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PREDIS

Milestone 13

Draft governance implementation plan

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Abstract

This document serves as a Position Paper reflecting the recommendations regarding the future merge of the PREDIS project together with EURAD, the European Joint Programme on Radioactive Waste Management. It specifically addresses the future programme's governance structure options, with attention to participation structure, work scope structuring, budgeting and roles of the stakeholders. It is authored by the PREDIS Management Team based on interactions with the partners, end user group and general stakeholders. One of the critical issues addressed is recommendations on how to integrate to a future joint programme (EURAD-2) the wider community of waste owners and waste producers who have served as the End User Group (EUG) of key stakeholders for the innovation and deployments developed in PREDIS. This document serves as a basis for discussion during the EURAD-2 planning process by the Core Group, including stakeholders such as SNETP, IGD-TP, IAEA and OECD-NEA.

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Notification

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1 Milestone Description

Milestone # M13, associated with Work package 2 Strategic Implementation, Task 2.4 Governance is completed by 28.2.2023, with a draft version that was circulated to key stakeholders for commenting on 30.9.2022.

The justification for the Milestone readiness is described below and complies with the Grant Agreement Description of Action noting verification by this memo addressing governance options. This milestone is a predecessor to Deliverable D2.8 final Governance Plan due in Month 46 (June 2024). It also serves as input to the discussions with the EURAD programme, IAEA, OECD-NEA and the European Commission during autumn 2022 and spring 2023 regarding a potential proposal to the Euratom programme call of 2023.

This Milestone report expresses the views of the PREDIS Management Team, who are also responsible for collecting feedback from their respective partners and stakeholders within the Work packages (WPs). This feedback was initially summarised in March 2022 by a SWOT analysis, as shown in the graphic of Figure 1. This was then elaborated based on wider internal consortium discussions. Much of the information presented in this Milestone report was presented at the EURAD workshop on 30 May 2022, hosted by the European Commission (project officer Seifallah BEN HADJ HASSINE) and with invite to key stakeholders.

Strengths	Weaknesses
<ul style="list-style-type: none"> - Excellent Consortium: positive/cooperative atmosphere, high commitment/engagement, students - Stakeholder/EUG/IAEA cooperation and outreach - Scientific excellence, multidisciplinary, experience - Streamlined organization issues - Communication (webinars, workshops, newsletters) <ul style="list-style-type: none"> - Embracing online digital world with best practices - Creating good impacts to wide international community 	<ul style="list-style-type: none"> - Large project organisation (communication needs) - Limited inter-WP exchanges - Need more input from waste generators, WMOs - Lacking face-to-face (f2f) interactions - Gathering commitment and value for all in Strategy (WP2) and Knowledge Management (WP3) activities - Diversity of partner roles
Opportunities	Threats
<ul style="list-style-type: none"> - Technical development achievements and impact for stakeholders/EUG - Exchange of best practices, real-world cases - Wide outreach with communication tools, f2f events - Cooperation and future together with EURAD (SRA influence for future EC call) 	<ul style="list-style-type: none"> - Covid-19 pandemic continues - Are we doing the right thing? - Overload of activities (too full of Calendars) - Lack of end-users feedback/inputs - Expectations for PREDIS by external groups

Figure 1. PREDIS Management Teams SWOT analysis, showing feedback on project implementation after the first 18 months (March 2021). Blue font items indicate similarities with the parallel SWOT conducted by EURAD programme.

This Milestone memo targets having feedback in autumn 2022 from EURAD-PMO and Core Group, IAEA (Rebecca ROBBINS) SNETP leadership (Abderrahim (Abdou) AL MAZOUZI) as relevant stakeholders. It will be further reviewed with SNETP and the PREDIS EUG members prior to the final version as Deliverable D2.8 expected in 2023 ahead of the 2024 original target.

The readiness of the milestone was reviewed and agreed upon by Maria Oksa, as the project Coordinator.

