Cores - Consortium for radiation safety research


NSFS Conference 2019, 10-14 June, Espoo/Helsinki
Aims of Cores, what is Cores for

• Radiation safety covers a variety of scientific disciplines, ranging from radiation and nuclear physics to biomedicine, environmental sciences and social sciences and humanities.

• The national universities provide a strong foundation of basic disciplines, this competence need to be integrated with the radiation safety research.

• Cores, Finnish Consortium for Radiation Safety Research, is strengthening the cooperation between research institutions and universities.

• This ensures that Finland maintains the national competence and that the Finnish research retains its high level position within international research community.

• Important lines of action are the joint use of infrastructures and databases (open science), as well as support and coordination of education and training.
National strategy

- Evaluation of impact of Government Resolution
- Objectives
- Surveying national co-operators
- Initial contacts and seminars
- Stakeholder consultation
- Communication plan
- Ministerial supervision
- Letters of Intent
- Research needs in Finland

Establishment of Consortium

- Plan for the use of infrastructures and information resources
- Tightening the co-operation and carrying out joint projects
- Promoting national and international funding, Strategic Research Council and H2020
- Operational system and accountabilities
- Establishing the National Consortium

Starting operation

- Description of national program and roadmap
- Organised permanent Consortium capable of long-term and flexible co-operation
- Tight contacts with the European research communities
- Website
- Stakeholder consultation

Implementing national program

- A STUK—coordinated national program that functions as part of European research area
- Reflecting stakeholder feedback
- A long-term funding plan
- Planning and implementing joint projects
- Research seminars

Tightening the co-operation of STUK and universities in radiation safety research

Roadmap for Cores & National RP research program

Phase 1 2013-2014

Phase 2 2015

Phase 3 2016

Phase 4 2017-
Roadmap for Cores & National RP research program

2018 - 2020

- Reflecting stakeholder feedback
- Updating the national programme and roadmap
- Engaging new partners
- Publishing Cores Newsletter
- Organising joint symposia
- Fostering education and training
- Promoting the joint use of infrastructures and databases (open science)
- Close co-operation in research with universities
- Promoting national and international funding
- Linking with the European radiation protection research platforms

2021 - 2022

- Towards 9th framework program
- Participating in EU research activities together
- Organising joint international symposia
- Supporting and coordinating education and training
- A long-term funding plan

Tightening the co-operation of STUK and universities in radiation safety research
Consortium for Radiation Safety Research

H = Health
M = Medical
E = Environment
P = Prepareness for emergencies
T = Technologies and measurements

University of Eastern Finland (H, M, E, T)
University of Jyväskylä (T, E)
Lappeenranta University of Technology (T, P)
University of Helsinki (T, E, P, M)
Aalto University (T)
VTT (T)

STUK, Helsinki (P, T, M, E, H)
University of Oulu (E, T, P, H)
Tampere University (T, H, M)
University of Turku (H, M)
Åbo Akademi (H, M)

CONCERT European Joint Programme "POMs"
Framework for Radiation Safety Research Programme

**HEALTH**
- Exposure to radiation
- Health risks and mechanisms
- Environmental Health
- New technologies
  - Dosimetry and metrology
  - Medical radiation
  - Consumer products
  - Limiting exposure
  - Optimization
  - Public
    - Workers
    - Patients

**ENVIRONMENT**
- Radionuclide transfer
- RN in foodstuffs
- Effects on biota
- Surveillance
- Environmental models
- Laboratory systems
- Radon safe construction
- Foodstuffs and household water
- Mines
- Nuclear Plants

**EMERGENCIES**
- Threat analysis
- Situation analysis and safety assessment
- Dispersion models and decision support systems
- Real time measurements
- Field measurements and reachback support
- Countermeasures
- Clean-up and decontamination
- Security arrangements
- CBRNE
RP research is multidisciplinary and it is linked to international networks.
European Radiation Protection Research platforms

- Maintaining and updating strategic research agendas and roadmaps for research
- Supporting access to infrastructures
- Fostering E&T
• National programme was updated last year, report is available on STUK www-pages

• www.cores.fi

• Cores Newsletter: http://www.stuk.fi/ajankohtaista/uutiskirjeet/tilaa-cores-uutiskirje
Examples on research areas in Cores members

- **STUK**: medical use of radiation, non-ionizing radiation, radiation in the environment, measurement of radiation, emergency management and nuclear security arrangements and, health effects of radiation
- **Aalto University**: materials for radiation detectors and detection technologies
- **University of Turku**: geology, space research, and nuclear medicine
- **Tampere University**: radiation dose assessment and health risks from radiation
- **University of Helsinki**: wide range of research on radiation and nuclear safety
- **University of Eastern Finland**: biological and health effects of non-ionizing and ionizing radiation, radioecology (research at the Kuopio University Hospital on the medical use of radiation)
- **University of Jyväskylä**: development of modern radiation detection and data acquisition techniques
- **University of Oulu**: aerial imaging and advancements in battery technologies, medical radiation protection
What is happening under Cores?

• Cores consortium arranges regularly seminars and other events on radiation research
  – Now three seminars has been arranged and they covered areas of radioecological research, emergency preparedness and non-ionization radiation

• The next Cores symposium is focusing on radon ja NORM
  – The symposium will take place in STUK on September 3 - 4, 2019, Helsinki

• Cores Newsletter
  – newsletter appears three to four times a year

• New research projects has started in cooperation with universities and research institutions
  – Cores welcomes Finnish universities and research institutions active in the field of radiation safety research as new members
Thank you !