



Milestone 21: Prioritisation of KM guidance documents to be produced by Month 24/56 (Task 3)

Work Package 2 Knowledge Management



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Executive Summary

This milestone report describes work conducted under Task 3.1 of EURAD-2 Work Package (WP) 2 to identify areas in which to develop guidance in support of the implementation of national radioactive waste management (RWM) programmes within Member States. This work in particular supports Small Inventory Member States (SIMS) and early-stage programmes (ESP), by providing them with insights from more advanced programmes (including examples of successful practices).

A review of relevant literature was conducted, including State-of-the-Art (SOTA) reports, Green Papers, Strategic Research and Knowledge Management Agendas (SRAs), and other relevant documents and their recommendations for further guidance or information gaps were documented. This resulted in a list of 29 candidate topics for further guidance development. A survey was circulated to EURAD-2 registered end users, registered stakeholders and partners in order to gather wider feedback on the list of candidate topics for guidance development. The survey responses revealed a clear preference for seven of the 29 topics, notably:

- Topic #2: Enhance public understanding
- Topic #4: Transfer of experience
- Topic #5: Waste management routes
- Topic #19: Characterisation - innovative methods
- Topic #20: Waste characterisation for WAC compliance
- Topic #23: Novel wasteforms
- Topic #24: Long-term storage

The survey results were examined by the sub-task 3.1 team and additional feedback was sought in consultation with the IAEA.

In general, these discussions confirmed that the seven most popular topics are already well covered in existing or planned guidance and guide-like literature, although some sub-topics contained within these topics may be less well covered and therefore represent information gaps. Any further guidance on these topics would need to respond to a clear and specific unmet need or gap.

In cases where existing guidance is judged to be sufficient, the most appropriate forward action will be undertaking activities to communicate and raise awareness of the availability of such guidance and dissemination of key learning points. The optimal methods to do this will vary depending on the topic but could include conducting webinars or training events on certain topics and/or producing short signposting documents or 'mini-Domain Insight (DIs)' that can act as a 'landing page' for a given topic, or to accompany guidance on a website. Recommendations are also made to enhance the accessibility of EURAD outputs published on the programme website.

Based on survey responses and subsequent analysis, the forward programme for guidance development under KM WP2 could include:

- Dissemination and signposting of existing guidance and conclusions relating to popular topics, particularly in relation to:
 - Public participation and science communication.
 - Waste management routes for a range of challenging and novel wastes.
 - Methods for waste characterisation.
 - Waste acceptance criteria (WAC).
- Development of guidance building on the outcomes of the ASTRA WP (Task 5) in relation to exchanges of operational experiences on waste management (if not already being delivered within the WP scope).
- Development of guidance in relation to waste inventories arising from the use of Small Modular Reactors (SMRs) and/or advanced fuels in nuclear reactors (to be revisited following conclusion of the FORSAFF WP).

- Further engagement with EURAD-2 partners, end users and stakeholders to identify specific knowledge gaps (sub-topics), in order to address targeted needs, particularly in relation to:
 - Public participation and science communication.
 - Waste characterisation.
 - Novel wasteform development and behaviour.
 - Long-term storage.
- Further engagement with guidance producing international bodies, especially the Nuclear Energy Agency (NEA) and the ERDO Association¹ for Multinational Radioactive Waste Solutions, may prove beneficial to identifying guidance gaps and to minimise duplication of effort in guidance production.

The conclusions and recommendations from this analysis will provide a basis for planning dissemination activities in Years 2 and 3 of the EURAD-2 work programme, as well as informing opportunities for progressing targeted guidance where gaps have been identified. The survey remains open and further feedback on existing or emerging guidance needs is welcomed. It is anticipated that another exercise to review guidance needs will be conducted in the second half of the EURAD-2 work programme.

¹ The Association for Multinational Radioactive Waste Solutions, <https://www.erdo.org/>.

Keywords

Guidance, Prioritisation, Knowledge Management, Survey, Stakeholder Engagement, Best Practices, Innovation, Training, Collaboration

List of acronyms and abbreviations

ASTRA	Alternatives RWM Strategies
BGE	Bundesgesellschaft für Endlagerung (Germany)
DI	Domain Insight
DSRS	Disused Sealed Radioactive Sources
DU	Depleted Uranium
EIMV	Elektroinštitut Milan Vidmar (Slovenia)
ESP	Early-Stage Programmes
EURAD-1	European Joint Programme on Radioactive Waste Management (2019-2024)
EURAD-2	European Partnership on Radioactive Waste Management (2024-2029)
FORSAFF	Waste Management for SMRs and Future Fuels
IAEA	International Atomic Energy Agency
ICARUS	Innovative Characterisation Techniques for Large Volumes
KM	Knowledge Management
L'OPERA	Long-term Performance of Waste Matrices
LCA	Lifecycle Analysis
LIMS	Large Inventory Member States
NSD	Near-Surface Disposal
PURAM	Public Limited Company for Radioactive Waste Management (Hungary)
PREDIS	The Pre-Disposal Management of Radioactive Waste
RMS	Requirements Management Systems
RSOWs	Radioactive Solid Organic Wastes

RWM	Radioactive Waste Management
SIMS	Small Inventory Member States
SMR	Small Modular Reactor
SNETP	Sustainable Nuclear Energy Technology Platform
SNF	Spent Nuclear Fuel
SOTA	State-of-the-Art
SRA	Strategic Research and Knowledge Management Agenda
SSTC NRS	State Scientific and Technical Center for Nuclear and Radiation Safety (Ukraine)
STREAM	Sustainable Treatment and Immobilisation of Challenging Waste
SUDOKU	Near-surface Disposal Optimisation Based on Knowledge and Understanding
T2L	Task 2 Leader
ÚJV	Ústav Jaderný Výzkumný (Czech Republic)
WAC	Waste Acceptance Criteria
WISARD	Waste Integration for Small and Advanced Reactor Designs
WP	Work Package

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1. Introduction

1.1 Context

The goals of Work Package (WP) 2 on Knowledge Management² (KM) within EURAD-2 are to continue, and build upon, the KM programme established during EURAD-1, and for KM to become self-sustaining in the next 10 to 20 years. EURAD-2 KM activities support the transfer of radioactive waste management (RWM) knowledge between organisations and generations, by establishing an inclusive, collaborative framework linked to the EURAD Roadmap [1]. WP2 KM activities are divided into four tasks:

- **Knowledge capture (WP2 Task 2):** production of KM documentation following the priorities set within the EURAD Strategic Research and Knowledge Management Agenda (SRA).
- **Knowledge application & know-how development (WP2 Task 3):** providing guidance on best practices and available technologies, through the production and signposting of documentation reporting successful practices for RWM (sub-task 3.1), as well as through the analysis of available RWM infrastructures within Member States (sub-task 3.2).
- **Competence building (WP2 Task 4):** closing generational competence gaps between members of the EURAD-2 Community, advanced and less advanced Member States, and sharing knowledge with the new generation of experts in the field of RWM, through the School of Radioactive Waste Management. This includes the provision of training, a mobility programme and mentoring & networking opportunities.
- **KM programme tools and methods (WP2 Task 5):** further building on KM platform specifications developed in EURAD-1, implementing effective data management approaches; developing methodologies to keep knowledge available over the long term, managing access to lost knowledge, and testing new and innovative tools and methods.

1.2 Sub-task 3.1 objectives and previous work

This milestone report describes progress made under sub-task 3.1: Guidance. The overall aim of work in this area is to support implementation of the national programmes within Member States, particularly Small Inventory Member States (SIMS) and early-stage programmes (ESPs), by providing them with insights from more advanced programmes, including examples of successful practices. This will be realised by the production and dissemination of guidance and/or lessons learned reports on successful practices for radioactive waste management in Member States and further afield.

