



SEMI-NUC Overview

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Lyon, France

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SEMI-NUC : background

- ❑ The Semipalatinsk Nuclear Test Site (SNTS) in northeastern Kazakhstan was the major nuclear weapon test site in the former Soviet Union
- ❑ 111 atmospheric tests (86 in the atmosphere and 25 surface events) were performed between in 1949-1962
- ❑ There was little information made available from the Soviet Union on exposures received
- ❑ In the last two decades, several groups tried to reconstruct exposures in the area around the SNTS and study health effects from fall-out, including cancer and cardiovascular mortality, thyroid nodularity and thyroid cancer
- ❑ Studies on residents around SNTS were not listed among those that provide future opportunities to develop a multidisciplinary approach to better understand cancer (and non cancer) risk associated with internal contamination (Laurier et al, 2012, summary of DoReMi workshop, Paris, 2011)*

SEMI-NUC: objectives

- To investigate feasibility of setting up a unified cohort of residents around SNTS
- To review dosimetry approaches used in the past and to make recommendations for individual dose reconstruction in the future

If feasibility is demonstrated:

- development of a proposal for a prospective full scale epidemiological study in the future

Scope of the work

- **WP 1:** Coordination and overall management
- **WP 2:** Assessing the feasibility of establishing a unified cohort suitable for future long-term studies
- **WP 3:** Identification of outcomes to be studied
- **WP 4:** Testing follow-up mechanisms
- **WP 5:** Identification of key pathways and mechanisms for formation of cumulative doses
- **WP6:** Development of approach for assessment of individual cumulative doses to the exposed population
- **WP7:** Development of detailed feasibility report

Start 1 April 2013 end 31 March 2016

List of partners

| Participant no. | Participant organisation name | Country |
|-----------------|--|--------------------|
| Coordinator | International Agency on Research on Cancer (IARC) | France |
| 2 | Norwegian Radiation Protection Authority (NRPA) | Norway |
| 3 | Federal Office for Radiation Protection (BfS) | Germany |
| 4 | National Nuclear Centre (NNC) | Kazakhstan |
| 5 | Kazakh Scientific Research Institute of Radiation Medicine and Ecology in Semipalatinsk (NIIRME) | Kazakhstan |
| 6 | National Institute of Radiological Sciences (NIRS) | Japan |
| 7 | Medical radiological Research Centre (MRRC) | Russian Federation |
| 8 | State Research Centre – Burnasyan Federal Medical Biophysical Centre of Federal Medical Biological Agency (FMBC) | Russian Federation |

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External Advisory Board (EAB)

- [Simon Bouffler](#) (Public Health England, UK)
- [Hiroaki Katayama](#) (Radiation Effects Research Foundation, Japan)
- [Daniel T. Lackland](#) (Medical University of South Carolina, USA)
- [Kiyohiko Mabuchi](#) (Radiation Epidemiology Branch, National Cancer Institute, USA)
- [Steve Simon](#) (Radiation Epidemiology Branch, National Cancer Institute, USA)
- [Masaharu Hoshi](#) (professor emeritus, Hiroshima University, Japan)

Main expected outcome

- Feasibility report, critically reviewed by the EAB, including:
 - ❖ recommendations for future multidisciplinary epidemiological study of residents around the SNTS



Importance of our work



Our research serves not only the international health and scientific community by providing reliable information but also the population concerned



Bodene village, September 2013

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and friends!**



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More information: <http://semi-nuc.iarc.fr/>

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