



Deliverable 11.8: Authors Guidance & Template

Work Package 11 State-of-Knowledge

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Executive Summary

One integral part of the EURAD KM Programme is the production of Domain Insight (DI) documents, which are short overview documents about a topic relevant to RWM. The writing and review of these documents is done by experts in their respective fields and the production process is coordinated by EURAD WP11 State-of-Knowledge (WP11 SoK). This *Authors Guidance & Template* document provides guidance to the authors of the DI documents and supports the production process. For that, it addresses the following points:

1. Topics of Domain Insight documents – How are the topics defined?
2. Purpose and target audience of Domain Insight documents – Who will use the documents and for what purpose?
3. Style of the Domain Insight documents – How should the documents be written?
4. Process and schedule of Domain Insight documents production – What should be done by whom and when?
5. Reimbursement of efforts for work on Domain Insight documents – How can the effort be compensated?

In addition to this document, the WP11 SoK team guides the expert(s) during the production process and stands ready to answer further questions.

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Glossary

Author

The expert involved in development of the SoK or DI document.

Community of Practice (CoP)

A voluntary group of peer practitioners who share lessons learnt methods, and best practices in a given discipline or for specialised work. The term also refers to a network of people who work on similar processes or in similar disciplines, and who come together to develop and share their knowledge in that field for the benefit of both themselves and their and other organisation(s).

Domain

Level 3 of the ERUAD Roadmap Goals Breakdown Structure (GBS). An area of activity, interest, or knowledge, especially one that a person, organisation etc. deals with.

Domain Insight (DI) Documents

Context documents that provide direct links for each knowledge domain to safety and implementation goals related to DGR requirements.

EURAD

The European Joint Programme on Radioactive Waste Management (EURAD). Also referred to as the 'Joint Programme'.

Expert

Someone widely recognised as a reliable source of knowledge, technique or skill whose faculty for judging or deciding rightly, justly, or wisely is accorded authority and status by their peers or the public in a specific well-distinguished domain.

Goals Breakdown Structure (GBS)

The EURAD goals breakdown structure is a thematic breakdown of knowledge and activities essential for radioactive waste management. It comprises Themes (Level 1), Sub-themes (Level 2) and Domains (Level 3), each formulated as goals. Although hierarchical and numbered, the knowledge and activities presented across the GBS should be considered collectively with no weighting to order of importance. Rather it is emphasised that there are many inter-dependencies and linked data across the GBS, where knowledge and activities can be centred in different ways, depending on the end user role and precise boundary conditions of the RWM programme to which the roadmap is applied.

IAEA

The International Atomic Energy Agency (IAEA).

INIS

The International Nuclear Information System (INIS), a collection of published information on the peaceful uses of nuclear science and technology hosted by the International Atomic Energy Agency (IAEA).

Knowledge

The acquisition, understanding and interpretation of information. It is often used to refer to bodies of facts and principles accumulated by humankind over the course of time. Knowledge and information each consists of true statements, but knowledge serves a purpose: knowledge confers a capacity for effective action.

Knowledge Ambassador

A person which plays an active role in supporting knowledge sharing and effective integration of knowledge management strategies in WPs.

Knowledge Management (KM)

An integrated, systematic approach of identifying, managing and sharing an organisation's knowledge and enabling groups of people to create new knowledge collectively to help in achieving the organisation's objectives.

Knowledge Management System (KMS)

A system for applying and using knowledge management principles to typically enable to create, share and find relevant information & knowledge quickly.

Radioactive Waste Management (RWM)

All activities, administrative and operational, that are involved in the handling, pre-treatment, treatment, conditioning, transport, storage and disposal of radioactive waste.

Research, Development and Demonstration (RD&D)

All activities to develop new or improved knowledge and/or products.

Review

Activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve established objectives.

Reviewer

The expert involved in review of the SoK or DI document.

Roadmap

A high-level overview of a programme's goals, typical activities and knowledge needed to implement a RWM programme, from the generation of radioactive waste to disposal.

SoK document

The document describing the state of knowledge in a specific domain of EURAD Goals Breakdown Structure (GBS). Experts' view of the most relevant knowledge and associated uncertainties in a specific domain applied in the context of RWM programme. Short summary of scientific and engineering facts relevant to the domain. Typically SoK documents would use a relatively small number of key primary references and signposts out to further detail where necessary (i.e. relevant SotA).

State of Knowledge (SoK)

Experts' view of the most relevant knowledge and associated uncertainties in a specific domain applied in the context of a radioactive waste management programme. Activities consisting of developing a systematic approach of establishing the state-of-knowledge in the field of RWM research.

State of the Art (SotA)

Scientific facts underpinning the knowledge base. SotA documents are oriented typically on a narrower scope and go into significant detail (e.g. focus on mechanistic or process-level understanding). They would not normally demonstrate the application of that knowledge. They typically include lots of technical references and are long documents.

Themes

Large groupings of related Knowledge Domains typical in Radioactive Waste Management. They are the highest level of the EURAD Roadmap Goals Breakdown Structure (GBS).

Theme Overview (TO) Documents

Broad description of programme goals and typical activities for each theme and how they evolve over the phases of implementation.

Work Package (WP)

A group of related tasks established within EURAD. Because they look like projects themselves, they are often thought of as sub-projects within the Joint Programme.

Work Package (WP) 10 Understanding of uncertainty, risk and safety (UMAN)

A EURAD work package to refine methods for conducting sensitivity and uncertainty analyses and to develop a multi-actor network for uncertainty management.

Zenodo

A general-purpose open repository for depositing research-related data and documents and generating a DOI.

