# Information on NFRP 4 – 2014: EU concerted development of Member State research on radioactive waste management



# "Towards a Joint Programming on Radioactive Waste Disposal"

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# Objective of the memo

The purpose of this memo is to inform Member States' representatives and potential interested programme owners and programme managers about the first Euratom H2020 Work Programme 2014-2015 - NFRP4 call and the JOPRAD project

The goal of this project is to prepare a proposal for the setting up of a "Joint Programming on Radioactive Waste Disposal". Such Joint Programming would bring together at the European level, those aspects of R&D activities implemented within national research programmes where synergy from Joint Programming is identified. The aspects of R&D activities brought together concern geological disposal of spent fuel and other high activity long lived radioactive waste, including waste management aspects linked with their disposal and accompanying key activities (Education and Training, as well as Knowledge Management). At the highest level, "the programme owners" are the ministries in charge of the setting up of the national programmes. In this project, where it is considered the technical part of the research and development programme associated with the national programme, the "programme owners" and "programme managers" are nationally mandated actors of research ("mandated actors"). They are financing and operating R&D on radioactive waste management, including geological disposal, in their respective countries. There are three categories in this project: (i) Waste Management organisations ("WMOs"), (ii) Technical support organisations ("TSOs")<sup>2</sup>, and (iii) nationally funded Research Entities<sup>3</sup> involved in the R&D of radioactive waste management, under the responsibility of Member States (Research Entities).

#### Responsibilities of Member States

The Directive 2011/70/EURATOM ("Waste Directive") establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste, reaffirms the ultimate responsibility of Member States for management of the spent fuel and radioactive waste generated in their respective countries. This includes establishing and maintaining national policies and frameworks, and implementing the policies by establishing and implementing National Programmes. This includes assuring the necessary resources and the required transparency.

With respect to the latter, Member States are obliged to ensure that the necessary information is made available to workers and the general public, and that the public is given the necessary opportunities to participate effectively in the decision-making process regarding spent fuel and radioactive waste geological disposal in accordance with national legislation and international obligations. The prime responsibility of the licence holder for the safety of spent fuel and radioactive waste management, under the supervision of its National Regulatory Authority (NRA), is also reaffirmed. Strong provisions are foreseen to assure the safety of spent fuel and radioactive waste management. In addition, the role of the NRA is reinforced and its independency is strengthened.

<sup>&</sup>lt;sup>1</sup> The WMOs are represented in the JOPRAD project through the IGD-TP which is the body in charge of coordinating RD&D needs of the implementers at the European level

<sup>&</sup>lt;sup>2</sup> The TSOs are represented, in the JOPRAD project through the SITEX project. The term « Technical Support Organisation » has to be interpreted as a generic term referring to organisations fulfilling an « expertise function » as defined by SITEX members, i.e. carrying out activities aimed at providing the technical and scientific basis for notably supporting the decisions made by the national regulatory body.

<sup>&</sup>lt;sup>3</sup> Research Entities may be research agencies, research institutes, universities, programs, ... Their needs are addressed in this project through the CNRS.

#### Setting up R&D programmes

According to the Waste Directive, Member States are obliged to regularly review and update their National Programmes, taking into account technical and scientific progress as appropriate as well as recommendations, lessons learned and good practices from peer reviews.

The Waste Directive states that national programmes shall set out how the Member States intend to implement their national policies for the responsible and safe management of spent fuel and radioactive waste to secure the aims of the Directive.

Amongst others, the National Programmes shall include the research, development and demonstration activities (RD&D) that are needed in order to implement solutions for the management of spent fuel and radioactive waste, as well as associated financing schemes.

# Towards a Joint programming

The main aims of "HORIZON 2020" are the integration of scientific programmes rather than support individual projects with an emphasis on those related to the ultimate management of radioactive waste.