2 Background of Existing Governance Structures

2.1 PREDIS Governance

The management of PREDIS is structured with a leading Coordinator and the Management Team, consisting of each Work package (WP) leader. All contributors to the project are partners to the Consortium and voting members in the General Assembly.

An End User Group (EUG) consists of waste owners, waste producers and waste management organisations who have direct impact from the innovative solutions and ability to implement the outcomes of the PREDIS project. As of August 2022, there are 25 members of the End User group from 15 countries. There are an additional 15 of 47 PREDIS partners who also qualify as End Users due to their ownership of facilities, such as research reactors, that also are responsible for managing their own waste. Key places for solicitation of EUG interests have been via the Sustainable Nuclear Energy Technology Platform (SNETP)¹ Technical Area 5 on waste management and decommissioning. EUG members sign a confidentiality agreement and are invited to focused discussions specific to the direction of the project. In some cases, they are providing co-financing for the PREDIS project work done by partners. External EUG members have no voting rights in the project but are encouraged to give feedback to ensure high impacts from the project achievements.

And additional group of Stakeholders is also identified, which is comprised of other parties who have an interest to follow the project work, such as regulators, other research entities, national programme owners, service providers, civil society, and international organisations. PREDIS currently has 107 registered Stakeholders, with a total project reach of 109 institutes/countries (partners included), from 23 Member State Countries, and 6 additional countries outside the EC.

A graphical representation of the management structure of PREDIS is shown in Figure 2. Further details of the PREDIS governance are noted on the project web page <https://predis-h2020.eu/> and within the Consortium Agreement and Grant Agreement.

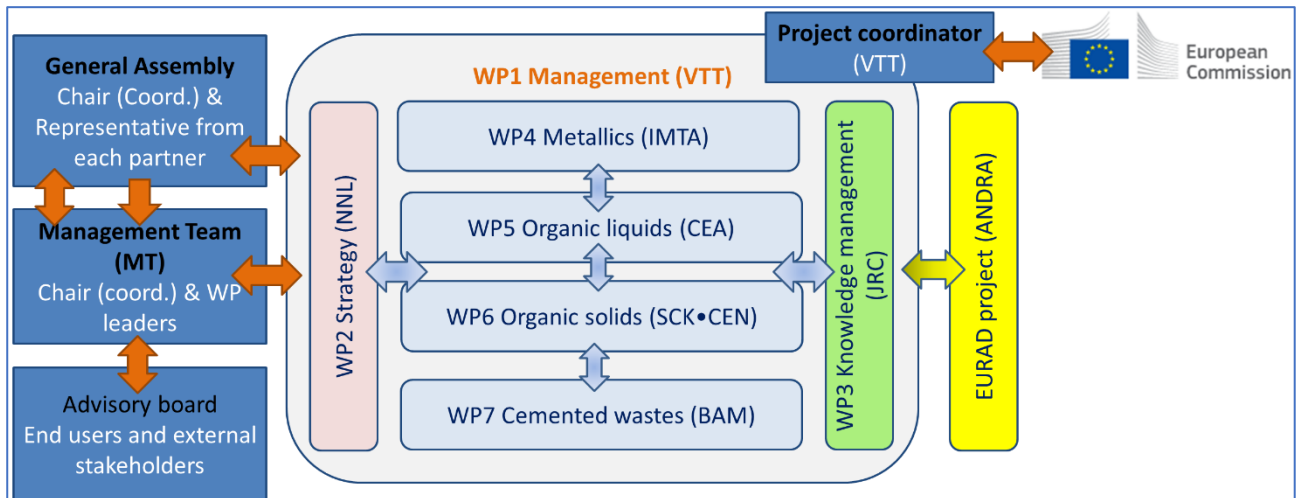


Figure 2. Current PREDIS project Governance structure.

