

EURAD-2 STRATEGIC STUDY “ASTRA” – ALTERNATIVE WASTE MANAGEMENT STRATEGIES



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Abstract

The EURAD-2 (www.ejp-eurad.eu) Strategic Study on Alternative Waste Management Strategies (ASTRA) analyses selected alternative strategies for radioactive waste management (RWM) including storage life extension, alternative waste management solutions like deep borehole disposal (DBD) and shared international waste management solutions, as well as the management of waste containing naturally occurring long-lived radionuclides. Topics that are especially challenging for Member States with small inventories (SIMS) and which should be addressed in more detail in a EURAD-2 2nd Wave WP as an outcome of ASTRA.

Introduction

The ROUTES Work Package (WP) in EURAD-1 identified several Research & Development (R&D) needs and opportunities many of which are being examined within ASTRA:

- Task 1 takes care of the management and coordination, Task 2 captures and evaluates WP-specific knowledge and promotes knowledge transfer
- Task 3 exchanges information on situations where the design lifetime of waste containers and/or storage facilities could be exceeded, identifying potential environmental impacts, potential hazards, waste extraction or retrieval options considering the required financial resources and technology availabilities.
- Task 4 evaluates DBD as a potential alternative disposal routes to mined repositories, especially for higher activity radioactive wastes, to assess the technology readiness and feasibility and its possible role in the disposal programmes of both SIMS and Large Inventory MS (LIMS).
- Task 5 analyses management strategies for small amounts of diverse and challenging wastes by facilitating the exchange of experience between LIMS and SIMS.
- Task 6 enables interactions between ASTRA technical partners and civil society (CS) participants in EURAD-2. The interactions will include close collaboration of CS experts being directly involved in Tasks 3, 4, and 5, as well as the final ASTRA workshop.

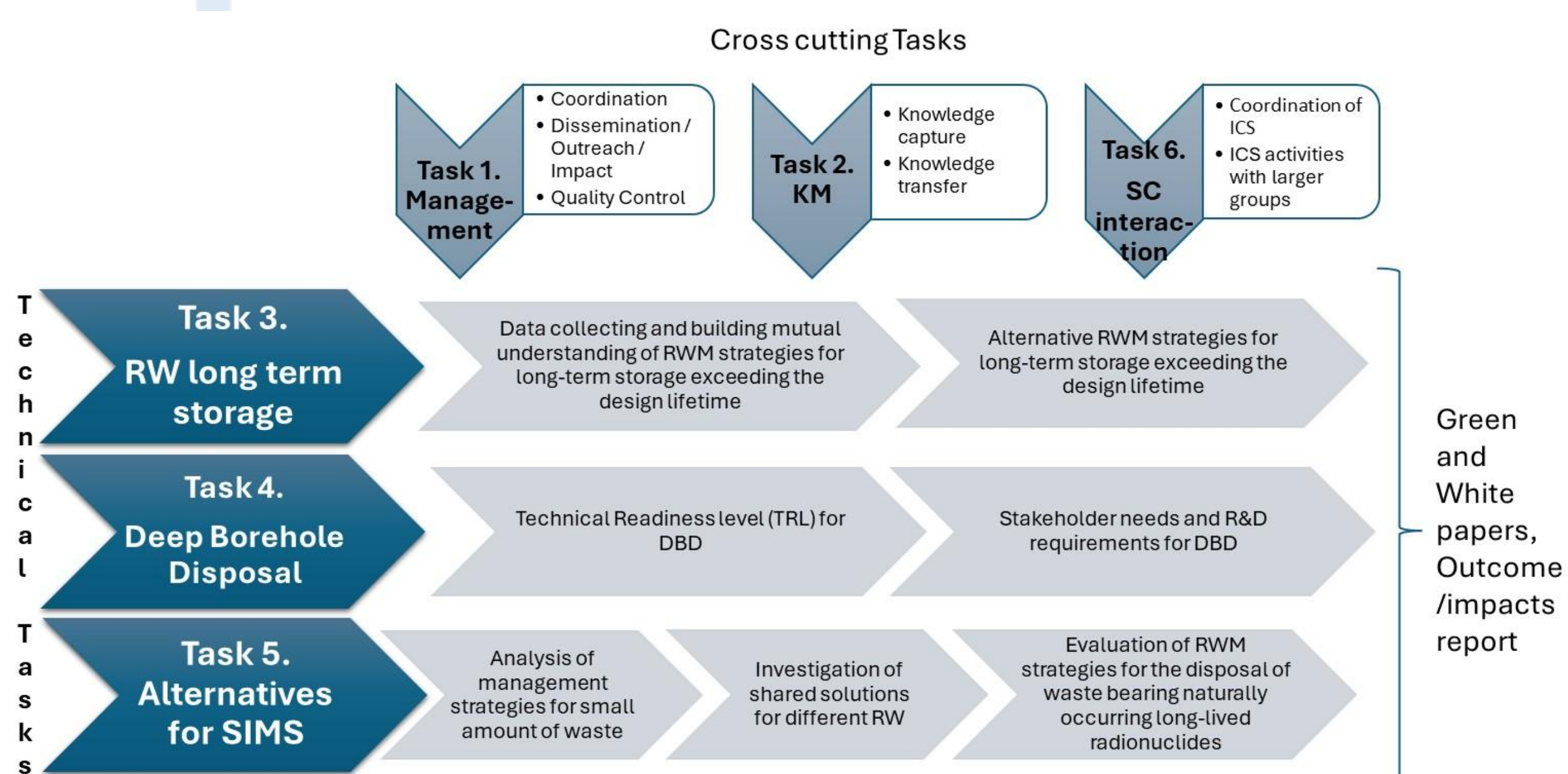


Figure 1. Schematic of ASTRA organization.

Description of the problem

Alternative RWM strategies need to be considered for waste types for which there are currently no WM routes or where WM routes could be optimised for challenging waste forms or where the original disposal solution proposed/considered under the national concept is updated. Alternative strategies may be considered by countries at different stages of programmes and with different volumes of waste. ASTRA will contribute to the identification of R&D needs and optimisation of national waste management programmes.

Methodology

Each task relies on surveys to collect information of the needs and available technologies of the participants. CS representatives are contributing to these surveys to ensure that relevant questions from a CS perspective are included. The results of the surveys will be further discussed in workshops to provide input for the ASTRA deliverables. Areas of work exemplified for Task 5 are shown in Figure 2.



Figure 2. Schematic representation of Task 5 areas of work.

Results

Information collecting is nearly done and the discussions of results (workshops) among partners and end-users is beginning.

Conclusions

The interest in ASTRA in the preparatory phases of EURAD-2 and the large participation in ASTRA meetings and surveys in the early phases of the work programme by participants, end-users and stakeholders have confirmed the value of these studies for national RWM programmes.



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