Sub-task 3.1 builds upon previous guidance development activities already conducted in EURAD-1, for example, on cost assessment and financing schemes for RWM programmes (EURAD-1 Deliverable D12.4) [2], on Requirements Management Systems (RMS) (D12.6, D12.8 & D12.9) [3; 4; 5] and the EURAD-1 Strategic Research and Knowledge Management Agenda (D1.9) [6]. It has been informed by previous exercises to review existing guidance and guide-like documents (D12.7) [7] and to identify and prioritise gaps where further guidance would be beneficial (D12.5) [8; 9].

The objective of initial work under this sub-task has been to determine the scope of guidance to be produced later in the task. This has been done by means of a screening exercise and gap analysis, taking account of feedback from EURAD-2 partners, end users and stakeholders on guidance needs. A review of needs already identified in relevant SRAs was also conducted. Finally, a prioritisation exercise was completed to identify topics to be taken forwards. At the start of the task, it was envisaged that two areas of guidance would be progressed in the first 24 months of EURAD-2; this initial plan is discussed in the light of findings from the above activities in Section 4. The work reported here can also inform subsequent activities to address ongoing guidance needs later in the EURAD-2 programme.

² Knowledge Management describes a sustainable, collaborative framework for managing and sharing knowledge related to radioactive waste management (RWM) and geological disposal.

EURAD-2 partners involved in sub-task 3.1 include Galson Sciences Ltd. (GSL), the State Scientific and Technical Center for Nuclear and Radiation Safety (SSTC NRS), Elektroinštitut Milan Vidmar (EIMV), Nuclear Research Institute (ÚJV Řež), Public Limited Company for Radioactive Waste Management (PURAM), and the German Federal Company for Radioactive Waste Disposal (Bundesgesellschaft für Endlagerung, BGE). DEKOM also played a role in the initiation of the task and remains an interested party.

1.3 Summary of approach to identify guidance needs

The flowchart shown in *Figure 1-1* presents the approach followed in this sub-task, highlighting a combination of literature review, stakeholder engagement, and data analysis to identify guidance needs. The process started with *Discussions on Data Inputs for Literature Review* where relevant sources and reference materials were collected. This was followed by a *Systematic Literature Review within the Task 3 team*, which identified, collated and screened recommendations for guidance and highlighted previous work to identify guidance needs in the field of RWM. Based on this review, the team identified 29 potential guidance topics, representing a broad array of themes relating to the EURAD SRA.

The next phase involved engagement with stakeholders via a survey. It started with *Drafting and Publishing the Survey for End User Engagement*, ensuring questions were relevant to gather appropriate feedback and inviting feedback. Following issue of the survey, the team proceeded with *Collecting Survey Responses* and responding to queries from respondents.

Thereafter, the focus shifted to *Analysing Survey Responses*. These were carefully reviewed to understand which topics are a priority for end users, to explore areas of common need, and to discuss potential approaches to respond. The analysis led to *Identifying the Priority Topics*, narrowing down the original 29 topics identified during the literature review to a subset, which are identified later in this *Milestone Report*.

Sub-task 3.1 activities will continue with the *Development of Guidance*. Preparation of documents, and related dissemination initiatives to signpost resources where existing guidance is already available, will address the prioritised guidance needs identified via the review and subsequent survey.

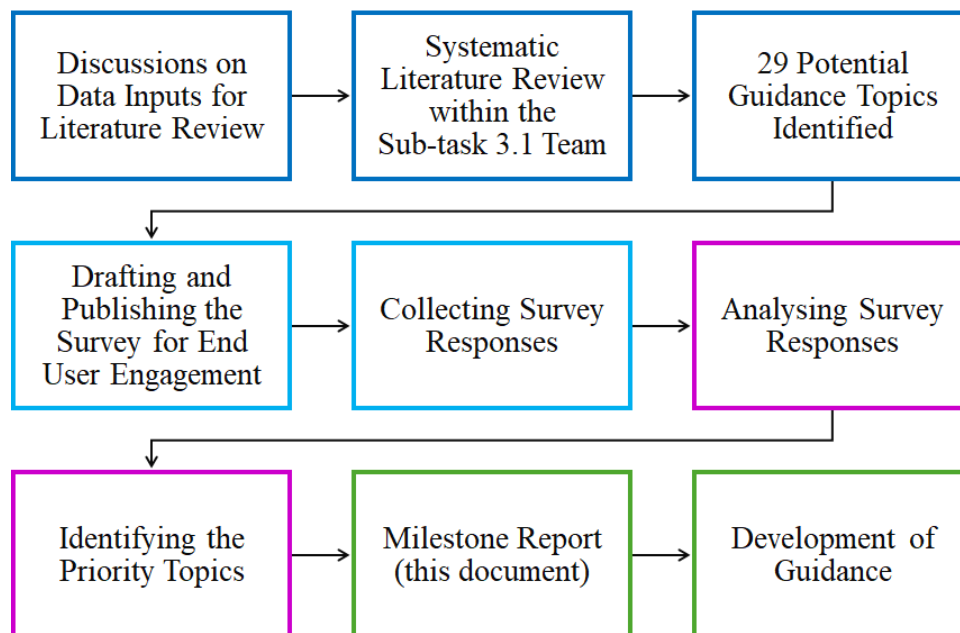


Figure 1-1 : Steps involved in the structured approach used to identify priority guidance topics, ultimately leading to the selection of topics for further development. In the diagram, dark blue boxes represent activities described in Section 2.1; light blue boxes correspond to Section 0; purple boxes correspond to the analysis provided in Section 3, and green boxes indicate key outputs including this Milestone Report and subsequent upcoming guidance.

2. Approach

2.1 Identification of potential guidance topics

In order to identify potential gaps in existing guidance that could form the basis for guidance topics to be delivered in EURAD-2, a targeted literature review was carried out by members of the sub-task 3.1 team. This review encompassed a range of strategic documents, including:

- The EURAD roadmap [10] and SRA [6].
- The Pre-Disposal Management of Radioactive Waste (PREDIS)³ SRA [11].
- A gap analysis conducted at the outset of the PREDIS project [12].
- Various documents produced under EURAD-1 WP12 on guidance, notably a list of prioritised topics for guidance documents, and a contribution to EURAD roadmap gap analysis in the form of a review of available guidance and guide-like documents on geological disposal [7,8].
- Deliverables from various EURAD-1 work packages, notably ROUTES, as well as other EC projects including HARPERS, THERAMIN, SHARE and CARBOWASTE.
- PowerPoint slides setting out the viewpoints of various SIMS as presented at an EC event held in October 2024 [13].

The findings from this review were systematically documented in a spreadsheet [14], which was structured with several data inputs, as outlined in *Table 2-1*. These data inputs enabled a clear distinction between areas where guidance is lacking and those where relevant knowledge already exists.

Table 2-1 : Data inputs from the literature review used in the spreadsheet [14] to identify and collate potential guidance topics.

Data Inputs	Description
Entry #	To assign each entry a unique reference number, for ease of reference
Source	Reference of the source document
Source Section	Reference within the source document
Guidance Topic	Indicate the scope of guidance that is required based on discussion in the source reference
Drivers	Explains why the guidance is needed, highlighting specific issues, gaps, or challenges it addresses
Anticipated Users	Who would be the primary audience for the guidance?
EURAD roadmap theme	How the guidance topic relates to one or more of the seven themes within the EURAD roadmap Goals Breakdown Structure
Sub-theme	How the topic relates to one of the EURAD roadmap sub-themes or if it connects to multiple sub-themes
Mapping to existing guidance	Identify any existing guidance on the same or related topics, making reference to the review reported in EURAD Deliverable D12.7 [7]. The intent here is to avoid duplication with existing guidance and to facilitate signposting, where beneficial

³ The PREDIS project: <https://predis-h2020.eu/>.