2.2 EURAD Governance

The management of EURAD, the European Joint Programme on Radioactive Waste Management (2019-2024) is structured with a leading Coordination supported by the Programme Management Office (PMO). Each Member State (through the Programme Owner) mandates a selected number of Beneficiaries that are uniquely classified as either a Waste Management Organisation (WMO), Technical Safety Organisation (TSO) or a Research Entity (RE). These mandated Beneficiaries are comprising the General Assembly and fall within the three respective Colleges of the same name (WMOs, TSOs, REs). Typically, there are then two to three representatives of each country's National Programme within the General Assembly. As of November 2022, the overall General Assembly has 51 voting members as mandated actors. All other contributors to the programme are Linked Third Parties (LTP) to these mandated Beneficiaries, and there are currently 62 LTPs,

¹ <https://snetp.eu/>

with a total representation of 23 countries (20 EU Member States and 3 Associated countries). The LTPs should express their views on programme implementation issues via the Colleges and/or their associated Beneficiary.

The existing three EURAD Colleges are comprised of the following groups (as of November 2022):

- Waste Management Organisations (WMOs) represented by IGD-TP² Executive Group, coordinated by Posiva (Finland),
- Technical Safety Organisations (TSOs) represented by SITEX.Network³, coordinated by BelV (Belgium),
- Research Entities (REs) represented by EURADSCIENCE⁴, coordinated by SCK CEN (Belgium).

Each EURAD College nominates three representatives to comprise the Bureau of the General Assembly, for efficient discussions and recommendations to both the General Assembly and PMO. The Bureau, via the Colleges, makes suggestions that impact the programme scope, such as contributing to feedback on the Roadmap, facilitating the revisions of the Strategic Research Agenda and proposing the future or additional work packages that were deployed as the second wave at the midpoint of the programme. The Bureau takes decisions jointly, thus it plays an important role in finding compromise between the different Colleges' positions. All EURAD programme decisions must be approved by the General Assembly.

The PMO together with the EC has also established an External Advisory Board (EAB) consisting of a few selected senior experts who fulfilled the defined Terms of Reference, whose role is to provide feedback on the programme and be ambassadors to share about EURAD. The persons on the EAB were nominated by the PMO and approved by the General Assembly.

EURAD End-users are parties who have expressed interest to follow the project, including implementing organisations, regulators, research entities, waste generators/owners, national programme owners and international organisations. As of February 2022, EURAD has 109 registered end-users, from 64 organisations external to EURAD, representing 21 different countries. End-users have no financial ties or voting rights in the programme.

A graphical representation of the management structure of EURAD is shown in Figure 3. Further details of the EURAD governance are noted on the programme web page <https://www.ejp-eurad.eu/> and within the Consortium Agreement and Grant Agreement.

