



PROJECT FINAL REPORT

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Executive summary

After decades of bilateral and multilateral cooperation, several European waste management organisations decided, under the auspices of the European Commission, to join forces to tackle the remaining research, development and demonstration (RD&D) challenges with a view to fostering the implementation of their respective geological disposal programmes. The Implementing Geological Disposal of Radioactive Waste Technology Platform (IGD-TP) was launched in November 2009 with a Vision that “by 2025, the first geological disposal facilities for spent fuel, high-level waste and other long-lived radioactive waste will be operating safely in Europe”. Aside from most of European waste management organisations, the IGD-TP now has 123 participants covering most of the RD&D stakeholders in the field of implementing geological disposal of radioactive waste in Europe.

Such a platform requires an active and efficient secretariat to organise and coordinate activities, to support specific actions and to communicate and disseminate information on IGD-TP activities and on developments in radioactive waste management. These have been the objectives of the Secretariat projects (SecIGD project and SecIGD2 project) which aimed to put in place a secretariat for the IGD-TP and make it efficient and sustainable.

The SecIGD2 project aimed to support the secretariat activities of IGD-TP over the period 2013-2015. SecIGD2 was implemented by a consortium of 4 Waste Management Organisations 1) Agence nationale pour la gestion des déchets radioactifs (ANDRA), France ; 2) Radioactive Waste Management Limited (RWM), UK ; 3) Posiva Oy (POSIVA), Finland and 4) Nationale Instelling Voor Radioactief Afval en Verrijkte Splijtstoffen (ONDRAF/ NIRAS), Belgium.

It followed the SecIGD project which set up the IGD-TP's practical operations, supported the production of the Strategic Research Agenda and the Deployment Plan and run its secretariat over the period 2010-2012. The Secretariat, through the SecIGD2 project, is part of the overall concept of implementing the platform and aims to support the IGD-TP vision and mission in its practical administrative and operational tasks so that IGD-TP objectives are achieved and the benefits from the work carried out are widely spread among its participants and in Europe. The work was divided into four work packages:

- The work package 1 (WP1) “**IGD-TP secretariat operations management and coordination of activities**” was led by Andra and aimed to maintain and further develop the IGD-TP secretariat activities and ensure a smooth management of the platform.
- The work package 2 (WP2) “Support for networking, structuring and developing Research Development and Demonstration (RD&D) competences in countries with less advanced geological disposal programmes” was led by RWM. WP2 was specifically set up to foster networking and structuring RD&D in countries with less advanced programmes. It focuses on looking at different ways of transferring strategic knowledge.
- The work package 3 (WP3) Support for the development, implementation and coordination of Competences Maintenance, Education and Training (CMET) activities in geological disposal in Europe was led by Posiva Oy. This activity aimed to support the development and implementation of end-user needs-based competence maintenance, education and training activities in the field of radioactive waste management and geological disposal.
- Work package 4 (WP4), led by Andra, was dedicated to the project management (reporting, deliverables, and financial management).

Further information about the Implementing Geological Disposal of Radioactive Waste Technology Platform is available on www.igdtp.eu.

1. Project context and objectives

Context

After decades of bilateral and multilateral cooperation, several European waste management organisations decided, under the auspices of the European Commission, to join forces to tackle the remaining research, development and demonstration (RD&D) challenges with a view to fostering the implementation of their respective geological disposal programmes. The Implementing Geological Disposal of Radioactive Waste Technology Platform (IGD-TP) was launched in November 2009 with a Vision that “by 2025, the first geological disposal facilities for spent fuel, high-level waste and other long-lived radioactive waste will be operating safely in Europe”. Aside from most of European waste management organisations, the IGD-TP now has 123 participants covering most of the RD&D stakeholders in the field of implementing geological disposal of radioactive waste in Europe.

Such a platform requires an active and efficient secretariat to organise and coordinate activities, to support specific actions and to communicate and disseminate information on IGD-TP activities and on developments in radioactive waste management. These have been the objectives of the Secretariat projects (SecIGD project and SecIGD2 project) which aimed to put in place a secretariat for the IGD-TP and make it efficient and sustainable.

Objectives

The SecIGD2 project (2013-2015) aimed to support the secretariat activities of the IGD-TP over the period 2013-2015. It followed the SecIGD project which set up the IGD-TP's practical operations, supported the production of the Strategic Research Agenda and the Deployment Plan and run its secretariat over the period 2010-2012. The Secretariat, through the SecIGD2 project, is part of the overall concept of implementing the platform and aims to support the IGD-TP vision and mission in its practical administrative and operational tasks so that IGD-TP objectives are achieved and the benefits from the work carried out are widely spread among its participants and in Europe.

The work package 1 (WP1) “**IGD-TP secretariat operations management and coordination of activities**” was led by Andra and aimed to maintain and further develop the IGD-TP secretariat activities and ensure a smooth management of the platform.

The responsibilities of the IGD-TP Secretariat are to organise and coordinate the activities of the IGD-TP; to contribute to that the IGD-TP is organised in an appropriate manner to achieve the committed Vision according to the timeframes set in the [Vision Document](#), in the [Strategic Research Agenda](#) and in its Deployment Plan ; to publish and update strategic documentation; to act as an information and dissemination centre about the IGD-TP activities and on developments in the waste management community. The Secretariat maintains a public website (www.igdtp.eu) where information and documents about progress, projects and events are published. The Secretariat also organises meetings and conferences ([IGD-TP Exchange Fora](#)) and ensures that interactions with EC and other organisations outside the IGD-TP are strengthened. A feasibility study regarding a potential legal status for the platform was also performed within WP1.

The work package 2 (WP2) “Support for networking, structuring and developing Research Development and Demonstration (RD&D) competences in countries with less advanced geological disposal programmes” was led by RWM. WP2 was specifically set up to foster networking and structuring RD&D in countries with less advanced programmes. It focuses on looking at different ways of transferring strategic knowledge.

A specific Working Group has been created in order to gather representatives of less advanced programmes and the interested stakeholders (academics, technical safety organisations and other organisations willing to

contribute actively in the work) of these countries. This Working Group aimed to (i) identify the specific needs of the less advanced programmes; analyse how they could be taken into account in the IGD-TP activities; (ii) Identify key open specific documentation accessible on specific topics established already and used by more advanced countries as a reference or state-of-the art, (iii) Prepare proposals to implement these; (iv) Identify areas of possible technology transfer through specific agreements between more and less advanced programmes.

Experience from international and bilateral cooperation was used as a basis for developing the methods to ensure effective resource utilization in the knowledge transfer. This working group also addressed the use of proprietary or accumulated background and foreground created and other intellectual property rights when actual knowledge transfer is performed.

More precisely, WP2 aimed to:

- Provide specific support to this working group.
- Provide the management guidelines for activities dealing with this working group.
- Support the organisation of two international conferences for disseminating the public scientific and technical information and results derived from the IGD-TP's activities and from other RD&D efforts in the field of geological disposal. Specifically provide support to members of countries with less advanced programme and developing the means to better take into account their engagement with the platform.
- Enable the further evolution of the IGD-TP Strategic Research Agenda.

The work package 3 (WP3) Support for the development, implementation and coordination of Competences Maintenance, Education and Training (CMET) activities in geological disposal in Europe was led by Posiva Oy.

This activity aimed to support the development and implementation of end-user needs-based competence maintenance, education and training activities in the field of radioactive waste management and geological disposal. More specifically, SecIGD2 assists the CMET working group, which was launched in June 2012, in achieving its goals. The overall goal of this working group was to promote European cooperation in this cross-cutting area in support of the IGD-TP Vision and its activities is divided into four main objectives which are to (i) Identify and share the needs in knowledge, skills and attitudes (competence) of the geological disposal community; (ii) Develop quality assurance of training provided for new and experienced professionals in the field of nuclear waste management and especially geological disposal by developing quality assurance procedures and criteria for the voluntary accreditation of training (and education) in geological disposal; (iii) To develop the content of learning outcomes or the content of training or a "Curricula" for professionals in geological disposal and to (iv) Ensure indirectly that providers for CMET and new personnel will be available in the near future.

The IGD-TP Secretariat helped the CMET working group directly in the organisation of meetings, in compiling a strategy and action plan (StrAP), and reporting a feasibility study for mutual recognition of competences.

Work package 4 (WP4), led by Andra, was dedicated to the project management (reporting, deliverables, and financial management).

2. Description of the main results

Work Package 1

2.1.1.Task 1.1 – Setting up and operating the Secretariat

a) *Executive Group meetings*

One of the activities of the IGD-TP Secretariat is to organize the Executive Group (EG) meetings which are held three times a year. The Secretary General sends out the calls for the meetings, produces the materials and writes the minutes of the meetings.

