EURAD-2 STRATEGIC STUDY "ASTRA" – ALTERNATIVE WASTE MANAGEMENT STRATEGIES

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The ROUTES Work Package (WP) in EURAD-1 identified several Research & Development (R&D) needs and opportunities for collaboration between Member States (MS). Some of these radioactive waste management (RWM) strategies are being examined in the Alternative waste management strategies (ASTRA) Strategic Study within EURAD-2. These include store lifetime extension, alternative waste management solutions (including deep borehole disposal (DBD) and internationally shared waste management solutions), and topics challenging to Small Inventory MS (SIMS), such as disposal of waste containing naturally occurring long-lived radionuclides. This paper provides an overview of the ASTRA WP. Task 1 will take care of the management and coordination of the WP. Task 2 of ASTRA will capture and evaluate WPspecific knowledge on alternative waste management strategies from countries at different programme stages and considering different waste inventories and volumes. It will also promote knowledge transfer between ASTRA, the wider EURAD-2 community and beyond through dissemination events, training activities and cross-party mobilisation of personnel. Task 3 will exchange information on situations where the design lifetime of waste containers and/or storage facilities could be exceeded prior to disposal and identify the potential environmental impacts, potential hazards, and waste extraction or retrieval options and consider the required financial resources and technology availability. Task 4 will evaluate DBD as a potential alternative disposal route to mined repositories for higher activity radioactive wastes, with the aim of considering technology readiness and viability and its possible role in the disposal programmes of both SIMS and Large Inventory MS (LIMS). Task 5 will analyse management strategies for small amounts of diverse and challenging wastes by facilitating the exchange of experience between LIMS and SIMS. Disposal strategies for challenging wastes that do not meet existing Waste Acceptance Criteria will be elaborated, and shared solutions for different radioactive waste will be assessed, including predisposal activities and disposal facilities, considering longterm strategic issues. Task 6 will enable interactions between technical partners of ASTRA and civil society participants in EURAD-2. The interactions will include close collaboration of civil society experts directly inside Tasks 3, 4, and 5, as well as a workshop at the end of ASTRA, providing room for fruitful interaction between all partners using methods developed in EURAD-1. In the paper, more detailed plans for the tasks will be presented.

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