Considering the "Waste Directive" statement on the need to study geological disposal options, the idea of Joint Programming is to bring together national research programmes to develop research activities of pan-European added-value. The immediate challenge is to address uncertainties about the safety of geological disposals, to build a sound safety case.

In order to increase research efficiency, and to foster interactions and mutual understanding of key challenges between actors involved in research, the present proposal aims at studying the possibility of creating "Joint Programming on Radioactive Waste disposal" dealing with geological disposal R&D issues.

## Initiative from IGD-TP and SITEX

In order to increase the efficiency of the research and to better coordinate the needs of various stakeholders in the field of radioactive waste and safety, IGD-TP and SITEX, have decided to submit with a Research Entity (CNRS), JRC and two consulting companies (MCM and Mutadis), a proposal aiming at studying the conditions for creating this "Joint Programming on Radioactive Waste disposal".

Considering the "Waste Directive" statement on the need to study geological disposal options, the role of the joint programming would be to drive research programmes on the basis of the consideration of priorities established (i) by WMOs (ii) by TSOs (iii) by Research Entities regarding scientific knowledge and skill development.

## The three steps of the project

This project will involve entities that are active in the safety, management and disposal of radioactive waste. The first step of this project will be, in collaboration with EC, to engage in discussion with Member States representatives in order to clarify the organisation of their national R&D consistent with the implementation of the Council Directive.

The second step will be to identify existing (or developing) research programmes or research agendas that could contribute to the identification of common scientific objectives and activities as well as specific aspects that the "mandated actors" would like to develop in the Joint Programme.

The third step will be to draft the joint "Programme Document" that should be the technical background of the Joint Programming. The "Programme Document" will comprise programmes focused on key priorities of WMOs, TSOs, and of other public programmes led by Research Entities.

In order to prepare the implementation of this Joint Programming, a study will be carried out. The study will comprise of three aspects:

- One dealing with the evaluation of the potential commitment (finance and in-kind) in a JP of the mandated actors,
- One dealing with the guidelines for the governance of the JP,
- One dealing with the legal scheme of the JP.

#### The consortium and duration

The consortium set up for this project comprises implementers and consultants heavily involved in the IGD-TP (Andra, RWM, SURAO, MCM) together with representatives of the SITEX Project (IRSN, Bel V, CVREZ, Mutadis), a national Research Entity (CNRS) and JRC. In order to guarantee its efficiency, the size of this group has been minimised; each participant will liaise through the existing structures with all the other

similar actors that may be part of the JP. However, participation in the JOPRAD project does not imply commitment of the participant or its member state to joint programming.

This project will last 30 month with a hold point after 15 months.

# Outcomes of the project

The outcomes of the project will be:

- A preliminary evaluation of a potential in-kind and financial commitment of Member States through their identified mandated actors,
- A "Programme Document" consisting of large programmes focused on key priorities of WMOs, TSOs side and Research Entities. In addition, the "Programme Document" may integrate the various needs whatever the time scales for implementation,
- A "Report" comprising a proposal for the implementation of this Joint Programming including the legal framework, the Terms of Reference, the rule of procedures and the bylaws.

At the end of the project, the ministries, the potential JP participants and EC will decide if they want to move forward for a JP.

#### Role of the Member States representatives

The Project partners in coordination with DG RTD will liaise with Member State representatives. The liaison with the Member States aims at providing at the governmental level, detailed information on the project itself, the work carried out by IGD-TP, SITEX, JRC and Research Entities in their respective domains and the objectives of the Joint Programming.

In return, the Member States are expected to mandate the organisations that will be in contact with the JOPRAD consortium, keeping in mind the importance of leaving the roles of WMOs, TSOs and also Research Entities, independent.

Such activities are expected to evolve along with the project implementation. This includes DG-RTD encouraging Member States to identify (i) National Programme representatives, and (ii) programme owners, programme managers including other entities that implement national or regional geological disposal R&D programmes.

The Member States representatives and their identified programme owners/managers will be involved in the JOPRAD mid-term and final workshops.





