During the SecIGD2 project, nine EG meetings took place:

- EG meeting n°10 – February 19th, 2013 (Enresa, Madrid)
- EG meeting n°11 – June 19th, 2013 (Puram, Budapest)
- EG meeting n°12 – October 31st, 2013 (RAWRA, Prague)
- EG meeting n°13 – February 19-20th, 2014 (Covra, Middleburg)
- EG meeting n°14 – June 4-5th, 2014 (KIT, Berlin)
- EG meeting n°15 – October 30th, 2014, (Kalmar, Sweden)
- EG meeting n°16 – March 26-27th, 2015 (Brussels, Belgium)
- EG meeting n°17 – June 24-25th, 2015 (Äspö, Sweden)
- EG meeting n°18 – November 5th, (RWM, London)

b) *IGD-TP Exchange Forum (EF)*

Over the period 2013-2015, the format of the Exchange Forum has been improved. After Exchange Forum n°3 in 2012, there was a need to make objectives of the Exchange Forum clearer and to allocate more time for presentations and for in depth discussions on technical subjects (through parallel working groups), notably in view of preparing projects to be submitted within EC calls. The Exchange Fora are now organised on two days. More time can be allocated for the chairpersons and the rapporteurs to prepare the conclusions. Furthermore, other European platforms and communities are now invited to Exchange Fora to present their work and how interactions can be implemented with IGD-TP (SITEX, SNETP, NEA IGSC, Radiation Protection community).

• IGD-TP 4th Exchange Forum, 29-30th October 2013, Prague, Czech Republic

In 2013, the IGD-TP Secretariat, with the help of SURAO, organised the 4th Exchange Forum (EF4) which was held on October 29-30th, 2013 in Prague, Czech Republic. Two announcements were sent, 38 abstracts were received. The objectives of EF4 were to i) Network ; ii) Inform on IGD-TP working groups activities and EC projects ; iii) Bring forward new projects in a bottom-up approach in the framework of the deployment of activities described in the SRA/DP and beside these ; iv) Identify new subject of collaboration related with SNETP (Sustainable Nuclear Energy Technology Platform) future needs ; v) Identify subject of common interest with Technical Support Organisations (TSOs) through SITEX (Sustainable network of Independent Technical EXpertise for radioactive waste Disposal) ; vi) Develop way forward towards relationships between R&D and stakeholder involvement.

To fulfil these objectives, the EF4 lasted two days. About 150 participants took part in plenary sessions as well as in five parallel Working Group sessions to discuss priorities and new areas of interest. This fourth

edition was a success. Presentations and outcomes (D1.4) and all documentation and presentations were posted on the IGD-TP website ([here](#)) and on the Extranet Projectplace.

- **IGD-TP 5th Exchange Forum, 28-30th October 2014, Kalmar, Sweden**

In 2013, the IGD-TP Secretariat, with the help of SKB, organised the 5th Exchange Forum (EF4) which was held on October 28-30th in Kalmar, Sweden. The objectives of EF5 were to

1. Provide a forum for informal exchanges between the participants around common interests in RD&D;
2. Inform on working groups activities and EC projects ;
3. Explore the main achievements of the IGD-TP since its inception and to discuss if the priorities presented in the SRA have been adequately covered by the joint activities and associated projects.
4. Express new ideas that could complement our SRA priorities and that could lead to new Research, Development and Demonstration (RD&D) topics over the next five years.
5. Continue the work with SITEX and SNETP started in 2013 in order to bring forward new subjects for collaboration and/or identify subjects of common interest.

To fulfil these objectives, the Exchange Forum lasted two days. About 130 participants took part in plenary sessions as well as four parallel Working Group sessions and a walkabout session organised by the Competence Maintenance, Education and Training (CMET) Working Group to address the prerequisites for a voluntary accreditation scheme for Geological Disposal. Finally, a visit of the Äspö laboratory was organised for the EF5 participants.

Presentations and outcomes (D1.4.1) and all documentation and presentations were posted on the IGD-TP website ([here](#)) and on the Extranet Projectplace.

- **IGD-TP 6th Exchange Forum, 3-4th November 2015, London, UK**

EF6 was held on 3-4th November 2015 in London, UK and attracted about 170 participants. Specific Key-notes talks were given in plenary sessions on:

- Siting Process in UK
- H2020 WP 2016-2017 and future Euratom programmes
- Radiation Protection Research in Europe: Reaching out to IGD-TP
- NEA IGSC Interaction with the IGD-TP
- State of high-level waste disposal in the U.S.
- Dissemination of RD&D to less advanced programmes

In addition to the plenary sessions, four parallel technical sessions were organised around four topics: EF6 was also the occasion to review the EC projects that were completed in 2014: PEBS, MoDeRn and REDUPP projects. The aim was to present the outcomes and assess the achievements of these projects. A review was carried out by an expert in the area including an assessment of how the projects have helped to achieve the IGD-TP's vision. Furthermore, the three technical projects accepted by EC in the framework of the Horizon 2020 EURATOM 2014-2015 work programme: Modern2020, CEBAMA and MIND were presented. All presentations are available on [www](#)

Presentations and outcomes (D1.4.3) and all documentation and presentations were posted on the IGD-TP website ([here](#)) and on the Extranet Projectplace.

2.1.2.Task 1.2 – Setting up, updating and maintenance of virtual forums and other means of dissemination

a) *Public Website*

The IGD-TP public website (www.igdtp.eu) was set up in its current version early 2013. Several new functionalities were added: online registration, direct access to all public documentation, access to “Projectplace” intranet, etc. The website is regularly updated with news, events, and documentations.

The website is regularly updated with news, articles, events and publications.

b) *Extranet (Projectplace)*

The IGD-TP Extranet is based on Projectplace: <https://service.projectplace.com>.

c) *Newsletters*

See Section 4.1.

2.1.3.Task 1.3 – Strategic documentation

This task consisted of updating the documentation related to the overall organization of the IGD-TP. During the first period, the following activities were carried out:

a) *Terms of Reference for IGD-TP and the Secretariat*

The Terms of Reference for IGD-TP and the Secretariat (D1.3) were updated taking into account the organisation adopted for the SecIGD2 project and the evolutions proposed by the EG. It contains the terms of reference of the Executive group, the Secretariat and the CMET working group.

b) *Strategic Documentation update*

Update of the Strategic Research Agenda (SRA)

One of the tasks to be carried out during the second period of the project was to prepare the update of the IGD-TP SRA to be delivered month 24 (Deliverable 1.7). However, it was agreed at EG meeting n°13 that it is probably too early to update the SRA. The IGD-TP Chair decided that each EG member should provide an analysis on what is their point of view on the major achievements of IGD-TP: each EG member, whatever the stage of development of their project, provided a short analysis, from their point of view, on the major achievements of the platform. In addition, they expressed their interest in participating in the activities and suggest improvements that could be carried out in the future (organizational and technical point of view). This analysis is detailed within deliverable 1.7.

Update of the Master Deployment Plan (MDP)

The IGD-TP Secretariat organised the update of the Master Deployment Plan (MDP) in 2013, 2014 and 2015 according to the deployment decisions made by the IGD-TP Executive group and the outcomes of the Exchange Fora.

- The [MDP 2013](#) (D1.5) was published on the website in July 2013.
- The [MDP 2014](#) (D1.5.1) was published on June 2014.
- The [MDP 2015](#) (D1.5.2) was published in July 2015.

2.1.4.Task 1.4 – Study on the legal status of IGD-TP

The draft feasibility study on a possible future legal status of the IGD-TP (D1.6) was released June 2, 2014. During EG12, Maître Valéry Schalenbourg (ATHOS-LAW) presented the draft outcomes of the study he carried out on behalf of ONDRAF/NIRAS. He pointed out three possible solutions for IGD-TP:

1. European Economic Interest Grouping (EEIG) as defined in EU Council Regulation n°2137/8 and in various National legislation (e.g. Belgian Law of July 25, 1985);
2. International Not-for-profit Association (Association Internationale Sans But Lucratif AISBL) as defined in Belgian Law of June 27, 1921 (e.g. NUGENIA);
3. Not-for-profit Association (Association Sans But Lucratif ASBL) as defined e.g. in Belgian Law of June 27, 1921 in the French Law of July 1st, 1901 (e.g. ENEN) or in the German Law (e.g. EURAMET).

Based on the study, the following conclusions can already be drawn:

- In the scenario in which only the current members of the Executive Group of the IGD-TP (and not the IGD-TP as a whole) decide to form a separate legal entity possessing legal personality, the choice to opt for an E.E.I.G. presents a lot of advantages, which may however also be pursued through a Belgian I.A.S.B.L.;
- In the scenario aiming at preserving a single legal entity for the IGD-TP as a whole, the Belgian A.S.B.L. or Belgian I.A.S.B.L. seems to constitute most adequate solutions to that effect.