1. Introduction

Safe radioactive waste management (RWM) and disposal relies on knowledge and its effective management, i.e., Knowledge Management (KM). The [European Joint Programme on Radioactive Waste Management \(EURAD\)](#) recognises the importance of KM and has therefore established a KM Programme, consisting of three Work Packages (WPs) (Beattie et al. 2022). One important activity in this KM Programme, led by WP11 State-of-Knowledge, is to capture relevant knowledge in the field of RWM and make it available to end-users through dedicated documents (KM documents) (Knuuti et al., 2022). The EURAD KM Programme has developed a hierarchical system of documents, which covers individual topics at different level of detail, enabling each end-user to access the knowledge they need at the appropriate level of depth. The *Domain Insight (DI)* documents are one type of these KM documents and are currently the focus of knowledge preservation activities (in EURAD WP11 State-of-Knowledge). In order to capture the most relevant and up-to-date knowledge, these documents are written and reviewed by recognised experts in their fields. The procedures for involving the experts (knowledge providers) is described in EURAD Deliverable 11.4. This *Authors Guidance & Template* document (i.e., Deliverable 11.8) is intended to provide guidance to the authors and to support them in writing useful DI documents. This document contains advice for the authors, indicated by the blue tip boxes (Tip n°1 – 5).

Tip n°1:

If you want to learn more about EURAD in general and the EURAD KM Programme, you might want to look at the following sources:

EURAD

- [EURAD Homepage](#)
- EURAD Founding documents:
 - [EURAD Vision Document](#)
 - [EURAD Strategic Research Agenda](#)
 - [EURAD Deployment Plan](#)

EURAD KM Programme:

- [EURAD KM Homepage](#)
- [EURAD KM and Networking Programme](#)
- [EURAD Roadmap User Guide](#)

2. Topics of Domain Insight documents – How are the topics defined?

The topics of the DI documents are defined by the [EURAD Roadmap / Goals Breakdown Structure \(GBS\)](#) (Beattie et al. 2021). The EURAD GBS (*Figure 1*) is a valuable tool to structure and organise topics relevant to RWM and disposal. It allows to define, categorise and communicate topics that are relevant for RD&D, Strategic Studies and KM in the field of RWM. In the GBS, topics are formulated as goals rather than just buzzwords, hence the name “Goals Breakdown Structure” (see *Figure 2* and explanation in legend). The roadmap is adapted and revised to current needs and will therefore change accordingly, as new domains emerge or if improvements are identified. To achieve the breakdown of

broader topics into smaller, more manageable “packages”, the GBS is hierarchically sub-divided into three different levels (Themes – Sub-themes – Domains, from highest to lowest level).

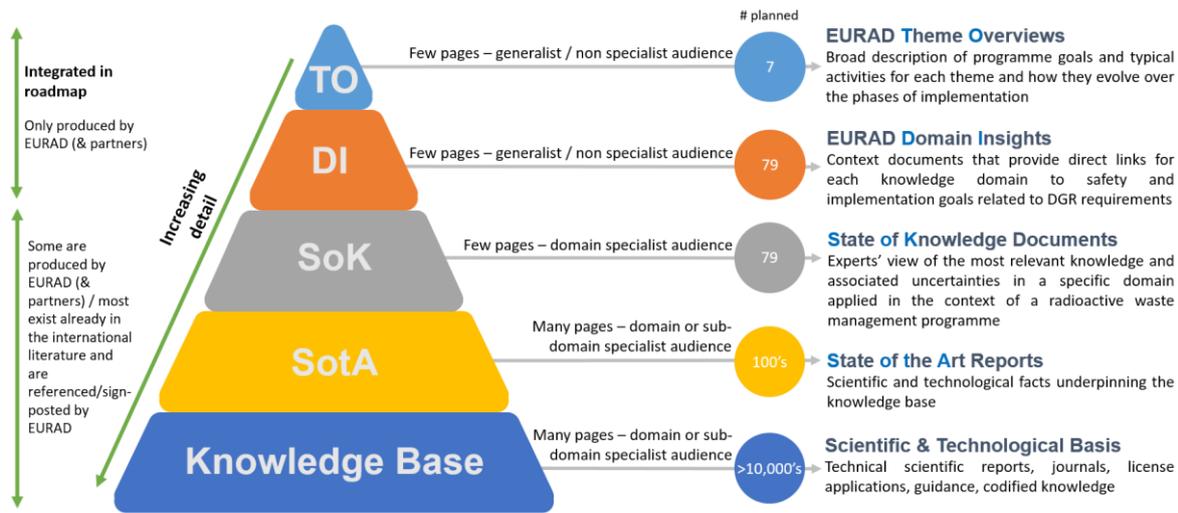


Figure 1: The current goals breakdown structure and KM document structure from Knutti et al. (2022).

To be more precise, on the highest level of the GBS are currently the 7 Themes, namely:

- Theme 1 – National Programme Management
- Theme 2 – Pre-disposal
- Theme 3 – Engineered Barrier System
- Theme 4 – Geoscience
- Theme 5 – Design and Optimisation
- Theme 6 – Siting and Licensing
- Theme 7 – Safety Case

These seven Themes are at the moment subdivided into a total of 27 Sub-themes on the next lower level. Below that, there are now the 79 Domains, which is the lowest level of the GBS. The DI documents are located at this level of the GBS. Hence, **the domains of the GBS define the topic for a DI document (topic = domain).**