Data Inputs	Description
Type / scope of new guidance required	Capture any indications (e.g. from the source document) on how to address knowledge gaps requiring guidance, particularly in terms of what form of guidance would be most useful
Potential Challenges	Identify any particular topics or technical areas that it would be useful for the guidance to address
Summary Topics	Proposed topics for engagement. The scope of these topics was defined to enable grouping of related spreadsheet entries into a manageable number for subsequent steps
Related EURAD-2 WPs and Deliverables	Identified, where relevant, as a basis for checking whether a guidance topic might already be in the process of being addressed within the wider EURAD work programme

29 potential guidance topics were identified through the analysis conducted within the guidance spreadsheet, as a basis for discussion, further refinement and engagement. The 29 shortlisted topics are presented in *Table 2-2*. Each of these topics aligns closely with one or more of the EURAD roadmap sub-themes and domains, as recorded in the spreadsheet.

Table 2-2 : List of potential guidance topics identified through the literature review and documented within the structured guidance spreadsheet.

No.	Potential Guidance Topic
1	Implementation of requirements from Aarhus convention - access to resources (including information) and inclusivity
2	Strategies to enhance public understanding of radioactive waste management research, integrate Civil Society feedback, and improve science communication in radioactive waste management
3	Planning and establishing early stage radioactive waste management programmes
4	Transfer of experience from Large Inventory Member States (LIMS) and more advanced programmes to Small Inventory Member States (SIMS) and earlier stage programmes (available to operators and/or regulators)
5	Waste management routes - challenging or novel wastes (including orphan sources, particular spent fuel, depleted uranium, Small Modular Reactor (SMR) inventories, others)
6	Long-term planning and decision-making: waste stewardship
7	Competence development for operators and regulators
8	Impact of EU Green Deal on radioactive waste management
9	Inventory - non-radiological constituents and chemotoxics
10	Inventory - challenging wastes
11	Inventory - waste definition approaches

No.	Potential Guidance Topic
12	Waste Acceptance Criteria (WAC) - harmonisation, optimisation (reduce conservatism)
13	Waste Acceptance Criteria (WAC) - good practice via benchmarking
14	Waste Acceptance Criteria (WAC) - definition for specific / novel wastes
15	Waste management - mobile / modular facilities
16	Waste management - shared use of facilities
17	Waste management - innovation and enhanced application of the waste hierarchy and/or integration of Lifecycle Analysis (LCA) into planning of facilities
18	Characterisation of challenging wastes - including disused sealed radioactive sources (DSRS) and orphan sources
19	Characterisation - innovative methods
20	Waste characterisation to determine compliance with Waste Acceptance Criteria (WAC)
21	Waste management - treatment of radioactive solid organic wastes (RSOWs), including bitumen
22	Recycling - best practice for decommissioning wastes
23	Novel wasteform development and behaviour
24	Long-term storage - social and technical challenges
25	Monitoring waste package performance; optimisation of storage conditions
26	Optimisation - technology selection and quality control
27	Adopting innovative and digital technologies in decommissioning to enhance efficiency
28	Methodologies for concept evaluation
29	Deep borehole disposal - guidance on safety case development

2.2 Guidance survey

Initial feedback on the list of 29 topics identified in Section 2.1 was sought from the EURAD-2 community of partners, end-users and stakeholders, by means of a survey. The objective of this engagement was to identify priority areas for guidance, placing a particular emphasis on end user needs, i.e., gaps and uncertainties that are creating challenges to the progression of national waste management programmes.

The survey, displayed in Appendix A, was developed and hosted on the EUSurvey platform [15], the preferred tool for conducting surveys within EURAD-2. It was composed of two main sections:

- The initial section (“General information”) collected meta-data about the responding organisation and its role within EURAD-2, for example whether the respondent was a EURAD-2 partner, end user, stakeholder, or “other” respondent. The EURAD-2 work package(s) to which each respondent organisation is contributing (if applicable) was also recorded, to help identify

any trends for guidance needs relating to specific work packages. Names and contact details of the responding individuals were also recorded for traceability and further possible queries. All personal details have been held in accordance with EURAD-2's data collection policy [16].

- The second section of the survey (“Guidance topics”) invited respondents to select up to three topics from the above ‘shortlist’ of 29 which they felt needed further guidance (**Question 1**). Respondents were also invited to provide the following inputs:
 - To identify any further topics requiring guidance that did not appear in the shortlist of 29 (**Question 2**).
 - To explain the rationale behind their topic selections in Question 1 (**Question 3**).
 - To indicate the nature (scope, mode and format) of guidance that would be most beneficial to their organisations (Question 4). For example, written guidance could take the form of an in-depth report; short case studies or high-level orientation documents. Guidance could alternatively be delivered through forums for discussion e.g. establishing a Community of Practice; holding training webinars; or arranging workshops on particular topics.

A final question provided respondents with the opportunity to add any additional comments on guidance not already captured in the survey (**Question 5**).

The survey was circulated via email to all EURAD-2 end users and stakeholders (as registered at the end of February 2025) via the EURAD-2 Coordinator, as well as to EURAD-2 partners via the Task 2 Leader (T2L) KM Ambassadors within each EURAD-2 technical WP. One response per organisation was requested to ensure a balanced representation of views across responding organisations. A live link to the survey was supplied as well as an attached pdf copy of the survey to enable review of survey questions between colleagues prior to submission of a single collective response per organisation. One month was allotted for organisations to respond (until the closing date of 26th March 2025). Reminder messages circulated mid-way through the response period were found to be effective in prompting further responses to the survey. The analysis presented in Section 3 considers responses received prior to this closing date; nevertheless, the survey remains open and can be used as a vehicle for providing additional feedback on guidance needs; such inputs will be considered later in EURAD-2.

3. Analysis of responses

Survey responses were analysed in order to identify topics for guidance development sought by EURAD-2 partners, end-users and stakeholders.

Initial data quality checks and pre-processing steps were performed on responses to the survey, including removal of duplicate entries for some responding organisations (in discussion with their representatives) and standardisation of grammar. Following this, the responses to the initial survey section (“General information”) were examined to determine the types of organisations that had responded, the countries to which these organisations belong and their roles within the EURAD-2 partnership, including work package involvement. The results are summarised in Section 3.1.

A summary of the priority guidance topics identified via the survey is provided in Section 3.2. These results were examined in discussion with the sub-task 3.1 team, as detailed in Section 3.3.

3.1 Summary of respondents

A total of 59 responses were received during the initial month-long response period. Duplicate responses were identified for two organisations during pre-analysis and data quality appraisal. These duplicate responses were resolved upon consultation with the organisations in question, giving a total of 57 unique responses.

Initial analysis revealed that responding organisations come from 26 countries (*Figure 3-1*), with the highest number of responses coming from European countries with more well-established radioactive waste management programmes, such as France, Germany and the Czech Republic (five responses each)⁴. Responding organisations span national Waste Management Organisations (WMOs); Technical Support Organisations (TSOs); Research Entities (REs) including national laboratories, universities and supply chain companies; and regulatory bodies. To date, there were limited responses from site operators or waste owners that are not also EURAD-2 partners.

As shown in *Figure 3-2*, the majority of responses came from EURAD-2 partners (77%), with contributions also received from registered end-users (19%) and registered stakeholders (4%).

⁴ Noting that there are typically more organisations working in the field of radioactive waste management in countries with well-established programmes.