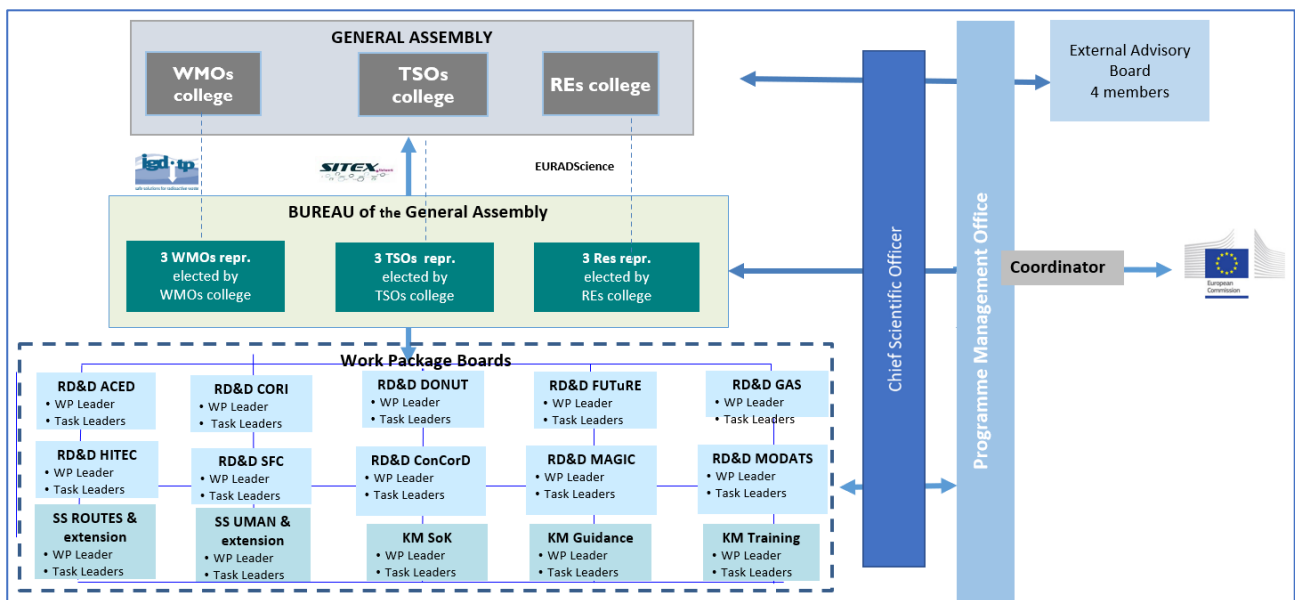


Figure 3. Current EURAD programme Governance structure.

² <https://igdtp.eu/>

³ <https://www.sitex.network/>

⁴ Bruggeman et al. 2020, "EURADSCIENCE, A Network of Research Organisations for Radioactive Waste Management Science Within Europe," Proceedings of EURADWASTE'19 Conference, pp. 338-343.

3 Future Programme Governance Recommendations

It is envisioned that the EURAD programme and PREDIS project may have continuations after their completion in summer 2024. A future Euratom funding scheme may include another radioactive waste management joint programme that encompasses both EURAD and PREDIS activities, for instance for the period 2024-2029. It is envisioned that the scope of such a EURAD-2 programme is fully inclusive towards waste management steps from predisposal through final disposal, and covering from very low level radioactive waste through high level (including spent nuclear fuel) radioactive waste.

The future EURAD-2 proposal will be developed by the Core Group established by the EURAD Colleges and coordinated by Andra. Further details about the Core Group can be found from the EURAD and PREDIS project communications (summer 2022) from the Coordinators to partners and Colleges.

The following sections give the PREDIS project's views on the governance structure of a future EURAD-2, considering the lessons learned from the PREDIS perspectives.

3.1 Founding Principles

PREDIS recommends that the founding documentation of the existing EURAD programme be used as a basis and foundation for the future programme EURAD-2. This includes specifically the EURAD Vision, Roadmap and Strategic Research Agenda (SRA). As EURAD already includes issues of predisposal waste management and addresses low- and intermediate-level waste management issues, the aspects specific to PREDIS are already integrated. It is noted that the EURAD SRA has the update on-going (2022).

Regarding the potential technical scopes of EURAD-2, it is envisioned that they will be based on the themes and drivers identified in the latest Strategic Research Agenda(s). PREDIS has produced a baseline Strategic Research Agenda (Milestone 2.3 report, August 2021, publicly available at <https://predis-h2020.eu/publications-and-reports/>) and will produce another revised draft by March 2023. This PREDIS SRA accounts for the feedback from the PREDIS End User Group (EUG), Stakeholders and especially the thematic scopes covered within the Nugenia pillar of Sustainable Nuclear Energy Technology platform (SNETP) Vision document⁵. The PREDIS SRA will be a direct input to the relevant chapters on predisposal issues within the EURAD revised Strategic Research Agenda, anticipated to be ready in February 2023.