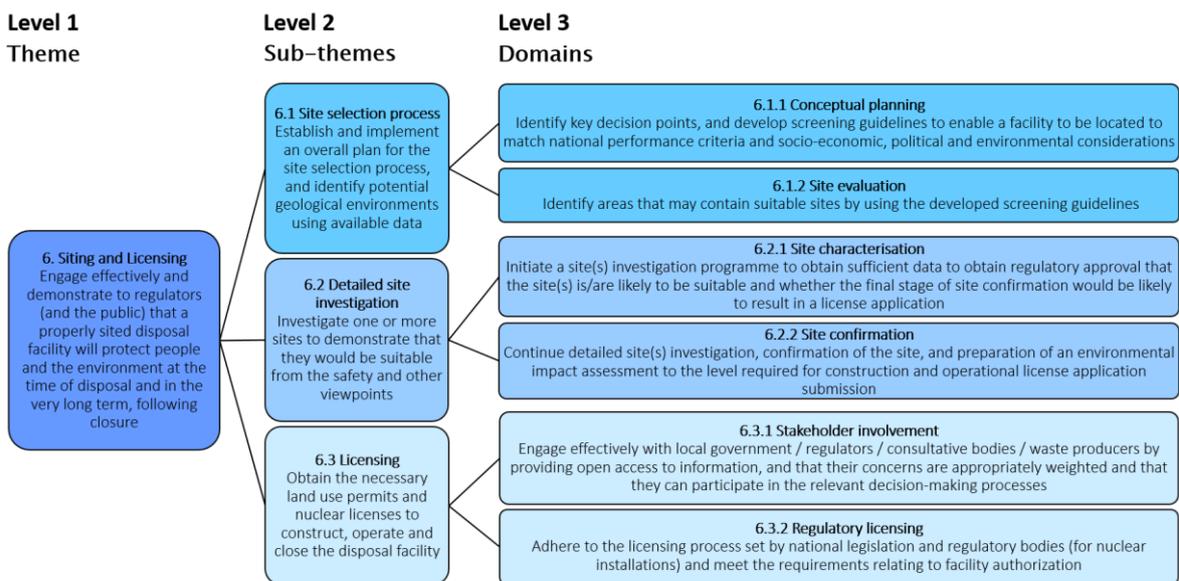


Figure 2: Example for the breakdown of one Theme (Theme 6 – Siting and Licensing) of the EURAD Goals Breakdown Structure (GBS) into the three levels (Theme, Sub-theme, Domain) and the formulated “goals”. For example, domain 6.1.2 – Site selection is described with the goal “Identify areas

that may contain suitable sites by using the developed screening guidelines” instead of only calling the topic “Site evaluation” (Knuuti et al., 2022).

It should be emphasised that by design, the EURAD GBS is generic. It does not claim to be complete, and the topics and knowledge could be organised differently. Hence, the numbering and order of the topics do not reflect their importance, or temporal order. There are also inter-dependencies between topics, which need to be considered. National programmes and individual organisations might find other ways to organise the knowledge better suited for them, depending on their specific needs. This is not in contradiction to the idea of the EURAD GBS, since it is intended to serve as a useful tool in EURAD and beyond the programme, which can be used to spark discussions and encourage thoughts about how to organise and structure topics and knowledge relevant to RWM and disposal.

Tip n°2:

Before writing a Domain Insight document, authors are strongly encouraged to **look at the [EURAD Roadmap / Goals Breakdown Structure \(GBS\)](#)** to see how their topic fits into the overall portfolio of documents and to get better understanding of the overall concept. This should allow to better define the scope of the topic at hand, i.e. which aspects will be covered in other domains and where references can be made to other domains.

Consider the Roadmap as a first reference point to orientate next generations and newcomers, especially capturing the experience and knowledge from advanced programmes who have ‘done it before’.

3. Purpose and target audience of Domain Insight documents – Who will use the documents and for what purpose?

3.1 Purpose and objective

The DI documents are short context documents (10 – 20 pages long) that provide a general overview and information about safety and implementation goals (*Figure 3*) about a domain that is relevant to RWM (for an explanation about the term *domain* see GBS in Chapter 2). They should function as an entry-point and allow the end-users to orient themselves in the domain at hand. This includes giving information about the context of the domain, its relevance and connection to other domains, and pointing to other knowledge resources to dive further into the domain. The documents are not intended to be a comprehensive collation of everything ever known or developed in relation to the specified domain. Those seeking more specific details on the domain should be able to easily navigate to the extended knowledge base via high quality references. Thus, the DI documents should contain signposts/references to important reports and sources. As the purpose of the DI documents is to capture knowledge considered most important for the implementation of radioactive waste management programmes, safety and engineering aspects that have been in the focus of work over the past decades should be addressed. Importantly, statements on international examples, existing uncertainties and the maturity of existing knowledge should be included where applicable.



Figure 3: List of generic long-term safety (blue) and implementation (orange) goals.

Tip n°3:

The DI content should respect three guidelines:

- Focus on contextualising and orientation of the domain
- Give a broad, but not detailed overview
- Sign-posting to available high-level knowledge documents

To get a better understanding about the objective and contents of a DI document, experts are invited to **look at the DI document template (Appendix A) and examples of published DI documents on the [EURAD homepage Roadmap Section](#)**

3.2 Target audience

The documents are open to all interested persons. However, the main target audience for the DI documents are generalists and non-specialists that want to learn more about a certain topic. These persons include, but are not limited to:

- people newly entering or transitioning to the field of RWM and/or a specific domain, for example, as employees of a Waste Management Organisation (WMO) or Technical Support Organisation (TSO). This can be from outside the RWM sector or moving within the RWM sector,
- researchers wanting to better understand how their work is linked to the overall context,
- engineers working in some field of RWM and wanting now to contribute to another field.

Although the focus is on non-specialists and generalists, experts and advanced programmes might also find it helpful to check their own knowledge and experiences against the DI documents. This might lead to a fruitful exchange between higher-level experts, which is equally supported by EURAD.

Tip n°4:

Imagine you are having a short exchange on the most relevant domain aspects with a non-specialist over a cup of coffee, for example a contributor to a less advanced European RWM programme, a new collaborator replacing a retired person in a WMO of a country with an advanced programme, a research scientist wanting to better understand how his work is linked to the overall context, an engineer working in some field of waste management and wanting now to contribute to another field.

4. Style of the Domain Insight documents – How should the documents be written?

4.1 Writing style

The experts are asked to use common, straightforward language, rather than overly formal or complicated language. The document should be written in plain English. Each DI document should aim to be a succinct expert compilation of the very best available knowledge (e.g., top recommended sources of information). Concepts should be concise. Links can be added to point to further detail.

Terminology should be consistent with the IAEA Safety Glossary (IAEA, 2018) and the Radioactive Waste Management Glossary (IAEA, 2003) as well as the glossary provided in this document. Acronyms should be used where understood across RWM. Niche acronyms should be expanded.