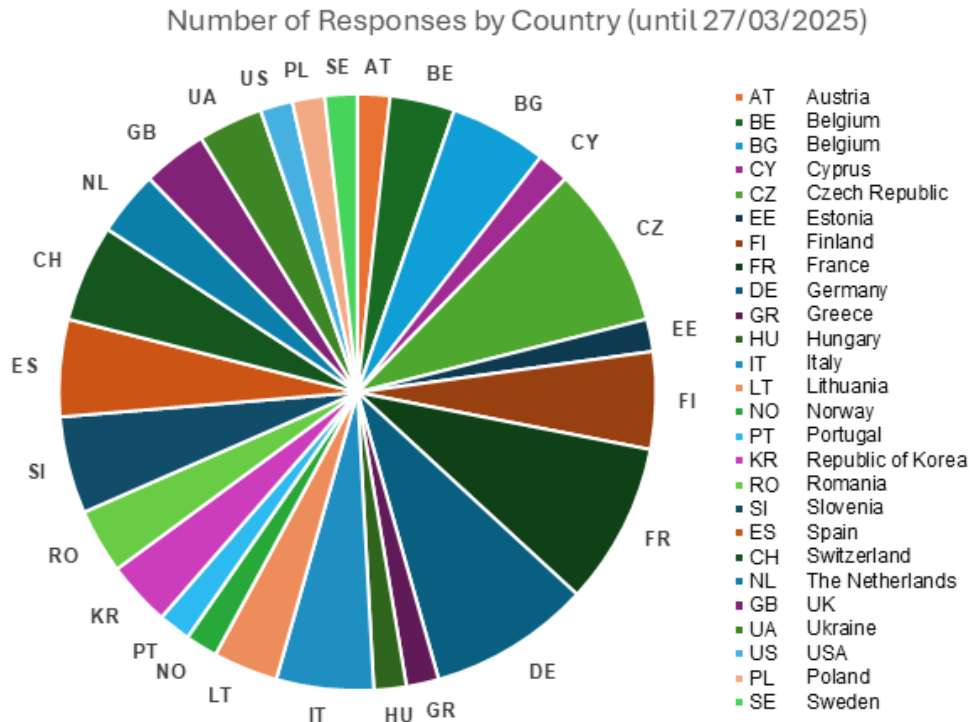


Figure 3-1 : Guidance survey responses by country. Two-letter country codes are included, along with full country names (right)

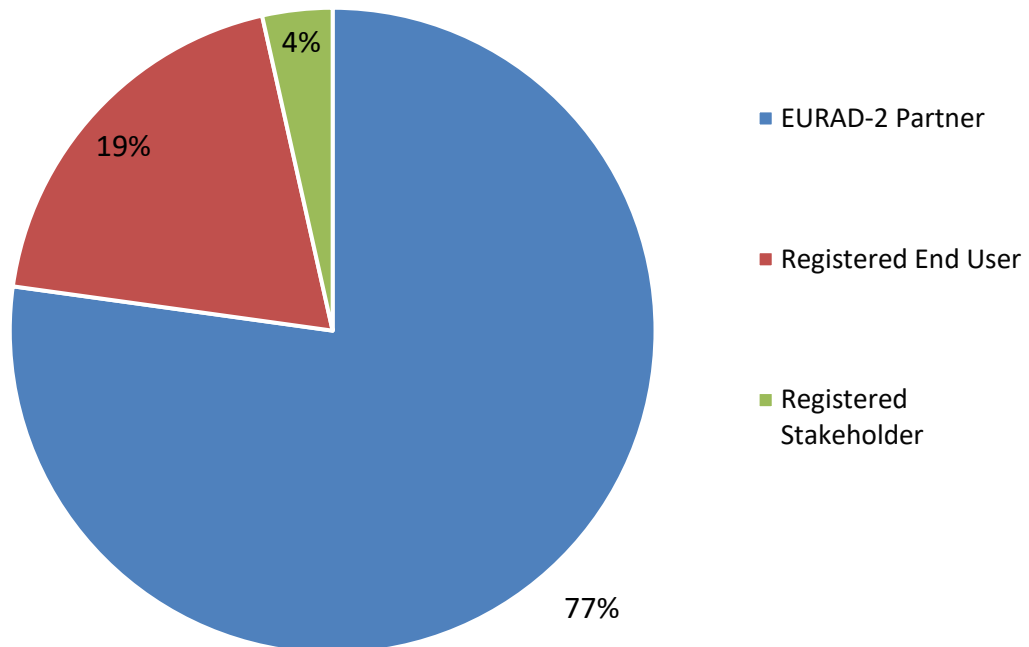


Figure 3-2 : Guidance survey response by respondent type

3.2 Summary of feedback

Question 1 asked respondents to select up to three priority topics for guidance from the 29 shortlisted topics. Most respondents selected three priority topics although some selected only one or two priority topics, resulting in a total of 155 votes for priority topics from the 57 respondents.

The responses to **Question 1** reveal broad interests across the topics, with all topics receiving at least one vote. Within this, several popular choices are apparent, notably Topic #5: waste management routes (16 votes) and Topic #20: waste characterisation to determine compliance with WAC (14 votes).

A bar chart of voting for each topic is shown in *Figure B-1* (Appendix B), broken down by respondent type in order to examine trends across distinct respondent groups. It reveals that, in general, there is not any significant split between topics selected by EURAD-2 partners and those selected by registered end users or registered stakeholders. It is however notable that three of the most popular topics (#2, #4 and #5) received the vast majority of votes from EURAD-2 partners, with only one registered end user selecting topic #5. It is also notable that there is a proportionately stronger interest expressed in characterisation, recycling and storage topics (#18, #19, #20, #22, #24) amongst end user respondents.

In order to focus the selection of potential guidance topics to those of widest interest, a cut-off value was defined for topics with more than 7 votes. This choice of cut-off value was decided by the task team upon inspection of the survey results, taking two main considerations into account:

- The resulting list of popular topics should be sufficiently short (4 – 8 topics) to enable further appraisal of the written rationale (**Question 2**) for each popular topic; and,
- An obvious cut-off point should be sought which represents a clear demarcation between popular topics with more votes and less popular topics with fewer votes.

Examination of the results revealed a clear demarcation between seven topics with eight or more votes and the remaining 22 topics with six votes or less. The seven most popular topics are displayed in *Table 3-1*.

Table 3-1 : Topics that received eight or more votes each from guidance survey respondents

Topic #	Topic	Number of Votes
2	Strategies to enhance public understanding of radioactive waste management research, integrate Civil Society feedback, and improve science communication in radioactive waste management	9
4	Transfer of experience from Large Inventory Member States (LIMS) and more advanced programmes to Small Inventory Member States (SIMS) and earlier stage programmes (available to operators and/or regulators)	9
5	Waste management routes - challenging or novel wastes (including orphan sources, particular spent fuel, depleted uranium, SMR inventories, others)	16
19	Characterisation - innovative methods	8
20	Waste characterisation to determine compliance with Waste Acceptance Criteria (WAC)	14
23	Novel wasteform development and behaviour	9
24	Long-term storage - social and technical challenges	9

It can be observed that existing or planned guidance already covers most of the broad thematic areas for the seven popular topics identified in this survey. For example:

- Pre-disposal topics such as #5, #19, #20, #23 and #24 were considered within the PREDIS programme.
- #5 is addressed under the ROUTES (EURAD-1) work package.
- Some current EURAD-2 work packages for example, ASTRA, will address themes related to #4.

This being the case, there may be a need for future activities under Task 3 of the KM WP to place an emphasis on raising awareness of the availability of associated guidance and resources. However, it may also be the case that existing guidance does not fully address all aspects of a topic, and there may be gaps pertaining to detailed elements where there is a specific need. For this reason, the focus on these seven popular topics was not modified at this stage of the prioritisation process.

3.3 Analysis of wider feedback

Survey responses to **Question 2**, which asked respondents to record the rationale for their selections of priority topics for further guidance, were collated for each of the seven most popular topics as recorded in *Table 3-1*. This feedback was analysed by the Task 3 team to examine the underlying rationales and consideration was given as to the suitability of each topic for further guidance development. Discussion points were recorded in column T of sheet 'Q1 Topics' of the survey results spreadsheet [17]. These are discussed in subsequent sub-sections.