Finally, the same values of EURAD should continue to be encouraged in EURAD-2, for instance positive participation, maintenance of independence, transparency of governance, scientific excellence, added-value, and inclusiveness.

3.2 Work Structuring

PREDIS supports that the **same work structure objectives** of the EURAD-2 programme would also exist as already established in EURAD, where work is focused on:

- Developing and maintaining scientific and technical excellence in radioactive waste management via Research and Development (R&D) Work packages, as the majority of effort,
- Addressing important and complex issues and enable expert networking via Strategic Studies (StSt) Work packages,
- Enhancing knowledge management (KM) between organisations, Member States and generations.

Regarding **budget allocations**, PREDIS encourages the following shares:

- **R&D technical** work package topics comprise at least 60% of the total programme budget, selected based on the SRA and drivers. PREDIS agrees with the principle to keep 50% direct cost funding by the EC budgeting to the R&D topics, so all participants are required to find and show their matching co-financing for the other portion.

⁵ Nugenia Vision, June 2021, <https://snetp.eu/wp-content/uploads/2021/06/NUGENIA-Vision-June-2021.pdf>

- Knowledge Management work packages be considered at 100% direct cost funding by the EC budget. This would be a change from the current EURAD programme (70% direct cost funding), but matching the practice used in PREDIS (100% direct cost funding). The justification for this is to ensure the highest quality and efficiency of the delivery team contributing to the tasks and outcomes.
- Strategic Study work packages direct cost funding to be evaluated, to be between 70-100%. It is acknowledged that there may be added benefit for showing commitment with co-financing for this work in many cases, yet in other cases well-qualified persons are not eligible to participate with self-funding. Variations may also be between certain countries or organisations or partner types (such as allocated to younger researchers or PhD students).
- Programme Management should not exceed 10% of the budget and should include allocations for effort by the Bureau.

PREDIS acknowledges the challenge of these overall direct cost funding allocations is linked to the overall programme funding rate allocated by the European Commission. We encourage that together EURAD and PREDIS projects should continue to campaign to the EC programme office and Member States about the financial commitment to ensure the greatest outcomes and impact of EURAD-2.

PREDIS encourages that we **apply a two-wave approach** for the selection of Work Packages, so that budget (for instance 30%) is reserved to allocate in a second wave around the midpoint of the programme. This would follow the similar process that was well-established by EURAD programme and with solicitation for priority work package ideas from the Colleges and synergy discussions among the Bureau to reach consensus on scope and budgets.

3.3 Participants to Programme

PREDIS recommends that a **more inclusive organisational structure** be used, like the existing format in PREDIS project, where **all interested participants to the programme are taken as partners** to the future programme EURAD-2. This means all parties are within the General Assembly, and without a two-tiered system of Mandated Beneficiaries and Linked Third Parties. The benefit to this system is the wider diversity and inclusiveness of all parties as equal contributors. All parties have better access to information, are part of the decision making with a vote on all issues, and feel they are better represented rather than being on a two-tier system. It removes the inconsistencies between Member States for how the mandates are allocated or not allocated. The drawback is the large size of the consortium, yet it has been demonstrated to be successfully managed by various other programmes across the European Commission, within Horizon2020 and others. Based on these PREDIS experiences and feedback from partners and stakeholders, options could be evaluated how to manage such a large consortium with the governance system applicable to EURAD-2..

Alternatively, if the EURAD-2 Core Group committee, EC or Member States decide to follow the existing EURAD structure, then PREDIS recommends improvements are made based on feedback and lessons learned in the first EJP and PREDIS. In the case of the same organisational structure as EURAD, the new programme would continue with the structure of having a limited group of Beneficiaries in the General Assembly who are mandated actors by their national programme owners. Other parties remain as Linked Third Parties. PREDIS stresses that it should be as easy as possible to establish ties from a Linked Third Party organisation to a Beneficiary by demonstration of collaborative relations. We recommend EURAD and PREDIS coordinators and/or the Core Group discuss this with the EC officer before finalising the EURAD-2 Governance plan. In such a case, PREDIS also recommends considering if the role of the colleges could facilitate a more direct route to allow LTP affiliations via the college chairperson organisation (e.g. for LTPs as REs to be associated to SCK CEN as the chairperson of EURADSCIENCE). There is also the need for greater transparency and communication flow with LTPs and the overall programme (see Section 4.1.2).