Tip n°5:

Some **short guidelines** for the content of the DI documents are:

- Do **not repeat** existing documentation. Reference out when appropriate.
 - ➔ The DI document should not be a place to reproduce existing documents.
- Do **not start from 'first principles'**. The DI document is not a detailed report.
 - ➔ The DI document should avoid unnecessary introductory information on the broad topic of RWM.
- **Be concise**. The DI document is a summary.
 - ➔ There are no strict requirements, but ~10-20 pages of ISO A4 is a good guide for the complete DI document.
- Add **cross-references** to other planned or existing DI documents where possible. Allow users to find out more.
 - ➔ See the structure of domains in the EURAD Roadmap/GBS.

4.2 Referencing

The DI document will be made available in a digital format online. The DI documents will also be assigned with a DOI and it is planned to be included in the IAEA/INIS database. Each DI document should include a limited number of high quality references (preferably with hyperlinks in-text and full citations at the end) orientated to the requirements of different end users. However, the document should be readable and understandable when printed. If possible, experts are kindly asked to use “Harvard Citation Format” (see following example).

In-text referencing approach:

“Radioactive substances are common in nature (e.g. uranium occurrences) and have been studied as... ([Miller et al. 2000](#)).”

End of document referencing approach:

[Miller, W.M., Alexander, W.R., Chapman, N.A., McKinley, I.G. & Smellie, J.A.T. 2000. The geological disposal of radioactive wastes and natural analogues. Oxford, UK: Pergamon Press. 332 p. ISBN 10: 0-08-043852-0, ISBN 13: 9780-08-04385.](#)

Different types of sources, preferably open and free, can be used to gather the information that will be included in the DI document. Internal organisation notes, oral presentations of information that can only be acquired from within the organisation, meeting minutes, oral communications, agreements or confidential reports, will not be included.

5. Process and schedule of Domain Insight documents production – What should be done by whom and when?

For the process and schedule of DI document production the individual situation of the experts will be taken into account. This means that there is some flexibility and details will be discussed and agreed between the experts and the WP11 SoK team.

The process of developing a DI document is illustrated in *Figure 4*. It includes the following steps (but it is not limited to): *initiation, drafting, review, finalisation and approval, publication, socialisation, evaluation* (see Appendix C). The process is further described in Deliverable D11.5 - *QA Procedures for the Generation of SoK Demonstration Cases*, including also the production of the more detailed SoK documents.

The schedule takes into account that usually other work has to be performed parallel to the DI production. Therefore, a *period of time* during which the task should be performed, as well as the *effort* for the experts, indicating how many actual working hours are needed, are estimated. It should be noted that these values are estimated based on previous experience and can vary depending on the domain and expert’s situation. In short, the proposed process and schedule is as follows:

Activity	Duration	Effort for experts
1. Drafting	2 month	40 h (Author)
2. Editorial processing	2 weeks	8 h (WP11)
3. Review	1 month	8 h (Reviewer)
4. Finalisation after review	2 weeks	8 h (Author)

This schedule results in a total duration of 4 months production time. After finalisation, the document will be published on the EURAD homepage and on the EURAD Wiki. The experts are encouraged to support WP11 in dissemination of the document and to provide feedback on their experiences, which will allow WP11 to improve the process and the concept of the DI documents. Furthermore, the end-users are also asked to provide feedback (for more details see EURAD D11.10, Kondratiev et al. 2023).