Feedback was also sought from the International Atomic Energy Association (IAEA) in order to ensure compatibility with planned or existing IAEA guidance. In general, the feedback gained was aligned with the initial conclusions of the task team; some additional considerations are highlighted in Section 3.3.8.

3.3.1 Topic 2: Strategies to enhance public understanding of radioactive waste management research, integrate Civil Society feedback, and improve science communication in radioactive waste management

Whilst it was agreed that guidance on civil society integration is in general crucial, and additional guidance on public engagement could be helpful, it was felt that this topic was quite broad with multiple sub-topic areas. Some aspects were thought to be well covered while other aspects were not, especially concerning step-wise guidance on public participation and science communication. The task team queried whether meaningful, generic guidance was possible on this topic, given the dependence of such activities on the national context for radioactive waste management and on the scope of specific waste management activities. Notwithstanding this, generic requirements exist in waste directives and general guidance is provided by the IAEA, so it was concluded to be possible, at least to an extent.

Signposting to existing guidance was agreed to be important, as was involvement of WMOs and Civil Society organisations to share their experiences of best practice. The following existing guidance was noted as relevant:

- Three deliverables from the EURAD-1 ROUTES WP (Waste Management routes in Europe from cradle to grave) addressing aspects of public participation and transparency. These deliverables provide a methodology based upon national experience, with findings, recommendations and examples (e.g. in relation to waste management costs). They do not directly provide guidance on transparency and public participation.
- The IAEA Nuclear Communicator's toolbox [18] addresses public understanding of RWM in a generic manner.
- THE NEA Forum of Stakeholder Confidence serves as a platform for understanding and enhancing stakeholder engagement in the field of RWM solutions. Stakeholders share experiences and challenges, identify best practices and publish reports on current and future

challenges related to stakeholder involvement in waste management and decommissioning processes.

In terms of responding to the highlighted need, case studies may be useful e.g., to explain how some countries (e.g. Switzerland, Belgium, Sweden, Hungary) selected a repository site. New guidance could also address emerging issues with public understanding arising from changing legislation e.g. on siting Small Modular Reactors (SMRs) in cities and how to communicate with the public on such topics. It was agreed that further engagement may be needed to identify specific topics of concern, in order to address targeted needs.

3.3.2 Topic 4: Transfer of experience from Large Inventory Member States (LIMS) and more advanced programmes to Small Inventory Member States (SIMS) and earlier stage programmes (available to operators and/or regulators)

The term 'transfer of experience' was deemed to be too broad as a basis for guidance. Guidance should focus on more specific topics and ideally be delivered via case studies of best practice. WMOs would be best placed to produce such case studies, but there may be commercial constraints on doing so.

Existing guidance in this area includes a suite of guidance on LLW disposal by the IAEA on siting, design and construction. It was noted that operational experience is less well covered in existing guidance than siting, design, and construction, and that this might usefully be addressed. Such guidance would have a large potential audience and could include monitoring, upgrading and surveillance sub-topics. The Multinational Infrastructure for Managing Radioactive Waste (MIRA), a joint Nuclear Energy Agency (NEA) and ERDO (The Association for Multinational Radioactive Waste Solutions) project may also be developing guidance which will assist SIMS [19].

The stated objectives of EURAD-2 WP3 on Alternative RWM Strategies (ASTRA) are:

Analysis of readiness, feasibility and challenges of alternative RWM solutions needed by many countries, in particular SIMS, but also larger programmes due to new requests accruing in national programmes to safely manage and dispose of their waste [20].

It was therefore deemed necessary to review relevant work being conducted under the ASTRA WP before undertaking further efforts in response to this need. ASTRA Task 5 is conducting exchanges of operational experience via a series of discussions and webinars, with the aim of addressing 15 topics by the end of Year 2, sharing approaches and challenges involved. The outputs from these exchanges might form the basis for a guidance document to be developed in Year 3 under KM.

3.3.3 Topic 5: Waste management routes - challenging or novel wastes (including orphan sources, particular spent fuel, depleted uranium, SMR inventories, others)

This topic covers waste management arrangements relating to a broad range of wastes. Some of these, especially orphan sources and organic wastes, are well covered elsewhere by IAEA documentation. Moreover, waste management routes were explored extensively in the (EURAD-1) ROUTES WP [21]. Notwithstanding this, the large number of survey responses highlighting a need for guidance in this area (16) suggests that there is either a limited awareness of this work having been conducted, or that knowledge gaps persist, despite completion of the ROUTES strategic study. The number of survey responses may indicate more widespread gaps, such as the management (and particularly the security) of disused sealed radioactive sources (DSRS), of which orphan sources are a sub-set.

One particular (and relatively recent) knowledge gap highlighted in survey responses was in relation to SMR waste inventories. Currently, there is no international agreement on SMR or advanced fuel management routes and somewhat limited understanding of associated waste arisings. Therefore, it is considered difficult to develop guidance at this time. However, this topic is being studied within the ongoing EURAD-2 WP4 on Waste Management for SMRs and Future Fuels (FORSAFF) [22], as well as in a separate four-year project, EASI-SMR [23], which is looking at challenges and safety issues

associated with SMR innovation. Moreover, in July 2025 the NEA published a comprehensive assessment of progress made by SMR designers and companies worldwide [24]. It is therefore considered appropriate to revisit the need for guidance in this area following the conclusion of FORSAFF and taking account of learning and deliverables from EASI-SMR and the NEA.

3.3.4 Topic 19: Characterisation - innovative methods

EURAD-2 WP5 on Innovative characterisation techniques for large volumes (ICARUS) produced a SOTA in March 2025 (D5.1) on innovative and non-destructive characterisation techniques, destructive techniques, and scaling factors for use cases [25]. The planned work programme also includes production of a searchable database for characterisation methods applicable to different wastes.

It is considered that this topic is unlikely to require further guidance, although further dissemination and/or summary of work on this topic, including outputs from the EC MICADO and CHANCE⁵ projects may be beneficial. A short signposting document to be produced in collaboration with the WP was suggested, possibly combined with end user engagement to identify any additional guidance needs that would complement the outputs of the ICARUS WP. It was felt that many relevant documents are already in the public domain and that current signposting of these resources is not sufficiently effective or user friendly.

3.3.5 Topic 20: Waste characterisation to determine compliance with WAC

As for Topic 19 (covered in Section 3.3.4), this topic is well covered by the ICARUS WP, especially with regard to scaling factors and characterisation methodologies for compliance. There has also been considerable recent focus on WAC, including the provision of related guidance, within the EURAD-1 ROUTES WP and in the PREDIS project, as summarised in a Domain Insight (DI) report produced under the PREDIS project [26]. The IAEA is also formulating additional guidance in this area.

Collaboration with the ICARUS WP was suggested to develop additional signposting of relevant resources in this area, and to target end users in associated dissemination activities, given the relatively high number of survey responses from end users that prioritised guidance on this topic (4 out of 14).

3.3.6 Topic 23: Novel wastefrom development and behaviour

This topic is closely aligned with work being conducted under EURAD-2 WP6 on Sustainable treatment and immobilisation of challenging waste (STREAM) [27] and WP7 on Long-term performance of waste matrices (L'OPERA) [28]. Discussion with these WPs would be needed to look for gaps or see if activities within these WPs already adequately address the desire for guidance on this topic.

In terms of near-surface disposal (NSD) aspects of this topic, EURAD-2 WP14 on Near-surface disposal optimisation based on knowledge and understanding (SUDOKU) [29] is expected to address aspects relating to engineered barriers and should therefore also be engaged in discussion.

Aspects of conditioning and geopolymers were addressed in various DI reports produced under the PREDIS project such as the Conditioning DI [30] as well as other technical deliverables produced under PREDIS WP6 and WP7. A PREDIS webinar on geopolymers [31] is also thought to cover aspects of guidance.