The IGD-TP EG members were requested to provide their position regarding the three proposed options at the latest September 30, 2014 in order to discuss the way forward at EG 15 in Kalmar. Based on this input, the study was finalized in February 2015 (D1.6).. At EG 15, EG concluded that the feasibility study offers interesting possibilities for a legal status for the EG and/or IGDTP; however, the EG concluded that it was neither advisable nor timely to opt for a particular legal status. Indeed, the new developments towards Joint Programming and their consequences have first to be considered before embarking in a specific status for IGDTP/EG.

WP1 - Significant results		
Task 1.1	<ul style="list-style-type: none"> • D1.2 Minutes of Executive Group meetings EG10 • D1.2.1 Minutes of Executive Group meetings EG11 • D1.2.2 Minutes of Executive Group meetings EG12 • D1.2.3 Minutes of Executive Group meetings EG13 • D1.4 Exchange Forum meeting (EF4) • D1.2.4 Minutes of Executive Group meetings EG14 • D1.2.5 Minutes of Executive Group meetings EG15 • D1.2.6 Minutes of Executive Group meetings EG16 • D1.2.7 Minutes of Executive Group meetings EG17 • D1.2.8 Minutes of Executive Group meetings EG18 • D1.4.1 Exchange Forum meeting (EF5) • D1.4.2 Exchange Forum meeting (EF6) 	

Task 1.2	<ul style="list-style-type: none"> • D1.1 Updated Website www.igdtp.eu and intranet
Task 1.3	<ul style="list-style-type: none"> • D1.3 Terms of Reference for IGD-TP and the Secretariat • D1.5 IGD-TP's Master Deployment Plan updates on extranet and website • D1.5.1 IGD-TP's Master Deployment Plan updates on extranet and website 2014 • D1.5.2 IGD-TP's Master Deployment Plan updates on extranet and website 2015 • D1.7 Strategic Research Agenda - Main Achievements and Way forward
Task 1.4	<ul style="list-style-type: none"> • D1.6 Feasibility study on a possible future legal status of the IGD-TP
Other results	Several conference papers , presentations and poster (see section 3)

Work Package 2

2.1.5.Task 2.1 Network, structure and develop RD&D competencies in member states

The object of this task was to provide a support to the WG to organize structure and develop competences in RD&D in countries with less advanced projects.

A working group (WG) was set up in order to gather representatives of less advanced programmes and the interested IGD-TP Exchange Forum participants. The working group has met 3 times since its formation in February 2013 and has had 21 active members including representatives from Italy, Slovenia, Romania, Netherlands, Slovakia, Croatia, Lithuania and Hungary.

- IGD-TP WG on RD&D dissemination, meeting n°1, 9 May 2013, London, UK
- IGD-TP WG on RD&D dissemination, meeting n°2, 25 September 2013, London, UK
- IGD-TP WG on RD&D dissemination, meeting n°3, 19 March 2014, Brussels, Belgium

The WG produced a questionnaire and collated responses to identify the needs from less advanced programmes. It presented 3 categories of needs at the 2013 Prague Exchange Forum 4 and sought feedback.

Within WP2 a **Guide on RD&D programme planning towards geological disposal of radioactive waste** was developed (**Deliverable 2.3**). This Guide considers the essential elements of RD&D planning and provides instructional questions that should be addressed to respond to Council Directive 2011/70/EURATOM Articles 12 (1,F) and 12 (1,J). It considers the RD&D activities that are typically planned during early phases of disposal programme management. It also considers the management activities that need to be considered to successfully implement RD&D activities, such as competency management, civil society involvement, different contractual mechanisms for completing RD&D, and the potential benefits of technology transfer of RD&D knowledge from more advanced radioactive waste programmes.

Users of this Guide are primarily programme owners and managers working within or on behalf of a waste management organisation (WMOs) responsible for implementation of geological disposal. As such, the contents of this Guide focus on the RD&D priorities and needs of WMOs. However, the rationale for organising the RD& D could be of use for Technical Support Organisations (TSOs – providing support to regulatory bodies when executing their regulatory function), representatives of civil society and experts knowledgeable in governance and involvement of civil society.

2.1.6.Task 2.2 Support the organisation of two conferences

In order to share the experience on the gathered knowledge in EC projects and on the developing activities of the IGD-TP with countries with less advanced programmes, two public events were organized during the course of the project.

IGD-TP Geodisposal 2014

IGD-TP Geodisposal 2014 conference, took place in the University of Manchester on 24-26th June 2014 (See deliverable 2.2). The objectives were to:

- Engage the countries with 'less-advanced' programmes and share best practices in geological disposal research and implementation;
- Showcase the underpinning science, technology and stakeholder engagement in geological disposal. The conference sessions were selected based on the topics in the SRA, those raised in the last IGD-TP Exchange Forum and the needs of the less advanced programmes and wider community

Almost 280 delegates attended (164 UK, 114 overseas) with 24 countries represented, participants, and there were 129 posters with 57 oral presentations. The main conference sessions were:

- Developing programmes for geological disposal - experience and lessons from advanced and less-advanced programmes
- Disposal concept, design and technology development
- Radionuclide and gas behaviour
- Knowledge transfer
- Natural systems, including biogeochemistry, biosphere and geosphere
- Safety case
- Engineered barriers, wasteforms and criticality
- Siting
- Societal aspects
- Future IGDTP activities, Horizon 2020, involving newer member states.

The outputs from the conference were captured in a special, peer reviewed and Open Access issue of Mineralogical Magazine, see at <http://minmag.geoscienceworld.org/>.

PLANning geological DISposal of radioactive waste in Europe - PLANDIS

PLANDIS workshop was held on 26 May 2015 and was hosted by the Institute for Nuclear Research, Pitești in Romania. It was aimed at communicating, reviewing and assessing the **Guide on RD&D programme planning towards geological disposal of radioactive waste** (Deliverable 2.3). **PLANDIS** meeting was attended by 36 delegates from 12 countries with a strong representation from less advanced programmes. It allowed participants to:

- Gain experience of ranking a list of potential RD&D tasks.
- Meet other professionals working on RD&D in a disposal programme.
- Gain experience of completing the Guide template on RD&D prioritization to take away as useful input to own programme.
- Interact with experienced RD&D planners in a more 'informal' setting to ask questions and provide feedback on Guide.

2.1.7.Task 2.3 Update of Management Guidelines

During the second periodic report, the Working Group updated the **Management Guidelines** for IGD-TP Joint Activities in early October 2014. They were put on Projectplace and presented at the Executive Group (EG) meeting EG15 at the end of October 2014. The IGD-TP EG members were asked to comment on them by end of December 2014. The guidelines were finalised taking into account EG comments and approved for publication at EG16 in March 2015 and put on the IGD-TP website and ProjectPlace (**Deliverable 2.1**)

WP2 - Significant results	
Task 2.1	<ul style="list-style-type: none"> • Minutes of the three WG meetings • Questionnaire and responses presented during EF4 • Deliverable 2.3 - RD&D Planning Towards Geological Disposal of Radioactive Waste, Guidance for less-advanced Programmes • Special issue of the Mineralogical Society Magazine, December 2015
Task 2.2	<ul style="list-style-type: none"> • Geodisposal 2014 conference, 24-26th June 2014 • IGD-TP Geodisposal 2014 conference, June 2014 (Deliverable 2.2) • Talks from the 2014 Geodisposal conference on the IGD-TP website • Minutes of the three PLANDIS organisational committee meetings • PLANDIS one day workshop, 26 May 2015 Institute for Nuclear Research, Pitești, Romania (Deliverable 2.5) • Talks from the 2015 PLANDIS workshop on the IGD-TP website (Deliverable 2.4)
Task 2.3	<ul style="list-style-type: none"> • Deliverable 2.1 - Management Guidelines, March 2015

Work Package 3

The goals of the CMET were identified in the IGD-TP's second Exchange Forum and in the Terms of Reference of the CMET group as:

- The transfer of the state of the art in geological disposal (especially its CMET activities), the competence analysis and needs. The idea of this objective is to identify the shortfalls and needs in knowledge, skills and attitudes (competence) to undertake the planned research, development and demonstration activities and programmes identified in SRA and its DP effectively. Several activities have addressed this topic earlier on a more general or in a more job specific way, but the IGD-TP's SRA provides now the basis to address the needs derived from implementing the SRA. This analysis requires also the definition of the border of knowledge (the state of the art) for each of the SRA Topic. Such analysis activities need to be carried out in cooperation with all of the relevant Joint Activities in order to identify them on the European level.
- Quality assurance of training provided for new and experienced professionals in the field of nuclear waste management and especially geological disposal by developing quality assurance procedures and criteria for the voluntary accreditation of training (and education) in geological disposal.
- Develop the content of learning outcomes or more traditionally the content of training or a "Curricula" for professionals in geological disposal for the development of joint training or engaging educators and trainers into developing E&T to meet the expertise needed to carry out the IGD-TP's SRA and its RD&D activities as part of the deployment. The different training needs (different jobs) of the different target groups need to be addressed in the curricula development. The development needs to take into account the

recent experiences from implementing the European Qualification Framework and the ECVET approach to learning outcomes.