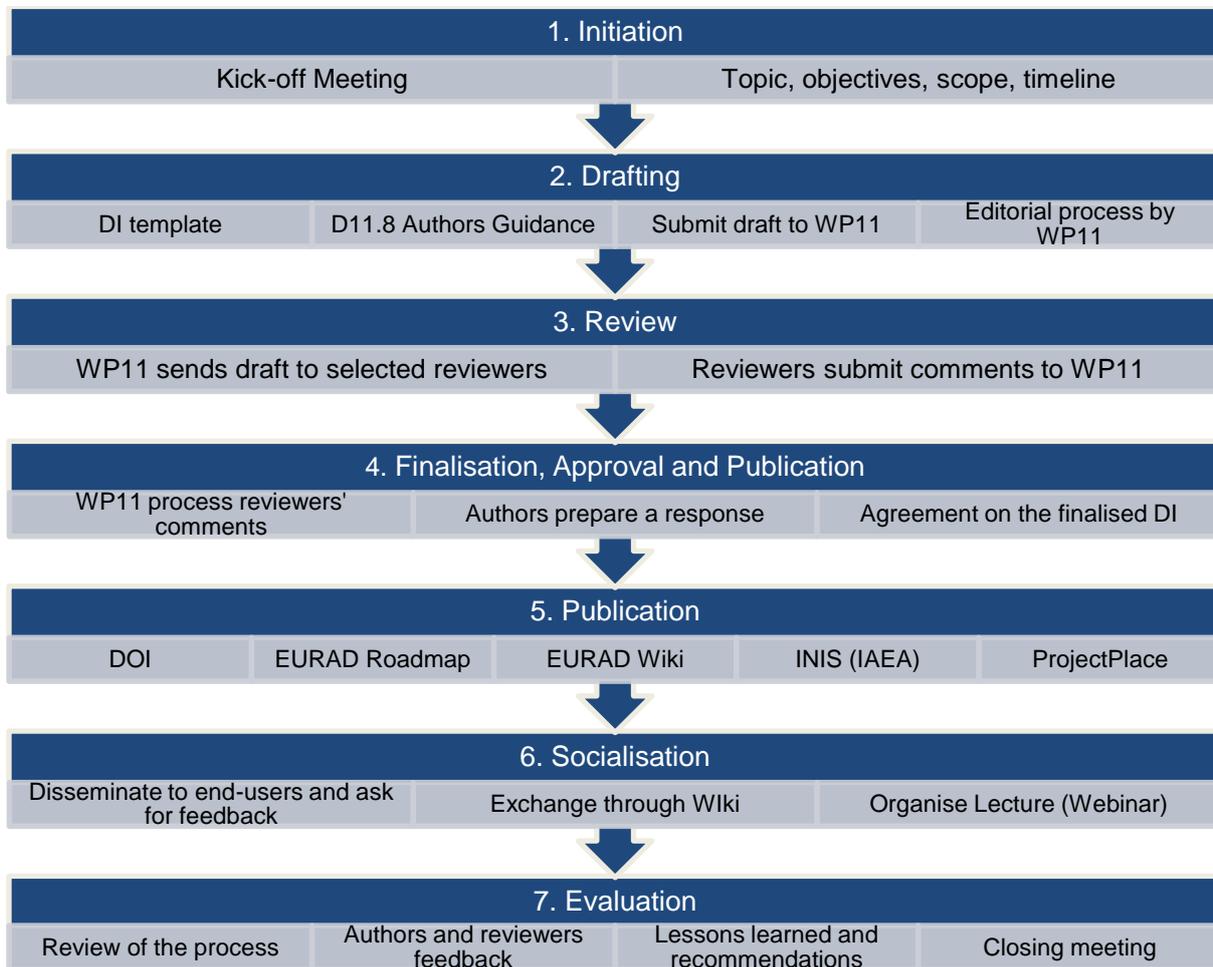


Figure 4: Overview of the procedure to develop a DI document

6. Reimbursement of efforts for work on Domain Insight documents – How can the effort be compensated?

EURAD values the time and effort that experts invest in the production of DI documents. Hence, work on these documents can be financially compensated. For the process of compensation, a distinction needs to be made between a) EURAD internal experts, and b) EURAD external experts. In the context of this document, a EURAD internal expert is a person that is employed by an organisation that is a member of EURAD (beneficiary or linked third party). It is not relevant if the person has done any work in EURAD prior to the involvement in the DI production.

An external expert is a person that is not employed by an organisation that is a member of EURAD (beneficiary or linked third party). This can mean that the person is either employed by another organisation, is self-employed (e.g., as a retired expert that has registered a company) or a private person (e.g., an expert without a registered company).

Depending of the category of experts, different processes for cost reimbursement apply. These processes are summarised in the following sub-chapters.

6.1 EURAD internal experts – Affiliated to EURAD via their organisations

In short, cost of work for experts that are employed by an organisation that is affiliated to EURAD can be reimbursed via the usual yearly financial report. A more detailed description of the process is given in the document *Cost reimbursement procedure for EURAD internal experts involved in the domain insight (DI) document production*, see also Appendix (B) of this document.

6.2 External experts – No Affiliation to EURAD

EURAD is aware that the writing of high-quality DI documents does take time and effort. Therefore, experts will be offered a compensation for their work in form of a fixed honorarium. In certain situations, a fixed honorarium may not be feasible. For example, experts who are contractually not allowed to receive compensation by another party or feel, that compensation is not necessary, are more than welcome to support EURAD in the generation of DI documents pro bono. In cases where a fixed honorarium is not sufficient to participate in the generation of a DI document, experts can request payment on an hourly base.

As a European Joint programme, EURAD does not generate profit, but its sole objective is to generate and manage knowledge in the field of RWM to support member states in the implementation of their RWM programmes. Therefore, EURAD has to allocate its budget in a way that provides maximum benefit. With that in mind, it is important that the compensation shall be done according to transparent, comprehensible and fair criteria. For this, the suitable option for each expert shall be selected according to some “guiding principles”. For all options, possible travel costs for physical meetings in the context of the DI document production process will be covered within the allocated budget. Regardless of the option, all experts will make a valuable contribution to the safe management and disposal of radioactive waste and authorship will be clearly attributed to the respective experts. Every effort that helps to provide a safe and healthy environment for current and future generations is highly appreciated.

The guiding principles for the selection of the appropriate options are:

Option 1 – Honorarium fixed

- The experts receive continuously and regularly full salaries from their organisations (employer) or retirement funding. They will be offered an honorarium of 5.000€ as an appreciating funding of their additional efforts.

Option 2 – “Pro-bono”

- With respect to any constraints, e.g. legal, institutional, tax or personal, there can be experts that are not allowed or willing to receive any financial compensation. In this case, only extraordinary cost (for example for a meeting with the other experts and the WP11 SoK team) will be covered.

Option 3 – Hourly based payment

- Experts that work as freelancers or that are totally or to a high extent earning project related income will need a kind of compensation for the purpose of earning their livelihood. These experts will have the option to ask for compensation on the base of hourly rate, based on the

actual hours spent on the work. The amount of work hours for each expert is estimated to be a maximum of ~48 h.

The applicable option will be agreed on by the respective expert and the WP11 SoK team and documented in the agreement, which will be concluded between the expert and EURAD (see “Experts Agreement”).

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EURAD Deliverable D11.4 Procedures to Involve Knowledge providers (2023) (in preparation)

EURAD Wiki https://rwmd.miraheze.org/wiki/Main_Page (accessed: 04.05.2023)

Kondratiev S., Fuzik K., Kutina L., Yesypenko Y., Tatomir A., Knuuti T. (2023): Feedback mechanism for Domain Insights, SoK documents and KM Systems – Methods and results. Final version as of 2023 of deliverable D11.10 of the HORIZON 2020 project EURAD. EC Grant agreement no: 847593. (under review)

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INTERNATIONAL ATOMIC ENERGY AGENCY, Radioactive Waste Management Glossary, Non-serial Publications, IAEA, Vienna (2003); [Radioactive Waste Management Glossary](#)

Appendix A. Template for a Domain Insight document.



Name, Domain Insight

Authors:

Reviewers:

Version: 1.0, DD MM YY

DOI:

To cite this document as:

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Overview

XXXXXX

Keywords

XXXXXX

Key Acronyms

XXXXX

Typical overall goals and activities in the domain of **Domain Name**

Copy overall domain goal from the roadmap GBS. Further elaborate activities needed to meet the overall goal, showing how they evolve and differ through successive phases.

(Note for Theme 2: Use IAEA Phases of Planning > Implementation (operations) > Optimisation.)