It was concluded that a significant volume of material is already available on this topic therefore a suitable approach may be the preparation of orienting document(s) to point towards existing guidance. This could take the form of a 'mini-DI' or factsheet.

⁵ <https://www.micado-project.eu/>

3.3.7 Topic 24: Long-term storage - social and technical challenges

Long-term storage is already being addressed under ASTRA Task 3 - long term storage options for managing waste. This task is collecting information about challenges faced and aspects of cooperative arrangements. No written guidance is planned; instead surveys, discussions and workshops will be used to disseminate and share information. It was noted that the scope of activities under this task is likely to reflect the RWM context of partners and end users that are directly involved, which may lead to limited applicability more widely. Given the nature of the topic in question, it was deemed pertinent to review where organisations selecting this topic in their survey responses were located, in order to ensure no bias in the survey results towards either LIMS or SIMS. Respondents nominating this topic were found to be from Cyprus, the Czech Republic, France, two from Germany, Norway, two from Switzerland and the USA, representing a broad range of countries with programmes generally tending towards the more mature. This topic is also covered by IAEA technical documents and in a DI on storage produced under the PREDIS project [32].

3.3.8 Discussion with the IAEA

In April 2025, discussions were held between the EURAD-2 WP2 team and representatives of the IAEA in order to ensure that respective guidance development programmes are well aligned, complimentary and not overlapping or reproducing guidance on similar themes. Discussion also aimed to identify gaps and opportunities in guidance development.

Recent IAEA publications and activities pertinent to potential guidance topics in sub-task 3.1 include the following (* starred points describe active guidance development work or guidance expected to be published shortly):

- Design Principles and Approaches for Radioactive Waste Repositories (No. NW-T-1.27).
- Costing Methods and Funding Schemes for Radioactive Waste Disposal Programmes (No. NW-T-1.25).
- Communication and Stakeholder Involvement in Radioactive Waste Disposal (No. NW-T-1.16).
- Stakeholder Engagement in Nuclear Programmes (No. NG-G-5.1).
- International Safeguards in the Design of Radioactive Waste Management Programmes (No. NW-T-1.28).
- A course on stakeholder engagement (although nothing specific to the national scale).
- Work focussed on transfer of experience to SIMS/early-stage programmes, including training material covering concept options, roadmap, stakeholder engagement & communities
- Disposal guidance specific to SIMS.
- SMR fuels*.
- National strategy/framework*.
- Two reports on stakeholder engagement and policy*.
- Guidance on small diameter borehole disposal for disused sealed radioactive sources*.

Discussion also highlighted the importance of understanding the entirety of long-term liabilities. This could potentially be a guidance topic gap.

Discussion of the seven popular topics arising from the Subtask 3.1 survey gave rise to the following observations.

Topic 2: Enhance public understanding

The IAEA has developed a course on stakeholder engagement. It is viewed as challenging to reach a wide (and representative) range of the general public.

Topic 4: Transfer of experience

The IAEA has focussed its work on early-stage programmes, including training courses. Disposal guidance has been developed which is aimed towards SIMS. It was observed during discussions that SIMS programmes face two key challenges:

- Progress is difficult without a mandate.
- SIMS are motivated to find a solution which does not entail a large capital investment (e.g., a dual track concept).

Topic 5: Waste management routes

A series of observations specific to particular waste types were discussed:

- For orphan sources, there are good solutions already available.
- Training courses are available on small diameter borehole disposal for sources, and guidance is due to be published soon.
- Regarding next generation and research spent nuclear fuel (SNF), the IAEA has published guidance on the properties of fuels but not on disposability of SNF.
- It was noted that potential for the disposal of depleted uranium in NSD facilities was of concern, specifically regarding the relatively large volume requiring management.
- Regarding SMR fuel, there was a recent publication on the type of fuels anticipated from SMRs [24] and the IAEA is currently working on this topic.
- Detail from vendors on management of exotic fuels is difficult to obtain for commercial reasons.
- Developers or national programmes wishing to licence SMRs would need to be engaged for more details.
- The Joint Project on Waste Integration for Small and Advanced Reactor Designs (WISARD) is another initiative by OECD-NEA looking into management routes for SMR SNF.

Topic 19: Characterisation - innovative methods

A handbook on characterisation methods was recently produced (currently only available via members area).

Topic 20: Waste characterisation for WAC compliance

A preprint WAC document should be accessible shortly from the IAEA.

Topic 23: Novel wasteforms

The PREDIS project has already provided adequate guidance on this topic.

Topic 24: Long-term storage

The sustainability of this as a long-term RWM solution was questioned. This would ideally be acknowledged in any future guidance or training on this topic.

4. Summary, conclusions and recommendations

This milestone report describes the steps undertaken in sub-task 3.1 of WP2 to identify guidance needs to support the implementation of national RWM programmes within Member States, particularly SIMS and ESPs, by providing them with insights from more advanced programmes (including examples of successful practices).

A systematic literature review was conducted by the task team to identify suggested areas for guidance development. SOTA reports, Green Papers, SRAs, and other relevant documents were reviewed and their recommendations for further guidance or information gaps were documented. This resulted in a list of 29 candidate topics for further guidance development. In order to gather feedback from the wider EURAD-2 waste management community, a survey was launched and circulated to EURAD-2 end users, registered stakeholders and registered partners. One response was solicited per organisation in order to ensure responses reflected organisational views and 57 responses were received. A clear preference was observed for seven topics where further guidance was needed, which each received at least nine votes (the remaining 22 topics all received six votes or less):

- Topic #2: Enhance public understanding
- Topic #4: Transfer of experience
- Topic #5: Waste management routes
- Topic #19: Characterisation - innovative methods
- Topic #20: Waste characterisation for WAC compliance
- Topic #23: Novel wasteforms
- Topic #24: Long-term storage

The survey results were examined by the sub-task 3.1 team and additional feedback was sought in consultation with the IAEA. In general, these discussions confirmed that the seven most popular topics are already well covered in existing or planned guidance and guide-like literature, although some sub-topics contained within these topics may be less well covered and therefore represent information gaps. Any further guidance on these topics would need to respond to a clear and specific unmet need or gap. Some sub-topics may also benefit from guidance targeted towards specific audiences or situations, even when the topic itself is addressed by existing guidance. Such guidance could address emerging issues using specific case studies, for example, to describe good practice identifying a geological repository site, or to provide guidance on public discourse of locating SMRs in cities. Several instances were identified where the potential need for guidance in a particular topic area requires more detailed examination, often in discussion with representatives from work packages that are ongoing within EURAD-2.

The observation that many of the topics identified by survey respondents as requiring guidance are already being examined within ongoing EURAD-2 work packages is taken as evidence that the EURAD-2 work programme is well-aligned with the EURAD SRA, and is addressing end user needs.

In cases where existing guidance is judged to be sufficient, it was felt that the most appropriate forward action would be undertaking activities to communicate and raise awareness of the availability of such guidance and dissemination of key learning points. The optimal methods to do this will vary depending on the topic but could include conducting webinars or training events on certain topics and/or producing short signposting documents or 'mini-DIs' that can act as a 'landing page' for a given topic, or to accompany guidance on a website.

In relation to this point on the importance of dissemination, it is noted that the EURAD-2 website publication page [33], which is a public facing repository of guidance and wider documentation on RWM, does not currently have a keyword search function. The website as a whole has this functionality but searchability of EURAD outputs would be improved, particularly for external audiences, if this were added to the publications page. Reliance is currently placed on users having familiarity with WP names, numbers and types, and deliverable numbers, which will be unfamiliar to external audiences. The ability to search by topic keywords could greatly improve the accessibility of outputs and, therefore, their

potential impact. Further, the naming of guidance documents was noted to be occasionally inconsistent with the convention in the data management plan [16] which may diminish the ability to correctly identify a document's purpose. The need for a dedicated KM and knowledge dissemination platform to improve accessibility has previously been highlighted under EURAD-1 KM activities [34]. Deliverable D11.9, Specification of the EURAD Knowledge Management (KM) platform (p-KMS) [35] sets out the rationale and specification for a dedicated and user-friendly portal containing all EURAD documents on RWM topics.