- Ensuring indirectly that providers for CMET exist i.e. ensure the sustainability of providers and infrastructures/facilities for competence maintenance and development and new personnel.

The CMET Working Group was organised as an Organisational Working Group under the IGD-TP. The Terms of Reference were established in 2012 prior the start of the SecIGD2 project and updated during the project.

By the end of December 2015, 36 professionals had expressed interest and joined the CMET WG. These professionals represent 29 organisations from 14 European countries. The organisations represent seven different types of stakeholder organisations: Universities, Waste management organisations and agencies (both private and governmental), research institutes, and organisations, and an association, including JRC ITU, ENEN, authorities and SMEs.

In total, the CMET WG has had in total six/seven group meetings (3 meetings during RP2) and two other major common venues on in connection with the IGD-TP Exchange Forum no 5 and another, a training session in connection with the CMET meeting no 5. Summary of CMET WG and other common meetings during RP2.

2.1.8. Task 3.1 Support to CMET working group and preparation of StrAP

Task 3.1 included the organisation and operation of the CMET WG and work on the Strategy and Action Plan (StrAP) document. .

Prior to the first meeting an ad hoc questionnaire was sent to the IGD-TP Joint Activities on their Strategic Research Agenda (SRA) related CMET needs. The replies were limited both in number and in content and these replies are reported as a part of the CMET meeting no 1 minutes (D3.1). In the CMET meetings, other representatives from IGD-TP and Europe were invited to present their projects in addition to the varying meeting agenda. Presentations were asked from Arcadia, ENEN/NUSHARE, Joint Activity Nuclear Knowledge Management JA15 and Petrus III. Arcadia project was not able to give a presentation at the meeting even though this was tentatively discussed with the Arcadia project coordinator. One of the standing agenda topics and a practical dissemination action on a continuous basis is to share as much information within the group about various on-going activities in CMET and Knowledge Management in the geological disposal community and in European and international organisations. This sharing aims at bringing together the individual group members with existing or planned activities in this cross-cutting area and thus pooling existing resources and avoiding double work as aimed in the objectives of the IGD-TP in general. In this way the resources of the CMET and its participants can be used to the main planned actions of the WG.

In addition to the preparation and work on the CMET actions, the group participants have provided information on the available training programmes in geological disposal and nuclear waste management in their respective countries, also the group has discussed the challenges of retirement and the country specific retirement ages as part of the challenges to competence maintenance in Europe.

The **Strategy and Action Plan** (D3.2) was first drafted in 2013, then revised in terms of its content in 2014 and represented to the IGD-TP Executive Group. The priorities and common interest for collaborative actions were produced in spring 2015 for the future and the Strategy and Action Plan was finalised as a product of the CMET group. The IGD-TP EG has decided to end this Joint Activity, but the community of practice will continue in connection with the Petrus network in geological disposal education and training.

2.1.9. Task 3.2 Feasibility study of a voluntary accreditation scheme

Interactions with EHRO-N and the CAPTURE project of JRC IET were continued in preparation of the feasibility study of a informal or sector internal accreditation scheme in geological disposal. Petrus III project (EC-GA no 605265) was also strongly linked to this activity. The background compilation for such a scheme was documented in and presented by the CMET group members in a conference paper and presentation at the NESTet2013 conference in Madrid, Spain, in November 2013. This document served also as a basis for planning the special CMET session of the IGD-TP's Exchange Forum no 5 (EF5).

At Exchange Forum no5, the CMET working group organised a special session on the potential feasibility of a voluntary accreditation scheme for geological disposal. The ECVET system and the experiences in using this system were used in the production of the feasibility study report (deliverable D3.4). Due to different priorities between the CMET WG and the IGD-TP EG concerning the voluntary accreditation scheme, a voluntary accreditation body was not considered feasible at this stage of the development. More experiences on the practical and efficient application of the ECVET system need to be gained in the future before implementation would be feasible. The prerequisites for a voluntary accreditation scheme have been outlined for future guidance in the D3.4 report produced. The European Professional Card was addressed in the study as a more appropriate tool for the professionals compared with the Europass that is best suited for students of e.g. universities and higher education institutions.

2.1.10. Task 3.3 CMET activities for collaboration and expert training session

A session plan for a walkabout covering the prerequisites of a voluntary accreditation scheme has now been produced and the walkabout will be carried out at EF5 in October 2014 as explained in Task 3.2 and reported in D3.4.

Task 3.3 was identified in connection with the Strategy and Action Plan preparation. The CMET members produced a list of potential joint actions and this potential list needs to be complemented and worked so that the most important and urgent joint actions can be identified for working together in the future. The process is foreseen to follow the compilation task that was used during the first Secretariat project (SecIGD) in coming up with the IGD-TP's SRA Key Topics and Cross-Cutting activities. A similar more focussed agenda is foreseen as the output for the future deployment of CMET joint activities. Discussions with ENEN association and links and expert input to the ENEN's potential H2020 proposal/s under NFRP10 have been initiated as it would be advantageous that some of the recommendations related to CMET and KM on European level would be addressed and work together on a broader level, i.e. the nuclear sector, without omitting the inputs from the geological disposal community.

The CMET WG organised a special session at the IGD-TP Exchange Forum no 5 during the second year of the project and produced a mini SRA from all the suggestions for potential future actions by CMET. In addition, the CMET organised an expert training session on collaboration and interaction with social media for the CMET WG members in April 2015 facilitated by Ms. Cheryl Contee, a Partner of Fission strategy (<http://fissionstrategy.com/>). The goal of the session provided new means for outreach to different stakeholder groups. The results of this task were reported in D3.3 and D3.3.1 as public deliverables.

Significant results	
Task 3.1	Setting up the CMET working group and its activities including the organisation and documentation of its meetings;

	<ul style="list-style-type: none"> • D3.1 CMET meeting n°1 minutes • D3.1.1 CMET meeting n°2 minutes • D3.1.2 CMET meeting n°3 minutes • D3.1.3 CMET meeting n°4 minutes, • D3.1.4 CMET meeting n°5 minutes • D3.1.5 CMET meeting n°6 minutes • D3.2 CMET Strategy and Action Plan - public report
Task 3.2	<p>Identification of major stakeholder questions related to the feasibility of a voluntary accreditation scheme and the preparation of the content for the related CMET session at EF5 for stakeholder input.</p> <ul style="list-style-type: none"> • D3.4 CMET report on the feasibility study on the informal or sector internal accreditation body - public report
Task 3.3	<p>Identification of the CMET action for 2015 has been done and included into the D3.2: It consists of a compilation of the future potential CMET actions for the identification of Joint Activities in CMET (following the SRA compilation process done during SecIGD).</p> <ul style="list-style-type: none"> • D3.3 CMET input for the content of IGD-TP's Exchange Forum Meeting no 5 - public memorandum about the walkabout and the session outcomes on the www.igdtp.eu web site as a part of the EF5 documentation • D3.3.1 IGD-TP CMET Social Media Training Session Training Report - public/open access report on the training including training materials
Other results	<ul style="list-style-type: none"> • Update of the Terms of Reference of the CMET WG in 2013 (included in WP1) • Two conference papers, and about 10 presentations, and two posters with an extended abstract to the OECD/NEA Constructing Memory conference in September 2014 in Verdun, France. (see list of dissemination activities in section 3) • Activity outlines for JA14 to the Master Deployment Plan updates (2013,2014, 2015) (WP1) • Articles or short inputs on CMET activities to IGD-TP's four different Newsletters (WP4) <p>The objectives for the work package have been achieved and also partly exceeded in terms of the content produced like the questionnaire, conference papers and the various inputs documented during the CMET WG meetings (see D3.5).</p>

Work Package 4

2.1.11. Task 4.1 – Managing the project consortium

Consortium management

The Consortium agreement was written and signed by all partners early 2013. It aims to establish in detail the rules on the internal management of the consortium.

Some changes were approved in the Consortium and Consortium Plan:

- Changes in the SecIGD2 Consortium

Nuclear Decommissioning Authority (NDA) Radioactive Waste Management Directorate (RWMD) changed its status from 1 April 2014. They became a fully owned subsidiary of the NDA and are known as Radioactive Waste Management (RWM) Limited.