This section provides the overall goal for this domain, extracted from the [EURAD Roadmap goals breakdown structure \(GBS\)](#). This is supplemented by typical activities, according to phase of implementation, needed to achieve the domain goal. Activities are generic and are common to most geological disposal programmes.

Domain Goal	
<i>Domain number and Domain goal text from Goals Breakdown Structure</i>	
Domain Activities	
Phase 1: Programme Initiation	<i>Add short and generic description of typical activities</i>
Phase 2: DGR Site Identification	
Phase 3: DGR Site Characterisation	
Phase 4: DGR Construction	
Phase 5: DGR Operation and Closure	

Contribution to generic safety functions and implementation goals

Describe safety significant features of the domain or key aspects that are important for overall implementation. Try to use the generic safety and implementation goals listed in the provided “List of Safety and Implementation Goals” or in Domain Insight 7.1.1 - Safety Requirements.

This section describes how **Domain Name/topic** (and its associated information, data, and knowledge) contributes to high level disposal system requirements using EURAD Roadmap Generic Safety and Implementation Goals (see, Domain 7.1.1 Safety Requirements). It further illustrates, in a generic way, how such safety functions and implementation goals are fulfilled. It is recognised that the various national disposal programmes adopt different approaches to how disposal system requirements are specified and organised. Each programme must develop its own requirements, to suit national boundary conditions (national regulations, different spent fuel types, different packaging concept options, different host rock environment, etc.). The generic safety functions and implementation goals developed by EURAD and used below are therefore a guide to programmes on the broad types of requirements that are considered, and are not specific or derived from one programme, or for one specific disposal concept.

Features, characteristics, or properties of **Domain Name** that contribute to achieving storage safety as well as long-term safety of the disposal system

See “List of Safety and Implementation Goals” or *Domain 7.1.1 Safety Requirements for list of safety goals*

Primary goal - relied upon for

Domain name [Add Tag used in EURAD roadmap documents to link to safety goal, blue items in “List of safety goals] Example: EBS Practicability

Add text as explanation

Secondary goal – acknowledged but not relied upon for

Features, characteristics, or properties of **Domain Name** that contribute to achieving long-term interim storage stability and feasible implementation of geological disposal

See “List of Safety and Implementation Goals” or *Domain 7.1.1 Safety Requirements for list of implementation goals*

Primary goals – relied upon for

Domain name [Add Tag used in EURAD roadmap documents to link to implementation goal, green items in “List of safety goals] Example: EBS Practicability

Secondary goal – acknowledged but not relied upon for

International examples of **Domain Name**

Compile a short list of key examples from across the international literature / MSs for the domain of interest.

Critical background information

This is a list of the knowledge areas that most organisations focus on for this domain.

The section highlights specific components, key information, processes, data or challenges that have a high impact or are considered most critical for implementing geological disposal, with respect to the domain of **Domain Name**.

Integrated information, data or knowledge (from other domains) that impacts understanding of **Domain Name**

List key interfaces with other domains of the EURAD GBS (Goals Breakdown Structure) without trying to be fully complete, as there might be too many interfaces. Aim to highlight the interfaces considered most important. If you don't have time to source the cross-reference from the roadmap GBS, write in plain English which other parts of the system are most important, and editors can add references for you.

Maturity of knowledge and technology

This section provides an indication of the relative maturity of information, data and knowledge for disposal of **Domain Name**. It includes the latest developments for the most promising advances, including innovations at lower levels of technical maturity where ongoing RD&D and industrialisation activities continue.

Advancement of safety case

Optimisation challenges and innovations

Past and ongoing (RD&D) projects

Past (RD&D) Projects:

- Project 1, date (with link to further reading if possible)

Ongoing (RD&D) Projects:

- Project 1, date (with link to further reading if possible)

Lessons learnt

Describe the lessons learnt from the past and ongoing projects and work that are relevant to the maturity of knowledge and technology.

Uncertainties

Describe at a high-level key uncertainties (max half a page). Do not create a wish list of future RD&D, state uncertainties that are well acknowledged for the domain of interest and if possible, substantiate with a good reference. Here we are also interested to see if there are specific aspects of a domain that are disputed or where there is no consensus view held among experts of the domain.

Guidance, Training, Communities of Practice and Capabilities

This section provides links to resources, organisations and networks that can help connect people with people, focussed on the domain of **Domain name**.

Guidance
<i>Add existing links to available guidance</i>
Training
<i>Add existing links to available training</i>
Active communities of practice and networks
<i>Add existing links to available CoPs/networks</i>
Capabilities (Competences and infrastructure)
<i>Add, if possible</i>

Further reading, external links and references

Less is more. Aim to capture a few broad and high level references or State of Knowledge document (either already existing in the international literature or developed within EURAD).

Further Reading

Some high quality documents that are recommended for the reader

External Links

Provide links to websites that contain more information or useful tools, if available

References

List of references used in this document. References can be listed twice, as: 8.1 Further reading and 8.3 References.

End of document.

Appendix B. Cost reimbursement process for EURAD internal experts

Please note: The following is taken from the document “EURAD Internal expert cost declaration process for DI production_v1.0” (Version 1, valid as of October 2022). When in doubt, please refer to the most current version of said document.

Cost reimbursement procedure for EURAD internal experts involved in the Domain Insight (DI) document production

EURAD internal experts can receive compensation for the actual work they have performed on contributing to Domain Insight documents, either as authors or as reviewers. The cost have to be declared in the annual financial report of their organisation for EURAD, via the Use of Resources excel table (see point 7 below). Cost should be declared at the end of the period in which they have occurred, even if the work continues in the next year (EURAD fiscal year, not calendar year). The cost will be reimbursed with the reimbursement rate that is agreed for KM WPs, which is 70%.

The “[Factsheet n°3 - Involvement of experts and reimbursement options](#)”, issued by the PMO in September 2020 and updated in May 2021 (available on ProjectPlace), states:

“For the work packages where the need has been foreseen, extra budget is available and secured under the WP leader’s budget pending the identification of experts. Once agreed between the WP Leader, the expert and the PMO, the budget transfers from one organisation to the other within the same WP can be made, without requesting an amendment, to cover the work provided by the expert.”