There may also be value in reviewing the adequacy of current mechanisms of dissemination for partners since the survey respondents, 77% of whom were EURAD-2 partners, selected topics for further guidance which are considered to be well-covered in existing guidance.

Based on survey responses and subsequent analysis, the forward programme for guidance development under KM WP2 could therefore include:

- Dissemination and signposting of existing guidance and conclusions relating to popular topics, particularly in relation to:
 - Public participation and science communication.
 - Waste management routes for a range of challenging and novel wastes.
 - Methods for waste characterisation.
 - Waste acceptance criteria (WAC).
- Development of guidance building on the outcomes of the ASTRA WP (Task 5) in relation to exchanges of operational experiences on waste management (if not already being delivered within the WP scope).
- Development of guidance in relation to waste inventories arising from the use of SMRs and/or advanced fuels in nuclear reactors (to be revisited following conclusion of the FORSAFF WP).
- Further engagement with EURAD-2 partners, end users and stakeholders to identify specific knowledge gaps (sub-topics), in order to address targeted needs, particularly in relation to:
 - Public participation and science communication.
 - Waste characterisation.
 - Novel wasteform development and behaviour.
 - Long-term storage.
- Further engagement with guidance producing international bodies, especially the Nuclear Energy Agency (NEA) and the ERDO Association may prove beneficial to identifying guidance gaps and to minimise duplication of effort in guidance production.

Figure 4-1 summarises planned next steps for each of the 29 topics included in the guidance survey, based on the analysis of responses received to 26th March 2025.

It should be noted that most survey responses were provided by EURAD-2 partners with less than 20% coming from registered end users. The results may therefore be weighted away from the needs of industry partners, waste owners and site operators. As such they may not reflect a balanced view of true guidance needs in the RWM community. It is therefore important to also keep in mind a wider range of topics highlighted elsewhere as requiring guidance such as on the use of mobile characterisation and waste treatment facilities, which was recommended for further exploration by the ROUTES WP.

The conclusions and recommendations from this analysis will provide a basis for planning dissemination activities in Years 2 and 3 of the EURAD-2 work programme, as well as informing opportunities for progressing targeted guidance where gaps have been identified. The survey [15] remains open and further feedback on existing or emerging guidance needs (or on planned next steps) is welcomed, either by completing new responses, or by contacting the task team directly. The opportunity will be publicised to EURAD-2 partners, end users and stakeholders via email, at online and in-person meetings, and in the EURAD-2 newsletter. In addition, wider inputs from waste owners and site operators will be sought, for example by reaching out to the Sustainable Nuclear Energy Technology Platform (SNETP). It is anticipated that another exercise to review guidance needs will be conducted in the second half of the EURAD-2 work programme.

EURAD-2 Milestone 21 – Prioritisation of KM guidance documents to be produced by Month 24/56

No.	Potential Guidance Topic	Total votes	Planned next steps (EURAD-2 Years 2-3)
5	Waste management routes - challenging or novel wastes (including orphan sources, particular spent fuel, DU, SMR inventories, others)	16	- Dissemination / signposting of existing guidance - Explore potential need for targeted guidance development in Y3 on SMR wastes, in discussion with relevant EURAD-2 WP (FORSAFF)
20	Waste characterisation to determine compliance with WAC	14	- Dissemination / signposting of existing guidance (in collaboration with ICARUS WP)
2	Strategies to enhance public understanding of RWM research, integrate Civil Society feedback, and improve science communication in RWM	9	- Dissemination / signposting of existing guidance - Further engagement to identify specific knowledge / guidance gaps (sub-topics)
4	Transfer of experience from LIMS and more advanced programmes to SIMS and earlier stage programmes (available to operators and/or regulators)	9	- Explore potential need for additional guidance development in Y3 on operational experiences of RWM, in discussion with relevant EURAD-2 WP (ASTRA)
23	Novel wasteform development and behaviour	9	- Dissemination / signposting of existing guidance - Further engagement to identify specific knowledge / guidance gaps (sub-topics)
24	Long-term storage - social and technical challenges	9	- Dissemination / signposting of existing guidance (and outcomes from ASTRA) - Further engagement to identify specific knowledge / guidance gaps (sub-topics)
19	Characterisation - innovative methods	8	- Dissemination / signposting of existing guidance (in collaboration with ICARUS WP)
3	Planning and establishing early stage radioactive waste management programmes	6	- Limited activities / emphasis planned in EURAD-2 Years 2-3 with respect to guidance
22	Recycling - best practice for decommissioning wastes	6	
28	Methodologies for concept evaluation	6	
7	Competence development for operators and regulators	5	
9	Inventory - non-radiological constituents and chemotoxics	5	
12	WAC - harmonisation, optimisation (reduce conservatism)	5	
29	Deep borehole disposal - guidance on safety case development	5	
8	Impact of EU Green Deal on radioactive waste management	4	- Limited activities / emphasis planned in EURAD-2 Years 2-3 with respect to guidance
10	Inventory - challenging wastes	4	
14	WAC - definition for specific / novel wastes	4	- Dissemination / signposting of existing guidance
18	Characterisation of challenging wastes - including DSRS and orphan sources	4	- Dissemination / signposting of existing guidance (in collaboration with ICARUS WP)
13	WAC - good practice via benchmarking	3	- Dissemination / signposting of existing guidance
15	Waste management - mobile / modular facilities	3	- Limited activities / emphasis planned in EURAD-2 Years 2-3 with respect to guidance
16	Waste management - shared use of facilities	3	
21	Waste management - treatment of RSOWs, including bitumen	3	
25	Monitoring waste package performance; optimisation of storage conditions	3	
26	Optimisation - technology selection and quality control	3	
27	Adopting innovative and digital technologies in decommissioning to enhance efficiency	3	
6	Long-term planning and decision-making: waste stewardship	2	
17	Waste management - innovation and enhanced application of the waste hierarchy and/or integration of LCA into planning of facilities	2	
1	Implementation of requirements from Aarhus convention - access to resources (including information) and inclusivity	1	
11	Inventory - waste definition approaches	1	

Figure 4-1 : Summary of planned next steps in EURAD-2 Years 2 and 3 for the 29 potential guidance topics included in the Subtask 3.1 survey, based on analysis of responses received to 26th March 2025.

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Appendix A. Guidance survey

A copy of the survey circulated to gather feedback on potential guidance topics is provided over the next three pages. The survey hyperlink is <https://ec.europa.eu/eusurvey/runner/KM-Gudance-Survey>.

EURAD - 2 Knowledge Management Guidance Survey

Fields marked with * are mandatory.

Knowledge Management (KM) activities within EURAD-2 include the production of guidance on best practices and/or best available technologies in the field of radioactive waste management. The aim is to support the progression of national waste management programmes.

We plan to build on guidance development activities in EURAD(-1), and to generate guidance in two further technical areas within the first two years of the partnership.

To inform these activities, we invite you to complete the following short survey.

- An initial shortlist of topics has been drawn up with reference, amongst other sources, to the EURAD and PREDIS Strategic Research and KM Agendas.
- You are invited to identify up to three topics where guidance is needed and to explain the reasons behind your selection.
- It is also possible to identify other topics that are not listed.
- For each topic identified, you are invited to indicate the nature (scope, mode and format) of guidance that would be most beneficial, and what you want it to achieve.
- To ensure that guidance development activities are tailored to meet End User and national programme needs, we kindly ask that you provide one response per organisation.
- The survey will be open until 26th March 2025. After this, responses will be analysed to identify priority areas for guidance development.

