signs it will be terminate in short time, 5, 10, 15 years, more?



Multilateral Co-operation

- ➔ Future of GP
- ➔ GP original 10-years program is finishing this year and there are on-going discussion on continuation (with new agenda). Sweden advocates cont. GP “classical” i.e. nuclear security issues and cont. of Russian projects with nuclear legacy in NW Russia until they are successfully finished
- ➔ Proposal for a concluding meeting on GP in Moscow in October 2012.