This means that there is an extra budget for experts also in WP11 SoK. Effective management and access to this budget relies on a close exchange and agreement between the experts, the EURAD coordinator and WP11, at all times. **Therefore, the following steps should be followed to organise reimbursement for cost:**

1. **The expert(s) and WP11 agree on the work that should be performed** and document this agreement (informal documentation, e.g. via saved e-mail or minutes is sufficient, please save the documents/e-mails). This includes agreement on:
 - a. Which activity (other activities can be added if necessary):
 - i. writing
 - ii. reviewing
 - b. Which Domain(s) of the EURAD GBS
 - c. Estimates of actual hours needed for the work (*if not agreed otherwise, the following estimates shall be used. All values are given for one DI document. Writing a DI document (draft + finalisation after review): 48h; Reviewing a DI document: 8h. IMPORTANT: only actual hours spent for the work are eligible for reimbursement, estimates are for planning purposes only*)
 - d. Estimates of schedule for the work (i.e., date at which the work will be finished) (*if not agreed otherwise, the following estimates shall be used. All values are given for one DI document: Production of a DI document: 2 weeks initiation (including activities described in this document), 2 months writing, 2 weeks editorial processing, 1 month review, 2 weeks finalisation*)
2. **WP11 informs the EURAD coordinator** about what was agreed in 1) and agrees if/that the work planned can be reimbursed from the budget. The expert receives confirmation about this from WP11 directly after agreement with the coordinator. This is to ensure that all have the same information and to avoid confusion when it comes to declaring the cost.
3. **The expert performs work** as agreed in 1) and informs WP11 regularly about progress and changes. In case of any major deviations from what was agreed in 1), WP11 informs the EURAD

coordinator about the changes. These changes must be discussed and approved between the expert and WP11 before they are implemented. This can be, for example, addition of more work through added domains or reduction of work.

4. **After the work is finished, the expert informs WP11**, and sends the result of the work (e.g. the written DI document, review comments).
5. **WP11 checks if the work was performed as agreed**. If the work does not match the agreement, WP11 contacts the expert and a common solution shall be sought. In case of persisting disagreements, the EURAD coordinator and the PMO can be contacted for support.
6. **WP11 informs the EURAD coordinator about the finished work (in copy to expert)**. At this point, the cost are eligible to be included in the financial report of the organisation at which the expert is employed. The reimbursement rate is 70%, which is the fixed rate for all work in KM WPs. If the expert, for whatever reason, will not declare the cost in the financial report, she/he shall inform WP11 and the coordinator about that.
7. **The expert declares the cost in the financial report** of the organisation according to the normal procedures used by the organisation. The hours need to be included in the Use of resources excel table, under WP11 – task 2 (column 4 and 5), see screenshot below. If the organisation is not part of WP11, there is a need to select “No” in the column “Foreseen in Annex 1” (column 6) and to provide an explanation in the column “If not foreseen in Annex I, please justify the cost” (last column).

Category of costs Mandatory Choose from the drop-down list below	In-Kind contribution against payment Only for SKB (UU) and Andra (LMDC)	Short Description of the expenses Mandatory	Person months Mandatory (only for personnel costs)	WP Nb Mandatory ory	Task Nb Mandatory (only for personnel costs)	Foreseen in Annex 1 (Yes / No) Mandatory	Direct costs (in €) For In-Kind contributors (UU and LMDC): the flat rate 25% should be applied in the direct costs	Indirect costs (in €). (No indirect costs for subcontracting or In-Kind contributors against payment)	Total costs (in €)	If not foreseen in Annex I, please justify the cost
[Choose according to your standard accounting process]		[Include number + name of the domain and your activity (writing or review). If you worked on more than one Domain Insight document, please fill out one individual row for each DI document]	[Actual person month, not the estimates]	WP11-KM SoK	Task2	no	[Calculate according to your standard accounting process]	0,00	0,00	Support of WP11 SoK as an EURAD internal expert for the production of DI document [add number and name of domain]

NOTE: if the work agreed in 1) extends over two different EURAD years, the expert shall declare the cost of the work in the respective year in which the work was actually performed, even though the work is not finished yet. For example, the writing of a DI document started in May of year 1 (last month of a EURAD year) and was finished in June of year 2 (first month of a EURAD year). In this case, the cost occurred in May shall be reported in the financial report of year 1, and the cost that occurred in June will be reported in the financial report of year 2. The expert shall inform WP11 and the EURAD coordinator about this.

Appendix C. Procedure for development of a DI document

Please note: The following is adapted from Deliverable 11.5 “QA procedures for SoK”

Planning of works with the DI document production

Before the start of activities on the production of a DI document, it shall be determined the whole process of development of the DI document (initiation, development, review, approval, socialisation and evaluation), including timeline, responsibilities (and their distribution between authors, if necessary), etc. When the potential author(s) for the production of the DI document is identified, WP11 initiates a kick-off meeting with the author(s) to discuss the whole procedure for the production of the DI document and get a clear understanding of the expectations for a particular DI document. WP11 with author(s) shall discuss and agree on:

- context of the selected Domain(s);
- objectives of the particular DI document;
- distribution of work between authors;
- target audience;
- scope/topics and preliminary structure of the DI document;
- steps of development and approval of the DI document;
- reimbursement and contracting;
- timeline;
- contacts and roles.

The content of the issues from the specified list is described below in Sections 2.1-2.7 of this Appendix C. The results of the discussion and agreement shall be recorded jointly by the WP11 Team and the author(s) in the form of minutes of the kick-off meeting.

The information provided in the minutes of the kick-off meeting can be used by WP11 Team for further planning of the DI document review, evaluation of the results of production of the document, etc.

2.1 Context of the selected Domain(s)

The place of the selected DI domain(s) in the structure of EURAD GBS shall be presented by WP11. A link to the respective SoK document(s) shall be provided.

