



State of flooded facilities in the Northern seas  
and presentation of the first report by the  
complex international group on development of  
technical and economic information

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- **Project and Parties**
- **Scope**
- **Main results**

# PROJECT and PARTIES

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- The European Union, in the frame of Instrument for Nuclear Safety Cooperation (INSC) programme 2013, has provided financing for the Project “Feasibility Study and Preparation for the Implementation of an Action Plan Concerning the Safe and Secure Management/Disposal of Sunken Radioactive Objects in the Arctic Sea”.
- The project is carried out by a European Consortium headed by SOGIN (Italy) and constituted by:
  - NRPA (Norwegian Radiation Protection Authority) (Norway)
  - NUVIA Limited (UK)
  - EWN (Entsorgungswerk für Nuklearanlagen GmbH) (Germany)

with the support of a CEA expert (France) and the Russian Institute IBRAE RAN

- The purpose of the project is the preparation of feasibility studies and an action plan for the safe and secure management/disposal of the five most hazardous sunken objects in the Barents and Kara seas.
- The project takes advantage from the international collaboration and experience of European and Russian companies that operate in the nuclear field and environment remediation, and profit from the available information provided by ROSATOM, other Russian stakeholders and results of international collaboration programs.
- The project is subdivided into the following main tasks:
  - The establishment of an inventory of all types of sunken objects in the Barents and Kara seas
  - The prioritization of the sunken objects based on their potential impact on the population and environment
  - The elaboration of feasibility studies for the safe and secure management /disposal and proposal of an action plan
- In that context, among the other, the following activities are performed: examination of hazard scenarios, simulation of releases and impact evaluation, investigation on available structures in Russian Federation for recovery of the sunken objects

- At present the inventory of the sunken object has been elaborated and analysed in order to discriminate the most hazardous.
- All the objects information have been collected into a database (about 800 parameters), characterized from the point of view of:
  - Date of dumping,
  - Location,
  - Status,
  - Activity,
  - Volume,
  - ...
- Typology varies from submarine, reactor compartments, ships, structures and containers of SRW dumped at a depth ranging from -20m to -300 m
- Among 18000 objects sunken in 80 dumping campaigns over the period 1959 – 2003 (submarine B-159 by accident), after a process of prioritization, the following 5 objects have been identified as the most hazardous.

# RESULTS and NEXT STEPS

- Nuclear Submarine B-159, sunken in 2003 @ -238m
- Shielding Assembly of Icebreaker “Lenin” OK-150, dumped in 1967 @ -49m
- Nuclear Submarine K-27, dumped in 1981 @ -30m
- Reactor Compartment of NS K-19 and RC NS K-11, dumped in 1965 @ -20m
- Reactor of NS K-140, dumped in 1972 @ -300m



NEXT STEPS will deal with the elaboration of feasibilities studies for the safe and secure management /disposal of the most hazardous objects and the proposal of an action plan

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THANKS FOR YOUR ATTENTION