



15 December 2014

ANNOUNCEMENT OF A CALL FOR PROPOSALS

The following project currently active in the *Seventh Framework programme of the European Atomic Energy Community for research, technological development and demonstration activities contributing to the creation of the European research area and to innovation (2007-2011, 2012-2013)* calls for proposals to carry out research work within the project. Please note that the Seventh Framework Programme offers part-funding, not full-funding of research activities.

Project grant agreement number: 604984

Project acronym: OPERRA

Project full name: Open Project for the European Radiation Research Area

Instrument type: Combination of Collaborative Project and Coordination and Support Action (Coordination)

This call for proposals is organized on behalf of the Open Project for the European Radiation Research Area (OPERRA) supported by the Euratom 7th framework programme for research and training.

The key aspect addressed by this call for proposals is to increase cooperation between the four Radiation Protection Research fields that are low-dose risk research, radioecology, management of radiological/nuclear emergencies and dosimetry; the work should be based on a comprehensive road map for research in these fields. The four European associations representing these fields, MELODI, ALLIANCE, NERIS and EURADOS respectively, have listed research topics that they consider as high priorities. OPERRA is seeking possibilities for enhanced cooperation. Information is available on the Strategic Research Agendas (SRA) developed by these associations.

The following research topics are considered to be of high scientific relevance and of priority for enhancing cooperation between communities dealing with radiation protection research. These four topics represent four distinct research approaches, which are expected to be addressed in separate proposals. For each topic, proposals will be evaluated on their individual merits and a ranking list will be established for each priority topic.

- Topic 1: Development of monitoring strategies, processes and tools

The proposal shall include the development of guidelines for monitoring strategies used in EU Member States in case of nuclear or radiological emergency with the emphasis on severe accident scenarios. These scenarios shall include accidents related to nuclear fuel cycle facilities situated not only in Member States but also to facilities in the vicinity of the EU. The strategies shall be focused on needs of the decision makers, i.e. dose assessment of members of the public and workers and identification of environmental contamination based on measurements. This may include the development of new techniques.

The guidelines shall include:

- A methodology to define reference levels in emergency exposure situations as well as reference levels applicable in the transition period following an emergency situation as required in Article 7 of the Council Directive 2013/59/EURATOM;
- Procedures for the coordination of monitoring capabilities within the EU;
- Required capabilities for monitoring related to severe accident as a function of scenarios;

- Procedures for the coordination of measurements done by Technical Safety Organisations or other institutions;
- Options to include measurements performed by the general public.

The proposals shall identify gaps in monitoring strategies, processes and tools at the EU level to cope with consequences of severe nuclear or radiological accidents and to propose a roadmap regarding capabilities in EU Member States, such as aircrafts including drones, mobile units, trans-border resource sharing and laboratory networking.

The studies following the Fukushima accident should be taken into account as well as lessons learned when using state-of-the-art technologies and techniques.

- **Topic 2: Spatial and temporal environmental modelling and human dose assessment after a nuclear accident**

The proposal shall develop unified models applicable for environmental modelling and dose assessment to humans in case of major nuclear or radiological accidents. The work should be based on a broad spectrum of scenario studies including one with long lasting releases. The model shall take into account the time and space development of the radiological situation including all environmental media, e.g. sea, rivers, lakes and underground water, and related pathways.

The model shall include:

- Timeframe of emergency and post-emergency situation of some days to weeks after an accident;
- Large scale modelling, e.g. up to hundreds kilometres away from the site of an accident;
- Influence of the distribution of the contamination on a regional level, e.g. impact on farming and fishing activities.

The uncertainties of the model applicable in the environment in Europe shall be discussed as well as a list of minimum set of parameters needed for these types of assessment. The proposal shall include also the monitoring strategy when only little is known about the scenario.

A unified model directly applicable for decision makers in case of an emergency shall be the result of the work. This model shall take into account existing models in the EU. The proposal shall also include guidelines for the application of different strategies in an emergency exposure situation as well as in the transition period.

- **Topic 3: Development of health surveillance procedures**

The objectives of the work proposed are to use the experience feedback from Chernobyl and Fukushima as well as from other emergency situations with individual exposures above 100 mSv effective dose, to develop procedures for health surveillance and medical follow-up in a broader perspective of improving living conditions of affected populations, including among other challenges, dose reconstruction and the involvement of stakeholders in order to ensure that the maximum information is available for refining existing health risk estimates and clinical decision making. The project shall include a description of the types of health surveillance measures as well as their duration. Key elements of “good practice” of medical surveillance (screening/reassurance) programmes at exposure levels below 100 mSv effective dose shall also be considered.

- **Topic 4: Biological indicators of radiation exposure, effects, health risk and disease susceptibility to inform emergency management and epidemiological studies**

Biological indicators of radiation exposure and effects, particularly in relation to health, play an important role in emergency management and can be integrated into epidemiological studies of risk and susceptibility.

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Further validation of existing and still to be identified biomarkers in relation to dose as well as their relationship with health is required. For emergency exposure situations the use of simple and rapid methods would be of great benefit. This method could also be applicable to other types of exposure situations. It cannot be expected that all scientific questions can be answered within the project but it is expected that the consortium clearly describe how:

- The proposed work builds on and further develops existing evidence;
- The results of the project could be part of a road map for future work.

Research shall be organized in collaborative efforts over a broad spectrum of techniques and knowledge in the field, including expertise and disciplines outside of traditional radiation protection. The work shall progress from the current state-of-the-art in the relevant fields and the proposal shall document the competence of the applicants (see attached guide).

This call is also open to legal entities from third countries. Instructions for application are given in the guide for applicants.

Subject to criteria of excellence of the proposals, it is anticipated to fund at least one project per topic. The composition of a consortium should comprise at least four partners per project, from at least two different countries, including at least one external (non-OPERRA) partner per project.

The duration of the work to be undertaken should correspond to a period of maximum 18 months. Partners of successful applications in response to this call for proposals will become partners of the OPERRA project, if so they not are yet.

The selected proposal(s) will be integrated into OPERRA work package 5.

Supporting documentation:

- The OPERRA-2014 Guide for Applicants
- MELODI Strategic Research Agenda
- ALLIANCE Strategic Research Agenda
- NERIS Strategic Research Agenda
- EURADOS Strategic Research Agenda

Expected duration of participation in the project: From 1 December 2015 to 31 May 2017.

Minimum conditions: The composition of a consortium should comprise at least four partners per project, from at least two different countries, including at least one external (non-OPERRA) partner per project.

Total EU funding available: A maximum of EUR 2.5 million is available for the entire call. The maximum EU contribution for one proposal is 800 kEUR.

THE APPLICANTS ARE URGED TO FOLLOW THE RULES RELATED TO THE LENGTH OF THE PROPOSALS AS DESCRIBED IN THE GUIDE FOR APPLICANTS. PAGES OF PROPOSALS IN EXCESS TO THE NUMBER REQUIRED IN THE GUIDE FOR APPLICANTS WILL BE DISREGARDED BY THE EVALUATORS.

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Call identifier: OPERRA-2014

Language in which proposal should be submitted: English

Date and time of close of call: Thursday 12 March 2015; 17h00 Brussels time

Internet address for further information (call webpage): http://www.melodi-online.eu/operra_second_call.html

Mail address for further information: Operra@Lallemand-Legros.be