



PREDIS

Milestone 1 End user seminars

Date 31.08.2021

Dissemination level: Public

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This project has received funding from the Euratom research and training programme 2019-2020 under grant agreement No 945098.

Project acronym PREDIS	Project title PRE-DISposal management of radioactive waste	Grant agreement No. 945098
Milestone No. MS1	Milestone title End user seminars	
WP No 1	Date version 31.08.2021	Due date M12
Lead beneficiary VTT		
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Abstract

During the first project year of PREDIS, the consortium has strived to have high engagement of End Users and general stakeholders. Two project overview meetings have been arranged for the whole consortium with End User Group participation. There has also been a series of six online free public webinars where End Users have been encouraged to participate and be invited guest speakers to share their challenges, needs and expectations for management of predisposal waste management issues. There has been high interest and participation by End Users as well as stakeholders, with over 100 various persons engaged.

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Acknowledgement
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1 Milestone Description

Milestone # 1, associated with Work package 1, Task 1.1 'Communication actions' has been completed on 31.08.2021.

The justification for the readiness is described below and complies with the Grant Agreement Description of Action noting verification by summary.

The readiness of the milestone was reviewed and agreed upon by Matthew Randall, NNL as deputy WP2 leader.

2 Annual meeting with seminar for end users

The first workshop of the PREDIS project took place on October 19-21, 2020, one month after the project start. Due to the corona (covid-19) pandemic, the workshop was arranged on-line through Microsoft TEAMS. End User Group members (officially approved by the PREDIS General Assembly) were invited to join specific work package meetings during the workshop. The target was to introduce the PREDIS project in general, and the targets and plans of the specific strategic, knowledge management and technical work packages. The agenda for the sessions of the workshop that End User Group members were invited to attend is presented below.

9-10 Welcoming Session (VTT)

- introduction/review of the PREDIS project
- information on WP2 Strategy and WP3 State-of-Knowledge

10-11 WP4 Metallic Waste session (IMT)

11-12 WP5 Liquid Organic Waste session (CEA)

13-14 WP6 Solid Organic Waste session (SCK CEN)

14-15 WP7 Cemented Waste packages session (monitoring and digitalization) (BAM)

15-15.15 Summary and ways forward (VTT)

A separate stakeholder session was arranged on Wednesday October 21, 2020. The agenda is presented below. The target was to introduce the PREDIS project and provide international views on challenges in waste treatment.

13.00 Welcome & PREDIS Introduction, Maria Oksa and Erika Holt (VTT)

13.20 EURAD project scope and cooperation, Louise Theodon (ANDRA), Elisa Leoni (IRSN), Tara Beattie (PMO)

13.50 IAEA Presentation on Pre-Disposal Radwaste activities (Rebecca Robbins, IAEA)

14.30 Technology cooperation/links

- SHARE (decommissioning roadmap, stakeholder needs) project, Christine Georges (CEA)
- MICADO (monitoring waste properties) project overview, Ferdinando Giordano (CAEN)
- CHANCE (measurements of waste properties) project overview, Guillaume Genoud (VTT)
- THERAMIN (thermal treatment of waste) project overview, Matti Nieminen (VTT)

15.30 PREDIS panel discussion of needs from end-users (moderated by VTT/Erika Holt):

- Needs of waste owners, Mark Dowson (Sellafield Ltd, UK)
- Needs of waste producers, Abderrahim Al Mazoui (EDF, France and SNE-TP)

- Needs of waste management organizations, Irina Gaus (Nagra, Switzerland and IGD-TP)
- International cooperation perspectives, Rebecca Robbins (IAEA, Austria)
- International cooperation perspectives, Piet Zuidema (EURAD Chief Scientific Officer)

17.00 Future Cooperation steps & summary (VTT)

17.30 Adjourn

At the time, there were fifteen End User Group member organisations, and all of them were represented in the PREDIS workshop. The participation of the end users and other stakeholders was also very good in the stakeholder session. At the time of this memo, the current composition of the End User Group includes 24 companies from 14 countries. The current composition is listed on the PREDIS web page <https://predis-h2020.eu/end-user-group/>. New members are welcome at all times and encouraged via outreach and web page registration. The process of encouraging End User Group and stakeholder members was described in *Deliverable D2.1 Survey of End Users* (March 2021).

The End User Group were also invited to participate (and present) in the six PREDIS webinars arranged during spring 2021. All webinars have publicly available summaries and the presentations slides available on the PREDIS web page: <https://predis-h2020.eu/events/> and at the links given below.

January 19, 13-16 CET: Innovations in cemented waste package monitoring and storage: Learn about the State-of-the-Art in wasteform/package/facility monitoring techniques (e.g., muon imaging) and how these applications can be improved and extended in the future.