- Changes in the SecIGD2 Consortium Plan

The Executive Group in EG14 proposed that Andra remains Secretary General and RWM (Former NDA) Assistant Secretary until the end of 2016. Then, in 2017, RWM will take over the responsibility of Secretary General and Posiva will take over the function of assistant Secretary. Thus the new organisation scheme of the secretariat will be as indicated in the following figure:

	2012	2013	2014	2015	2016	2017
Secretary General	SKB	Andra	Andra	Andra	Andra	RWM
Assistant Secretary	Andra	NDA	NDA/RWM	RWM	RWM	Posiva
SecIGD2 Coordinator		Andra	Andra	Andra		

This new organisation had no impact on the SecIGD2 project. All objectives, work packages, tasks, milestones and deliverables remained unchanged. Furthermore, the beneficiaries did not request any changes in the overall budget or the individual financing. They decided to rearrange the workload between them without any change in the man/month effort.

- Consequences for the SecIGD2 project

- o Grant Agreement n°323260

EC has considered that these changes are internal to the platform's activities and therefore no change to the Grant Agreement n°323260 is required.

- o Consortium Agreement

The consequences for the SecIGD2 Consortium Plan were:

WP1 tasks of Secretary General transferred from RWM to Andra for year 2015 WP1 tasks of Assistant Secretary transferred from Posiva to RWM for year 2015 In accordance with Article 7.1 and Article 7.1.1 of the SecIGD2 Consortium Agreement, the members of the SecIGD2 Steering Committee gave their consent to the changes in the Consortium Plan as mentioned above (see Appendix III of Deliverable 4.2.2 SecIGD2 Project meeting n°3).

Secretariat meetings

During the project, three SecIGD2 project meetings were organised. The first one (kick-off meeting) was held on January 10th, 2013. The second one was held on March 20th, 2014 and the third (last) one was held on 21 January 2015 in Eurajoki, Finland. The objectives of these Project meetings were to give an overview of the progress of work packages and allow for discussion on problems encountered, and solutions in order to prepare the reports.

Reporting SecIGD2 progress to the IGD-TP Executive Group

During each IGD-TP Executive Group, the IGD-TP Secretary General presented the SecIGD2 progress, as it is a recurrent item on the agenda of the EG meetings.

2.1.12. Task 4.2 - Financial management

This task dealt with the management of all financial aspects related to the project (pre-financing, interim payment and financial payment).

2.1.13. Task 4.3 Deliverables and Periodic reports

A list of additional deliverables was created.

Adding additional deliverables is not possible anymore since the last update of SESAM. The only way to insert new deliverables on SESAM application is to make an amendment to the GA.

In order to avoid an amendment, the EC suggested that we submit all the deliverables which are not listed in SESAM as attachments of the Periodic Reports.

The original numbering has been kept. Additional deliverables are numbered with a third digit.

Periodic Reports

The Coordinator, with the help of the partners prepared the first and second Periodic Reports and financial statements, as well as this Final Report.

Significant results	
Task 4.1	<ul style="list-style-type: none">• Consortium Agreement• D4.2 Project meetings Secretariat n°1• D4.2.1 Project meetings Secretariat n°2• D4.1 IGD-TP Newsletter 1• D4.1.1 IGD-TP Newsletter 2• D4.2.2 Project meetings Secretariat n°3• D4.1.2 IGD-TP Newsletter 3• D4.1.3 IGD-TP Newsletter 4
Task 4.2	Distribution of the Pre-financing on January 2013 Distribution of interim payment, December 2015
Task 4.3	<ul style="list-style-type: none">• List of additional deliverables• First periodic report submitted within August, 31st 2014• Second periodic report submitted within February, 29th 2016• Final report submitted within February, 29th 2016

3. Potential impact and main dissemination activities and exploitation of results

Impacts of the project

The impacts of the SecIGD2 project cannot be separated from the impacts of the IGD-TP. Within the European geological disposal community, the IGD-TP is expected to create opportunities to carry out joint Research Development and Demonstration of safe solutions in geological disposal of radioactive waste. The work on increasing knowledge and overall level of competence in the field leads to improvements in technology. Therefore, the IGD-TP is expected to build competence and to disseminate knowledge among all relevant stakeholders concerned with radioactive waste management and with geological disposal in particular.

Furthermore, by supporting the development of strong competence centres, the IGD-TP is seen to facilitate efficient knowledge transfer between countries in early stages of their waste management programmes and those who are entering the licensing application submission phase.

More globally, the implementation of safe solutions in geological disposal and an open communication will enhance general confidence in Europe towards viable solution for the management of nuclear fuel cycle and radioactive wastes.

Achieved Results

The Secretariat is a key part of the implementation strategy of the IGD-TP vision, mission and objectives, which will not be fully achieved without a dedicated Secretariat. The Secretariat support has continued to strengthen the activities, the participation opportunities, and sustainability of the IGD-TP. The SecIGD2 project results are linked to the outcomes of the IGD-TP. For the period 2013-2015, the main objective of the IGD-TP and its Secretariat was to deploy the Joint Activities identified in its Deployment Plan and also to update its strategic documentation and more precisely its Strategic Research Agenda (SRA) and Deployment Plan (DP).

Another important action was to communicate on all the activities of the platform and to promote the scientific and technical quality of the RD&D. Therefore, the Secretariat was in charge of developing an effective dissemination plan.

JA N°	Listing of joint activities (DP)
1	Waste forms and their behaviour
1a	“Dissolution rate for doped fuel”
2	Full scale demonstration of Plugging & Sealing
3	Waste forms and their behaviour C14
4	Monitoring the Environmental Reference State
5	Safety of construction and operations
6	Confidence increase in Safety Codes : Material interaction
6a	Cement-organics- radionuclides interactions
6b	Microbiological issues

7	Monitoring programme
8	Handling of Uncertainties in the Safety Case for Deep Geological Repositories
9	Safety Case communication: Safety case peer review
10	Long-term stability of bentonite in crystalline environments
10a	"Bentonite Mechanical Properties" (provisory title)
11a	Sharing of knowledge on HLW container materials behavior
11b	Repository layout design
11c	Analogues
11d	Characterization and control of preconditioned waste
12	Adaptation and optimisation of the repository
13	Communicating result from RD&D
14	Competence Maintenance, Education and Training: CMET
15	Nuclear Knowledge Management: NKM

More precisely, over 2013-2015, the following Joint Activities have been launched:

- ✓ Information Exchange Platforms (IEP)
 - SNETP/IGD-TP Working Group
 - IGSC/NEA
 - Natural analogues (JA11c)

- ✓ Four Technical Projects (TEP):
 - CARbon-14 Source Term – CAST (JA3)
 - Modern2020 (JA7)
 - Cebama (JA6)
 - MIND (JA6b)

- ✓ Technical/Scientific Working Group (TSWG);
 - Cement-Organics-Radionuclide Interactions CORI (JA6a)
 - Microbiological issues (JA6b)
 - Spent fuel dissolution & chemistry in container (JA1a)
 - Bentonite homogenization (JA10a)

Another important action is to communicate on all the activities of the platform and to promote the scientific and technical quality of the RD&D. Therefore, the Secretariat continues to be in charge of developing and improving the effective dissemination plan about the IGD-TP's activities and about the participation opportunities. The more recent dissemination activities include the improvement on the IGD-TP logo as well the website layout re-design. In addition, a series of newsletters were launched in autumn 2013. Four issues were published, in September 2013, June 2014, March 2015 and December 2015.

The Secretariat also ensures that synergies with existing projects and platforms are generated at European level (See Section 4.3). For example, it promotes interactions with other Technology Platforms (such as SNETP) to stimulate new ideas that could complement the SRA in view of the disposal of new waste types.