Responses will not be attributable in subsequent written analysis, but we may wish to follow-up on some responses by email if we require clarification. Please do not hesitate to contact us if you have any questions or need further assistance. Thank you in advance for your inputs to guide KM activities in this area.

With best regards,
Liz Harvey, on behalf of the Task 3.1 (Guidance) KM team
ejh@galson-sciences.co.uk

General Information

* Name

1

* Email

* Organisation

* Country

* Please indicate if you are a:

- EURAD-2 Partner
- Registered End User
- Registered Stakeholder
- Other (give details below)

* Please specify the EURAD - 2 Work Packages you are contributing to.

If "Other", please provide details of your interest in the survey

Guidance Topics

* 1. Please identify your organisation's top three priority areas where guidance relating to aspects of radioactive waste management is needed.

between 1 and 3 choices

- 1. Implementation of requirements from Aarhus convention - access to resources (including information) and inclusivity
- 2. Strategies to enhance public understanding of radioactive waste management research, integrate Civil Society feedback, and improve science communication in radioactive waste management
- 3. Planning and establishing early stage radioactive waste management programmes
- 4. Transfer of experience from Large Inventory Member States (LIMS) and more advanced programmes to Small Inventory Member States (SIMS) and earlier stage programmes (available to operators and/or regulators)
- 5. Waste management routes - challenging or novel wastes (including orphan sources, particular spent fuel, depleted uranium, SMR inventories, others)
- 6. Long-term planning and decision-making: waste stewardship
- 7. Competence development for operators and regulators
- 8. Impact of EU Green Deal on radioactive waste management
- 9. Inventory - non-radiological constituents and chemotoxics
- 10. Inventory - challenging wastes
- 11. Inventory - waste definition approaches

- 12. Waste Acceptance Criteria (WAC) - harmonisation, optimisation (reduce conservatism)
- 13. Waste Acceptance Criteria (WAC) - good practice via benchmarking
- 14. Waste Acceptance Criteria (WAC) - definition for specific / novel wastes
- 15. Waste management - mobile / modular facilities
- 16. Waste management - shared use of facilities
- 17. Waste management - innovation and enhanced application of the waste hierarchy and/or integration of Lifecycle Analysis (LCA) into planning of facilities
- 18. Characterisation of challenging wastes - including disused sealed radioactive sources (DSRS) and orphan sources
- 19. Characterisation - innovative methods
- 20. Waste characterisation to determine compliance with Waste Acceptance Criteria (WAC)
- 21. Waste management - treatment of radioactive solid organic wastes (RSOWs), including bitumen
- 22. Recycling - best practice for decommissioning wastes
- 23. Novel wasteform development and behaviour
- 24. Long-term storage - social and technical challenges
- 25. Monitoring waste package performance; optimisation of storage conditions
- 26. Optimisation - technology selection and quality control
- 27. Adopting innovative and digital technologies in decommissioning to enhance efficiency
- 28. Methodologies for concept evaluation
- 29. Deep borehole disposal - guidance on safety case development

2. Are there any other topics where you feel guidance is needed?

* 3. Please explain why you have identified the above areas as priorities (including any additional topics you have identified). What specific aspects do you need guidance on these topics to address?

* 4. For each of the topics you have identified above, what would be the most useful format of guidance?

*E.g. written guidance could take the form of: an in-depth report; short case studies; high-level orientation documents;...
or guidance could be delivered through forums for discussion e.g. establishing a Community of Practice; training webinars; workshops;...*

5. Do you have any other comments on guidance ? Are there any guidance-related activities you wish to highlight?

Appendix B. Guidance survey selected results

The chart in *Figure B-1* : presents responses to Question 1 of the guidance survey, where respondents were asked to identify their organisation's top three priority areas where guidance relating to aspects of radioactive waste management is needed.

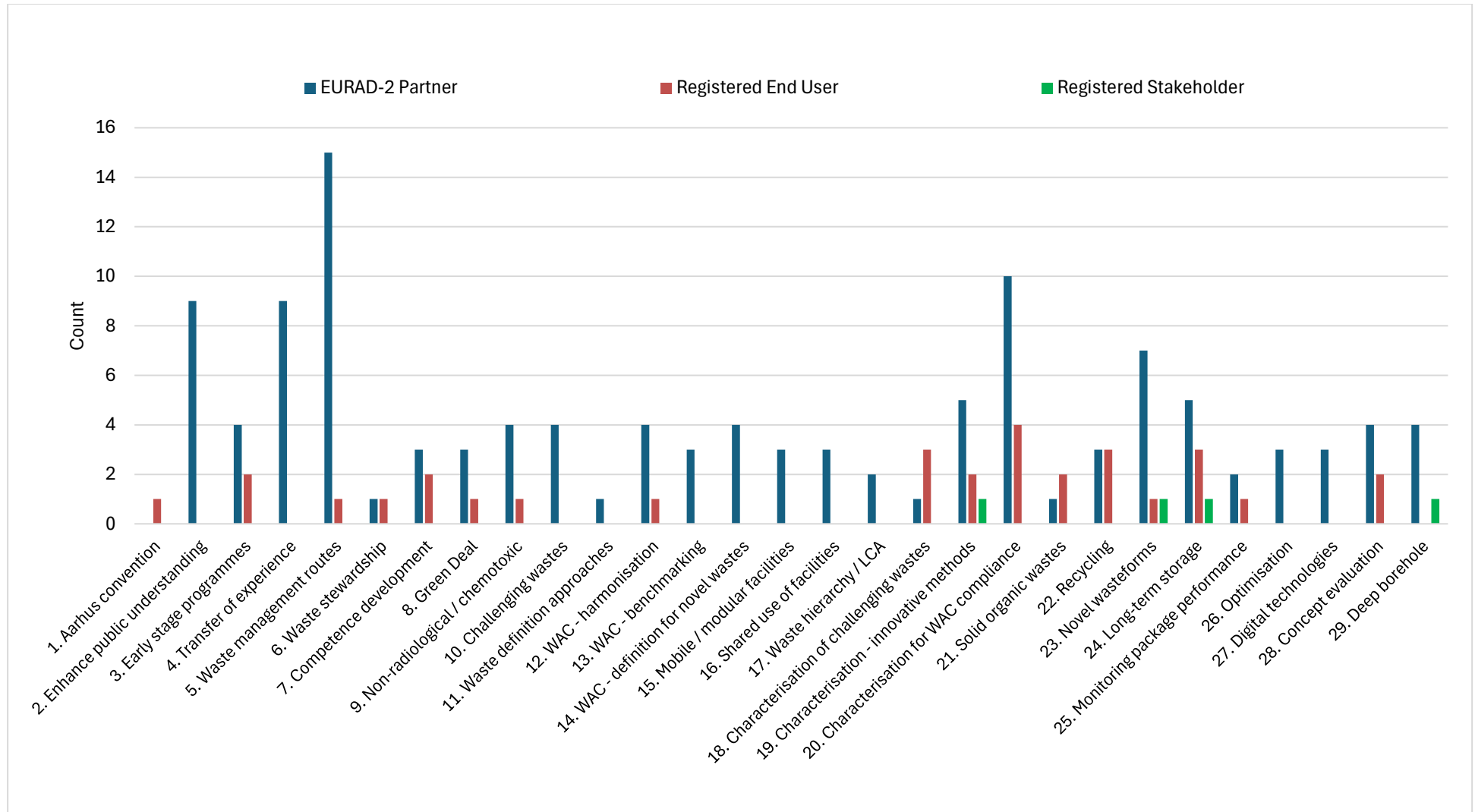


Figure B-1 : Guidance survey results indicating respondent preferences for the 29 guidance topics, broken down by respondent type (EURAD-2 partner, registered end user or registered stakeholder). A shorthand description of each topic is used here for brevity; the full names of the guidance topics are provided in Table 2-2.