More than 120 participants registered to attend this webinar from 20 countries including some from outside Europe. Representation was split evenly between End User Group members + general stakeholders (49.6%) and consortium partners (50.4%). Attendees had the opportunity to listen to invited speakers and WP7 partners present end user perspectives on waste package and waste facility monitoring, the scope and objectives of PREDIS WP7, survey results on the state of the art in waste package and waste facility monitoring activities across Europe, views and information from IAEA and potential opportunities for cooperation in areas of waste immobilization and storage, recent cross-cutting R&D results from the MICADO and CHANCE projects and introductions to specific WP7 topics and themes.

- [WP7 Webinar summary](#)

February 16, 13-16 CET: Innovations in metallic material treatment and conditioning: Getting the most from optimised characterisation, efficient decontamination and advanced conditioning of both ferrous and more reactive metallic wastes.

Over 130 participants registered to attend this webinar from 24 countries including several from outside Europe. Representation was divided between End User Group members + general stakeholders and consortium partners at 55% to 45%. Presentations in the first session covered the management strategies of metallic waste by end-users (including utility, waste management and service companies), survey results on metallic waste inventories across Europe and IAEA's perspective on metallic waste management. The presentations in the second session focussed more on technical issues related to specific decontamination activities in nuclear power plants as well as encapsulation of metallic waste and its radiological characterization. This session concluded with presentations on the decontamination, characterisation and confinement technologies being developed in WP4.

- [WP4 Webinar Summary](#)

March 9, 13-16 CET: Innovations in solid organic waste treatment and conditioning: How to provide long-term solutions for the management of radioactive solid organic wastes through thermal treatments and immobilisation with conventional or novel binders.

More than 160 participants registered to attend this webinar from 24 countries including some from outside Europe. Representation was divided between End User Group members + general stakeholders and consortium partners at 54% to 46%. A set of presentations in the first session covered the management strategies of solid organic waste including the treatment of problematic waste using a variety of thermal technologies (by end-users including waste management and service companies), survey results on solid organic waste inventories across Europe and IAEA's perspective on solid organic waste management. The second session began with a presentation on the EURAD-ROUTES work package which aims to

describe and compare the different approaches to characterisation, treatment and conditioning and to long-term waste management routes between EU member states (making it uniquely positioned for good collaboration with the PREDIS project). Following this, a specific description on the disposal of geopolymer-conditioned waste was given by a WMO. The second session concluded with presentations on the hot isostatic pressing, geopolymer immobilization and some decomposition technologies being developed in WP6.

- [WP6 Webinar Summary](#)

March 30, 13-16 CET: Innovations in liquid organic waste treatment and conditioning: Meeting the challenges of conditioning (and accepting) radioactive liquid organic wastes through stabilisation and solidification with geopolymers.

Over 200 participants registered to attend this webinar from 25 countries including several from outside Europe. Representation was divided between End User Group members + general stakeholders and consortium partners at 58% to 42%. The program consisted of four sessions of presentations by invited speakers and WP5 partners: an introductory session, a session on the disposability of radioactive organic liquids encapsulated in geopolymers and related materials, a session on the needs and challenges faced by waste owners with respect to liquid organic wastes (LOWs) and a final session on ongoing work and international guidance. The presentations in the introductory session covered the definitions of radioactive liquid organic wastes (RLOWs) and the applications of geopolymers. The second session provided examples regarding the development of waste acceptance criteria for geopolymer conditioned wastes and established practices for conditioning LOWs in cement matrices. The third session described finding treatment and conditioning schemes for challenging RLOWs. Formal presentations concluded with the fourth session which featured the goals, objectives and first outcomes of WP5 and IAEA's perspective on liquid organic waste management.

- [WP5 Webinar summary](#)

April 21, 9-12 CET: Waste Acceptance Criteria (WAC) 1 –information and resources

More than 200 participants registered to attend this webinar from 37 countries including some from outside Europe. Representation was divided between PREDIS End User Group members + general stakeholders and consortium partners at 37% to 63%. A total of 177 people joined the webinar over its duration. This webinar was aimed at providing information on existing project and institutional activities regarding WAC. The program was organized into two sessions of presentations by invited speakers: a session on EU projects with WAC components and a session on other international programs regarding WAC issues.

- [WAC1 Webinar summary](#)

May 20, 9-12 CET: Waste Acceptance Criteria (WAC) 2 – needs, challenges and opportunities

Over 170 participants registered to attend the webinar from 30 countries including several from outside Europe. Representation was divided between PREDIS End User Group members + general stakeholders and consortium partners at 37% to 63%. A total of 119 people joined the webinar over its duration. This webinar was aimed at identifying the most pressing WAC-related issues facing waste owners, generators and management organizations as well approaches to deal with them. There were two sessions of presentations by invited speakers: a session on general stakeholder perspectives and a session on end user perspectives.

- [WAC2 Webinar summary](#)