List of deliverables

3.1.1. WP1 deliverables

D.n°	Title	Lead beneficiary	Dissemination level	Delivery date from Annex I	delivered Yes/No	actual delivery date	Submitted Yes/No	Comments
D1.1	Updated Website www.igdtp.eu and intranet	ANDRA	PU	28/02/2013	Yes	28/02/2013	Yes	
D1.2	Minutes of Executive Group meetings	ANDRA	PP	31/03/2013	Yes	23/07/2013	yes	
D1.2.1	Minutes of Executive Group meetings EG11	ANDRA	PP	n/a	yes	13/11/2013	n/a	
D1.2.2	Minutes of Executive Group meetings EG12	ANDRA	PP	n/a	yes	21/02/2014	n/a	Attached to Periodic Report 1
D1.2.3	Minutes of Executive Group meetings EG13	ANDRA	PP	n/a	yes	30/06/2014	n/a	Attached to Periodic Report 1
D1.2.4	Minutes of Executive Group meetings EG14	ANDRA	PP	n/a	yes	30/10/2014	n/a	attached to Periodic Report 2
D1.2.5	Minutes of Executive Group meetings EG15	ANDRA	PP	n/a	yes	15/04/2015	n/a	attached to Periodic Report 2
D1.2.6	Minutes of Executive Group meetings EG16	ANDRA	PP	n/a	yes	30/06/2015	n/a	attached to Periodic Report 2
D1.2.7	Minutes of Executive Group meetings EG17	ANDRA	PP	n/a	yes	05/11/2015	n/a	attached to Periodic Report 2
D1.2.8	Minutes of Executive Group meetings EG18	ANDRA	PP	n/a	Yes	25/02/2016	n/a	attached to Periodic Report 2
D1.3	Terms of Reference for IGD-TP and the Secretariat	ANDRA	PU	30/04/2013	Yes	30/04/2013	Yes	
D1.4	Exchange Forum meetings	ANDRA	PU	31/12/2013	yes	19/12/2013	yes	
D1.4.1	Exchange Forum meetings EF5	ANDRA	PU	n/a	yes	17/11/2014	n/a	attached to Periodic Report 2
D1.4.2	Exchange Forum meetings EF6	ANDRA	PU	n/a	yes	25/11/2015	n/a	attached to Periodic Report 2
D1.5	IGD-TP's Master Deployment Plan updates on extranet and website	ANDRA	PU	31/12/2013	yes	03/07/2013	yes	
D1.5.1	IGD-TP's Master Deployment Plan updates on extranet and website 2014	ANDRA	PU	n/a	yes	30/06/2014	n/a	Attached to Periodic Report 1
D1.5.2	IGD-TP's Master Deployment Plan updates on extranet and website 2015	ANDRA	PU	n/a	yes	30/06/2015	n/a	attached to Periodic Report 2
D1.6	Feasibility study on the legal Status of IGD-TP	ONDRAF/NIRAS	RE	28/02/2014	yes	15/04/2015	yes	
D1.7	Strategic Research Agenda (SRA) Final Draft	ANDRA	PU	31/12/2014	yes	15/04/2015	yes	

3.1.2. WP2 deliverables

D.n°	Title	Lead beneficiary	Dissemination level	Delivery date from Annex I	delivered Yes/No	actual delivery date	Submitted Yes/No	Comments
D2.1	Management guidelines	RWM	PP	30/04/2014	yes	15/04/2015	yes	
D2.2	Support to the organisation of a Conference in 2014	RWM	PU	30/04/2014	yes	02/12/2015	Yes	
D2.3	Proposal networking, structuring and developing RD&D for countries with less advanced programme	RWM	PU	30/06/2014	yes	30/06/2015	yes	
D2.4	WG Input for the content of IGD-TP Exchange Forum Meeting n°5 and/or n°6	RWM	PP	31/01/2015	yes	02/12/2015	Yes	
D2.5	Support to a public event on scientific and technical issues in 2015	RWM	PU	31/10/2015	yes	02/12/2015	Yes	

3.1.3. WP3 deliverables

D.n°	Title	Lead beneficiary	Dissemination level	Delivery date from Annex I	delivered Yes/No	actual delivery date	Submitted Yes/No	Comments
D3.1	CMET meetings (starting M3) and producing their minutes (twice a year)	POSIVA OY	PP	30/04/2013	yes	29/05/2013	yes	
D3.1.1	CMET meeting n°2 minutes	POSIVA OY	PP	n/a	yes	03/03/2014	n/a	Attached to Periodic Report 1
D3.1.2	CMET meeting n°3 minutes	POSIVA OY	PP	n/a	yes	12/06/2014	n/a	Attached to Periodic Report 1
D3.1.3	CMET meeting n°4 minutes	POSIVA OY	PP	n/a	yes	16/03/2015	n/a	Attached to Periodic Report 2
D3.1.4	CMET meeting n°5 minutes	POSIVA OY	PP	n/a	yes	03/11/2015	n/a	Attached to Periodic Report 2
D3.1.5	CMET meeting n°6 minutes	POSIVA OY	PP	n/a	yes	17/12/2015	n/a	Attached to Periodic Report 2
D3.2	IGD-TP Competence Maintenance, Education and Training Strategy and Action Plan for 2013-2016	POSIVA OY	PU	28/02/2014	Yes	31/12/2015	Yes	
D3.3	CMET input for the content of IGD-TP's Exchange Forum Meeting no 5 or no 6	POSIVA OY	PU	30/06/2015	yes	31/12/2015	Yes	
D3.3.1	IGD-TP CMET Social Media Training Session - Training Report	POSIVA OY	PU	n/a	yes	19/11/2015	n/a	attached to Periodic Report 2
D3.4	CMET report on the feasibility study on the informal or sector internal accreditation body	POSIVA OY	PU	30/06/2015	yes	31/12/2015	yes	
D3.5	CMET activity report for 2012-2015	POSIVA OY	PP	31/12/2015	Yes	31/12/2015	yes	

3.1.4.WP4 deliverables

D.n°	Title	Lead beneficiary	Dissemination level	Delivery date from Annex I	delivered Yes/No	actual delivery date	Submitted Yes/No	Comments
D4.1	Newsletter Month 9	ANDRA	PU	30/09/2013	yes	16/09/2013	yes	
D4.1.1	Newsletter month 18	ANDRA	PU	n/a	yes	30/06/2014	n/a	Attached to Periodic Report 1
D4.1.2	Newsletter month 27	ANDRA	PU	n/a	yes	02/03/2015	n/a	Attached to Periodic Report 2
D4.1.3	Newsletter month 36	ANDRA	PU	n/a	yes	02/12/2015	n/a	Attached to Periodic Report 2
D4.2	Project meetings Secretariat	ANDRA	RE	31/10/2013	yes	22/02/2013	yes	
D4.2.1	Project meetings Secretariat 2	ANDRA	RE	n/a	yes	28/04/2014	n/a	Attached to Periodic Report 1
D4.2.2	Project meetings Secretariat 3	ANDRA	RE	n/a	yes	31/12/2015	n/a	Attached to Periodic Report 2

Co-operation with other projects/programmes

Participation to the Senec Workshop organised by SITEX project:

Independent Technical Expertise Interacting with Civil society on Radioactive Waste Management in Europe, A SITEX EUROPEAN WORKSHOP, 16-17th September 2013, Hotel Dolphin, Senec, Slovakia

The workshop enabled to draw lessons from the analysed European technology platforms as regards the engagement of civil society in European radioactive waste management (RWM) research. This field of research is marked by an increasing importance of the European level, in particular through European technology platforms and future European public-private partnerships, while EURATOM calls for participation of civil society in EU research. However, the experience of European technology platforms in the nuclear field shows that it is difficult for civil society organisations to participate in research activities at the European level through traditional processes of public consultation on documents, through exchange forums or through direct participation to the activities of European technology platforms (for instance, the temporary participation of Greenpeace to IGD-TP as a member of the platform). Civil society stakeholder fatigue can be observed in this context: taking part to the activities of European technology platforms appears as unproductive spending of time and resources from the point of view of civil society organisations

Further work is still needed to organize an appropriate framework to Civil Society in decision making process in the field of RD&D of RWM.

Interaction with SNETP: Waste form developments - IGDTP/SNETP Information exchange platform

The cooperation with SNETP started in EF4 with a discussion on changes in waste forms that have implications for geological disposal and the required RD&D. Then, in EF5 a working group session led by Richard Stainsby (SNETP/NNL) and Lena Zetterström Evins (IGD-TP/SKB).

Actually the objective is to develop an exchange forum in order to anticipate changes in waste forms that may occur during the next two decades (e.g. higher burnups, change of cladding materials, use of fuel form other than UO₂, increased separation and recycling, change in the reprocessing end-product, GenIII reactors...).

In 2015 the **factsheet on “Nuclear developments and radioactive waste management”** was prepared. It was also noticed that at this stage, it was too early to develop projects in common. The work should continue to be focussed on exchange of information on the future strategies on fuel developments.

Co-operation with IGSC/NEA

The cooperation with IGSC/NEA is made easier by the fact that all the IGD-TP Executive group members are also part of IGSC-NEA. So it was decided that IGD-TP EG will not continue specific activities on communication on Safety Case, Knowledge Management and management of uncertainties.

In EF5, Lucy Bailey (IGSC /RWM), chair of the “Integration Group for the Safety Case (IGSC)” presented her views on the ways of this collaboration. IGSC was established in 2000 by NEA Radioactive Waste Management Committee (RWMC) to assist member countries to develop effective safety cases supported by robust scientific technical basis.

The EG considered launching a joint study with IGSC that will consist of a summary of the existing tools for the safety case. This summary will explore how these tools have been used and how they have been useful. This is typically the work of IGSC. IGD-TP will provide its Members Expertise in the domain. The results will be shared by the two groups.

Cooperation with the “Radioprotection community” (MELODI/OPERRA)

In EF5, Hildegard Vandenhove and Nathalie Impens (SCK-CEN) presented the views of the radioprotection community (MELODI/OPERRA) on the work that could be developed in common with IGD-TP. For that purpose a review of the SRA topics has been carried out, pointing the areas of possible collaboration.