2.2 Objectives

Objectives of the particular DI document shall be clearly presented by WP11. The overall aim and approach is based on creating an entry-point for those wishing to access the specified ‘Domain’ Knowledge Base. See Section 3.1 of this Authors Guidance document.

2.3 Target Audience

The target audience of the DI document shall be clearly defined by WP11. See Section 3.2 of this Authors Guidance document.

2.4 Scope/Topics and Preliminary Structure

The scope and preliminary structure of the DI document shall be defined. The topics within the EURAD GBS domain to be reflected in the particular DI document shall be identified.

2.5 Steps of development and approval of the DI document

The steps of development and approval of the DI document shall be specified together with the authors of the DI document, and will include the following steps:

- Drafting;
- Review
- Finalisation and approval;
- Socialisation;
- Evaluation.

2.5.1 Drafting

The procedure for the planned development of the draft DI document shall be briefly described and consist of following (but not limited to):

- 1) The author(s) shall develop the DI document in accordance with the minutes of the kick-off meeting for the specific DI document and recommendations of D11.8 Authors Guidance and template (additionally, see the Roadmap authors quick start guide).
- 2) The WP11 shall support author(s) in the process of writing the DI document. The author(s) shall periodically inform WP11 about progress and changes.
- 3) The author(s) shall submit the DI draft document to WP11.
- 4) The editorial process shall be performed to the draft DI document. WP11 Team or other internal expert(s) might perform an editorial review of the draft DI document (focusing on editorial and format). The draft of the DI document shall be checked for compliance with the minutes of the kick-off meeting for the specific DI document. After taking into account comments and recommendations in the appropriately finalised draft DI document, author(s) shall submit this document to WP11.

2.5.2 Review

The review process shall be implemented according to the following procedure:

- 1) The WP 11 Leader (and/or WP11 team) shall submit the draft DI document to selected reviewers (if agreed upon via the EURAD Coordinator).
- 2) Upon the review of the draft DI document, the reviewers shall prepare review comments and submit them to the WP11 Leader.

2.5.3 Finalisation and approval

The finalisation and approval processes shall be implemented according to the following procedure:

- 1) WP11 shall process the review comments and submit them to the author(s) for taking into account the comments and finalise the DI document.
- 2) The author(s) shall prepare a response to the review comments to the draft DI document and submit it with the finalised DI document to WP11.
- 3) WP11, in consultation with the Coordinator, PMO and Bureau, shall agree on the finalised DI document.

2.5.4 Publication

- 1) After the document has been finalised and approved, WP11 sends to the Coordinator the finalised version.
- 2) The DI document is assigned a DOI (e.g., zenodo).
- 3) The DI document is uploaded (as pdf) on the EURAD webpage (in the EURAD Roadmap).
- 4) The document is uploaded to the EURAD Wiki (and in the future to the platform KMS) to the EURAD ProjectPlace

5) The DI document is sent to IAEA to be uploaded in the IAEA/INIS repository. An agreement between EURAD and IAEA was made regarding the uploading of the DI documents.

2.5.4 Socialisation

The socialisation process shall be implemented after the DI document is approved and published and shall be performed according to the following procedure:

- 1) WP11, with support of PMO, shall disseminate the DI document to defined end-users (e.g., through Knowledge ambassadors, Communities of practice), asking for feedback.
- 2) WP11 shall foster exchange and discussion of the DI document through the Wiki (and the future platform Knowledge Management System), where the document has been uploaded beforehand (EURAD website, Wiki, DOI, IAEA/INIS)
- 3) In agreement with the authors, WP11 jointly with WP13 (Training & Mobility) and PMO are encouraged to organise a lecture with associated discussion on the DI document.
- 4) WP11 shall encourage the authors to disseminate the DI documents in their expert community.

2.5.5 Evaluation of production process

The evaluation process shall be implemented according to the following procedure:

- 1) WP11 shall review the process and results of the development of the particular DI document.
- 2) WP11 shall interact with the authors and reviewers of the DI document in order to obtain and take into account their experience and opinions on the process and results of the development of the DI document.
- 3) WP11 shall assess the lessons learned during development of particular DI document and provide recommendations on an optimised approach for future DI document production.
- 4) WP11 shall arrange the closing meeting to discuss results of the evaluation process for optimisation of further DI document production activities. The results of the evaluation process, discussions and decisions made from the meeting shall be recorded in the minutes of the closing meeting.

The minutes of closing meeting shall contain, in particular, the following:

- processes of development of the DI document;
- challenging issues during the development of the DI document;
- lessons learned during development of the DI document;
- recommendations on providing an optimised approach for future DI documents production.

2.6 Timeline

The timeline and deadlines for the development of particular DI document shall be indicated. The schedule for the development of particular DI document shall be defined between WP11 Team and author(s) at the kick-off meeting. The start of planning is counted from the kick-off meeting.

If not agreed otherwise between the authors and WP11, timelines and deadlines for the specific stages should be approximately the following:

- Initiation - 2 weeks;
- Drafting - 2 months;
- Editorial processing - 2 weeks;
- Review – 1 month;
- Finalisation after review: 2 weeks.

2.7 Contacts and roles

At the kick-off meeting, the procedure for the production of DI document and the procedure for communication between all involved parties (WP11 Team, author(s), EURAD Coordinator) shall be discussed. The information on names and mail addresses of the contact persons is entered into the minutes of the kick-off meeting.

3. Production of a DI document

Further development of the DI document shall be carried out according to the procedure agreed upon at the kick-off meeting and recorded in the minutes of that meeting (see paragraphs 2.1-2.7 of this appendix).

As the DI document develops, the WP11 Team shall support the author(s) in the process of writing the DI document and the author(s) shall periodically inform WP11 Team about progress and changes.

If the opinion and vision of a DI document of the author(s) differ from the opinions of the WP11 Team, or if there are problems with the writing of a DI document, the EURAD Coordinator, PMO and Bureau might be involved to find a solution.