The MELODI Association, as a well-advanced network, takes the lead in establishing the necessary structures able to manage the long-term European research programmes in radiation protection.

Following the presentation, the IGD-TP- EG acknowledged the work carried out by Ms Impens and Vandenhove in their analysis of our SRA and exploring the potential scope of common activities. Although the scope of potential activity seems very limited, some studies could be of mutual interest to the platform, it is considered at this stage that the idea of developing a WG at next EF7 is not mature enough.

The IGD-TP-EG considered that it would be of interest to develop a position paper in common with the radioprotection community and explain how the two areas of research may interact.

Interaction with Petrus III project

Several members of CMET working group are also members of the PETRUS III consortium. Two of the CMET meetings (CMET3A and CMET5) were organised back-to-back and in cooperation with the PETRUS III meetings. The experiences of the work done in PETRUS III project was used and complemented especially the feasibility study prepared in the Work Package 3. The PETRUS III members were also invited to join the special CMET training session. PETRUS III has also provided for continuous interaction with the ENEN association. PETRUS III newsletters were distributed also via the www.igdtp.eu webpages for the wider geological disposal community. The CMET activity will also continue under the PETRUS III project during spring 2016.

Dissemination activities

Participation in national, European and international workshops and conferences

The main dissemination activities consisted in the participation in national, European and international workshops and conferences where presentation on the IGD-TP and SecIGD2 activities were presented. See the whole list of dissemination activities in Section A1.

IGD-TP website

The IGD-TP website is regularly maintained and updated. See www.igdtp.eu.

IGD-TP intranet section

Projectplace is the IGD-TP Intranet tool which works as a project management tool, mainly used for securely storing, sharing, finding and reviewing different type of project documents. Projectplace is maintained by Andra (IGD-TP secretary general). The access rights are closely managed (different groups of users with different access rights).

IGD-TP newsletters

The objective of the IGD-TP newsletter is to inform about the outcomes of the project, demonstrate the added value of the platform and disseminate the major achievements of the Joint Activities and the associated projects. The newsletter is issued every 9 months. During the SecIGD2 project, four newsletters were issued:

- The [first newsletter](#) was issued in September 2013
- The [second newsletter](#) was published in June 2014
- The [third newsletter](#) was published in March 2015
- The [fourth newsletter](#) was published in December 2015

3.1.5. List of dissemination activities – Period 1

No	Type of activities	Main Leader	Title	Date	Place (place, organisation) or publication	Audience	Size of audience	Countries addressed
1	Oral presentation to a scientific event	POSIVA	Panel presentation "IGD-TP Implementing Geological Disposal of Radioactive Waste Technology Platform". EC/EESC Symposium 2013 - Benefits and Limitations of Nuclear Fission for a Low-Carbon Economy, Brussels, Belgium 26-27 February 2013.	26-27/02/2013	Symposium proceedings. Publication of European Union 2013. ISBN 978 92 79 29833-2, doi 110.2777/12636. pp. 310-312	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias	300	AT,CZ,CH,BU,BE,FI,FR,DE,DK,ES,GR,GB,HU,IE,IT,IN,LT,LU,PL,NL,RO,SE,SI,SK,ZA,TR,EG
2	presentations	ANDRA	The IGD-TP - A tool for European RD&D cooperation	15/04/2013	NEWLANCER 2013 Ljubljana, Slovenia	Scientific Community	40	EU
3	presentation + paper	ANDRA	The Implementing Geological Disposal of Radioactive Waste Technology Platform A tool for European RD&D cooperation	22-24/05/2013	NUCLEAR 2013, Pitești, România	Policy makers, civil society, médias	250	EU member states
4	presentations	ANDRA	The IGD-TP - A tool for European RD&D cooperation	28/05/2013	COR IRSN, France			
5	posters	ANDRA	The IGD-TP - A tool for European RD&D cooperation	30-31/05/2013	ENEF, Prague, CZ	Policy makers	350	EU
6	presentations	ANDRA	The IGD-TP - A tool for European RD&D cooperation	10/09/2013	Summer School on Radioactive Waste Management and Nuclear Decommissioning, EC-JRC, University of Milan, IAEA and AIRP, SS2013, at EC-JRC Ispra, Italy	Scientific Community	20	EU
7	publications	ANDRA	IGD-TP Newsletter, issue 1	13/09/2013	-	All	1500	Global
8	Other	POSIVA	Kansallinen YJH-kurssi 2013 - National Nuclear Waste Management Course 2013 lecture on "Management of High-level Waste in the World" by Marjatta Palmu, slides on IGD-TP in Finnish.	02/10/2013	Aalto Dipoli, Espoo, FI	Scientific community (higher education, Research) - Industry - Policy makers	21	FI
9	presentations	ONDRAF/NIRAS	The IGD-TP as a tool for RD&D cooperation in Europe	02/10/2013	RWM Research Board	Scientific community, policy maker	30	UK
10	presentations	ONDRAF	R&D in Safety Case Development – the contribution	7-9/10/2013	Safety Cases for the Deep Geological Disposal of Radioactive Waste: 2013	Scientific community, industry, policy makers, civil society,	120	Global

		/NIRAS	from the IGD-TP		Technical State of the Art, Paris, France	medias		
11	Oral presentation to a scientific event	POSIVA	Towards a European CMET strategy: The CMET Working Group Actions within IGD-TP (Abstract, paper + presentation)	14-17/10/2013	EURADWASTE '13, Vilnius, Lithuania	Scientific Community, Industry, Policy makers	300	EU
12	Abstract, paper + presentation	ONDRAF /NIRAS	The Implementing Geological Disposal – Technology Platform (IGD-TP), Now and in the Future	14-17/10/2013	EURADWASTE '13, Vilnius, Lithuania	Scientific Community, Industry, Policy makers	300	EU
13	paper	ANDRA	Secretariat of the Implementing Geological Disposal Technology Platform SecIGD2 project	14-17/10/2013	EURADWASTE '13, Vilnius, Lithuania	Scientific Community, Industry, Policy makers	300	EU
14	Oral presentation to a scientific event	POSIVA	Input to Jorma Aurela's presentation "Stakeholders' Involvement in Euratom Research and Training Programmes", slide 9.	16/10/2013	FISA 2013, Vilnius, Lithuania,	Scientific Community, Industry, Policy makers	200	EU
15	Organisation of Conference	ANDRA	IGD-TP 4th Exchange Forum	29-30/10/2013	IGD-TP 4th Exchange Forum, Prague, CZ	Scientific Community, Industry	150	EU, Japan
16	presentations	RWM	IGD-TP working group on RD&D dissemination	30/10/2013	IGD-TP 4th Exchange Forum, Prague, CZ	Scientific Community, Industry	150	EU, Japan
17	Oral presentation to a scientific event	POSIVA	The CMET Working Group actions within IGD-TP. Feasibility of voluntary accreditation in geological disposal using ECVET approach	17-21/11/2013	NESTet13 Nuclear Engineering Science & Technology, Madrid, Spain	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	123	Global
18	presentations	ANDRA	The IGD-TP RD&D cooperation in Europe	27/11/2013	IAEA URF Network, Vienna, Austria	Scientific Community (higher education, Research),	100	Global
19	Oral presentation to a scientific event	POSIVA	Euratom activities in FP7 in the National H2020 kick-off information day "Tästä se lähtee! Tietoa Horisontti 2020 -rahoituksesta" in Dipoli, Espoo, Finland - a case slide in Arto Kotipelto's (Energy NCP) presentation "H2020 Energy challenge and Euratom WP 2014-2015" slide 8. http://tekes.pukkivisuals.fi/past/horizon2020_dipoli/	27/11/2013	Dipoli, Espoo, Finland	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	788	FI (mainly)
20	presentations	ANDRA	IGD-TP : a tool for RD&D cooperation in Europe	18/12/2013	Italy Euratom national meeting	Industry, research	30	IT
21	presentation + paper	ANDRA	The Implementing Geological of Radioactive Waste Technology Platform - Main Achievements to Date and Way Forward	07/03/2014	Waste Management 2014, Phoenix AZ USA	Policy makers, scientific community, civil society, médias	2000	Global

22	flyers	ANDRA	Presentation of the IGD-TP and its Secretariat	01/03/2014	-	Scientific Community, Industry		Global
23	web	RWM	Manchester Geodisposal 2014 website		https://www.meeting.co.uk/confercare/geodisposal2014/	Scientific Community, Industry		Global
24	Oral presentation to a scientific event	POSIVA	Presentation "Rajapinnat ja hyvät käytännöt geologisen loppusijoituksen teknologiayhteisön näkökulmasta" TEM "Rajapinnat"(Interfaces) seminar on 4 April 2014 in Helsinki, Finland, for planning interfaces between technology platforms and national research programmes KYT and SAFIR for the next programme period (in Finnish).	04/04/2014	Ministry of Employment and the Economy, Helsinki, Finland	Scientific community (higher education, Research) - Industry - Policy makers	20	FI
25	Oral presentation to a scientific event	POSIVA	"Lasting and intensifying research, development and demonstration with EURATOM support. A Finnish and a European perspective on geological disposal cooperation." Swedish Euratom H2020 Information Day in Stockholm on 27 May 2014 in co-operation with TEKES (NCP) Finland. Presentation and webcast	27/05/2014	Vinnova, Stockholm, Sweden	Scientific community (higher education, Research) - Industry	80	SE, FI
26	presentation + paper	RWM	The Implementing Geological Disposal of Radioactive Waste Technology Platform (IGD-TP) The working group on RD&D dissemination	27-30/05/2014	NUCLEAR 2014, Pitești, România	Scientific community (higher education, Research) - Industry	280	Global
27	Organisation of Conference	RWM	IGD-TP Geodisposal 2014	24-2/06/2015	Manchester, UK	Scientific Community, Industry	280	Global
28	posters	POSIVA	IGD-TP - CMET working group activities	24-2/06/2014	IGD-TP Geodisposal 2014, Manchester, UK	Scientific Community, Industry	280	Global
29	publications	ANDRA	IGD-TP Newsletter, issue 2	30/06/2014	-	all	1500	Global

3.1.6. List of dissemination activities – Period 2

No	Type of activities	Main Leader	Title	Date	Place (place, organisation) or publication	Audience	Size of audience	Countries addressed
1	Oral presentation to a scientific event	ANDRA	IGD-TP - Key challenges in research and development in radioactive waste management	7-11/07/2014	ICONE 22th Conference, Prague CZ	Policy makers, scientific community, civil society, medias	400	Global
2	Flyers	POSIVA	CMET/IGD-TP International actors in the geological disposal field are all working together to meet important, common goals	01/09/2014	Petrus III newsletter 1	Policy makers, scientific community, civil society	150	Global
3	Posters	POSIVA	Competence Maintenance, Education and Training Working Group of IGD-TP (poster in English and in French)	15/09/2014	Constructing Memory An International Conference & Debate on the Preservation of Records, Knowledge and Memory of Radioactive Waste across Generations, Verdun, France	Policy makers, scientific community, civil society, media, Other: artists, NGOs	200	AT, BE, CA, CH, CY, CZ, DE, ES, FI, FR, GB, HU, JP, NL, RO, SE, US, Int'l
4	Oral presentation to a scientific event	POSIVA	Kansallinen YJH-kurssi 2014 - National Nuclear Waste Management Course 2014 lecture on "Management of High-level Waste in the World" by Marjatta Palmu, slides on IGD-TP in Finnish.	08/10/2014	Aalto Dipoli, Espoo, FI	Scientific community (higher education, Research) - Industry - Policy makers	23	FI
5	Oral presentation to a scientific event	POSIVA	Interaction with Petrus III project, presentation of the Exchange Forum walkabout plan to the Petrus III consortium in Kalmar at Petrus III project meeting no 3 (WP3)	01/10/2014	Petrus III, project meeting no 3 from 30 September to 2 October 2014, at Linneus University, Kalmar, SE	Scientific community (higher education, Research) - Industry	23	FR, RO, FI SE, CZ, ES, BE, IT, UK, SI, PT
6	Organisation of Workshops	POSIVA	CMET walkabout session, including introductory presentation and preliminary walkabout report	29/10/2014	IGD-TP Exchange Forum no 5 in Stadshotellet, Kalmar, SE	Scientific community (higher education, Research) - Industry - Policy makers	135	EU
7	Presentations	ANDRA	IGD-TP - Key challenges in research and development in radioactive waste management	1/12/2014	AIEA, Beijing, China	Scientific community	20	China

No	Type of activities	Main Leader	Title	Date	Place (place, organisation) or publication	Audience	Size of audience	Countries addressed
8	Organisation of Workshops	POSIVA	CMET of the IGD-TP - How to facilitate access to expertise and to maintain competences in geological disposal?	05/03/2015	7th ENEN Special Event 2015 Espoo, Finland, March 2015	Scientific community (higher education, Research) - Industry	40	EU JP RU US
9	Other	ANDRA	Newsletter 3	01/03/2015	www.igdtp.eu	All	1000	Global
10	Presentations	ANDRA	IGD-TP main achievements to date and role in implementing the European policy on radioactive waste	23-26/03/2015	Clay conference, Brussels, Belgium	Scientific community (higher education, Research) - Industry - Policy makers	500	Global
11	Presentations	ONDRAF	IGD-TP's roles and achievements	14/04/2015	NEA /RWMC, Paris France	Scientific community (higher education, Research) - Industry	40	OECD
12	Presentations	SKB	IGD-TP's Missions and activities	15-17/04/2015	Arcadia Meeting, Vilnius Lithuania	Policy makers, scientific community	40	EU
	Oral presentation to a scientific event	POSIVA	CMET of IGD-TP. How to facilitate access to expertise and to maintain competences in geological disposal? PETRUS III Extended End-User Council Workshop	23/04/2015	IST, Lisbon, Portuga	Scientific community (higher education, Research) - Industry	12	International, FR, AT, GB, FI, SI, NL, ES, PT
13	Presentations	SKB	IGDTP-Status	19-21/05/2015	EDRAM, Helsinki, Finland	Policy makers, scientific community	30	EU
14	Presentations	RWM	IGD-TP Strategic Research Agenda (SRA) Development History, Prioritisation and Status	26/05/2015	PLANDIS - RD&D Planning Towards Geological Disposal of Radioactive Waste, Pitesti, Romania	Policy makers, scientific community	36	EU
15	Presentations	ANDRA	IGD-TP - Main achievement in 2015	28/05/2015	Nuclear 2015, Pitesti, Romania	Policy makers, scientific community	100	EU
16	Presentations	ANDRA	IGD-TP's main achievements in 2015	1-4/06/2015	77th EAGE Conference & Exhibition 2015, Madrid, Spain	Policy makers, scientific community	30	Global

No	Type of activities	Main Leader	Title	Date	Place (place, organisation) or publication	Audience	Size of audience	Countries addressed
17	Presentations	SKB	IGD-TP's main achievements in 2015	2-4/06/2015	LUCOEX Conference, Oskarshamn, Sweden	Scientific community	80	EU
18	Presentations	POSIVA	IGD-TP's Joint Activity on Competence Maintenance, Education and Training	15-16/06/2015	Workshop on Nuclear Radiochemistry in connection with CINCH	Academia, research institutes, industry and regulators	38	FI, CH, UK, FR, HU, NO, DE, IT, CZ, BU, SK, CY
19	Presentations	RWM	PLANing geological DISposal of radioactive waste in Europe (PLANDIS) workshop, and other IGD-TP activities	09/07/2015	ERDO-WG Meeting, Ljubljana, Slovenia	Policy makers, scientific community	30	EU
20	Presentations	SKB	IGD-TP European Strategic Research Agenda to support the implementation of Geological disposal	21-24/9/2015	GLOBAL 2015, 21st International Conference & Exhibition: "Nuclear Fuel Cycle for a Low-Carbon Future", Paris, France	Scientific community (higher education, Research) - Industry - Policy makers	500	Global
21	Presentations	POSIVA	IGD-TP status 2015 est. 2009	5-6 October 2015	EHRO-N SAG no 12, Lisbon	Scientific community (higher education, Research) - Industry - Policy makers	13	International, FI, NL, FR, BE, SK, BU, IT, PL, EU
22	Presentations	RWM	IGD-TP Working Group on RD&D Dissemination	3-4/11/2015	IGD-TP Exchange Forum no 6 in London, UK	Scientific community (higher education, Research) - Industry - Policy makers	160	EU + JP + US
23	Presentations	RWM	IGD-TP main achievements in 2015 and role in implementing the European policy on radioactive waste	3-4/11/2015	IGD-TP Exchange Forum no 6 in London, UK	Scientific community (higher education, Research) - Industry - Policy makers	160	EU + JP + US
24	Other	ANDRA	Newsletter 4	01/12/2015	www.igdtp.eu	All	1000	Global
25	Other	Andra	Euratom FP7 Research & Training Projects Volume 4	ed. 2015	2015 Euratom FP7 Research & Training Projects Volume 4, doi 10.27777/625894	all	-	EU
26	Publications	RWM	proceedings from the IGD-TP Geodisposal 2014 conference in a special issue of the Mineralogical Society Magazine	14/12/2015	Special issue of the Mineralogical Society Magazine http://minmag.geoscienceworld.org/	Scientific community (higher education, Research) - Industry	-	International