3.4 Composition of Colleges

PREDIS project sees there are three options of how to structure the composition of the colleges within EURAD-2 programme. These three are listed below (Sections 3.4.1 through 3.4.3) in our preference (highest) to lowest order. The next section provides additional suggestions for the mobilisation of the waste owners and generators group. We acknowledge that the first two options are highly dependent on the interest and commitment of the waste owners and generators, thus their feedback to these suggestions is critical (see Chapter 4).

3.4.1 1st (highest) Priority: Inclusion of PREDIS EUG Representation to EAB

PREDIS recommends that the future **EURAD-2 maintains the same College and Bureau structure as existing in EURAD programme but having a more direct route via the External Advisory Board (EAB)** where waste owners/generators are specifically represented. PREDIS accepts that the existing Colleges fulfil the Member State mandates to beneficiaries, where waste owners/generators, who can be numerous private companies, would not be possible to have such allocation from the national programme owners as being representative of the country's needs.

3.4.2 2nd Alternative: Utilise EUG of PREDIS for New College and Bureau Representation

PREDIS project's second alternative structure would be that the future EURAD-2 programme would use a **more inclusive governance structure** so that the waste owners and waste generators also are represented by a **new (fourth) college**, for impacting the Work Structure (as described in Chapter 3.3). The justification for this recommendation is that the waste owners and waste generators have a key role in driving the technical R&D, strategic studies and knowledge management needs. They are key parties who may be contributing to the co-financing of the work done by partners, and thus should also have a say in the Founding Principles (as described in Chapter 3.2) especially the prioritization of work package scope and budget. Not all waste owners or generators are qualified to be members (directly or indirectly through daughter organisations) of the WMO college. Inclusion of waste owners or waste generators within the Research Entities college (EURADSCIENCE) is not the ideal location as the waste owners' focus is not necessarily on scientific excellence but rather on innovation needs for implementation safety, innovation for optimisation (time efficiency, cost efficiency) and sustainability for instance in applying circular economy principles.

3.4.3 3rd (lowest) Alternative: Maintain Same Structure as EURAD with Three Colleges

PREDIS acknowledges that it may be the final decision of the European Commission and Core Group that the future EURAD-2 programme would use the **same Colleges and Bureau structure** as the existing EURAD programme. Thus, the same structure would be applied, having three colleges (WMOs, REs and TSOs), so that the three colleges impact the Work Structure (as described in Chapter 3.3). Waste owners/generators may be part of an existing college, e.g., of the RE College if they have a specific research function, but do not, as a group, provide specific feedback to the EURAD-2 programme and scope prioritisation (including through the EAB)

4 Way Forward

4.1.1 Mobilisation of Waste Owners' and Waste Generators' Voice

PREDIS proposes the means to mobilise the collective voice of the interested waste owners and waste generators within EURAD-2 is via SNETP, especially Technical Area 5 on waste management and decommissioning. PREDIS is prepared to assist the EURAD-2 Core Group and work with SNETP to solicit a Letter of Commitment from companies who would comprise this group to fulfil the options given above (College or Advisory role). This same solicitation would be provided to the current members of the PREDIS project's End User Group. It is envisioned that at least 5-10 companies would need to commit to this group by March 2023 to move forward with this option. The role would continue to be voluntary, like as practiced now by the other College representatives in the Bureau of EURAD.

PREDIS recommends the future EURAD-2 composition of the External Advisory Board (EAB) is reviewed by the European Commission and Project Management Office of EURAD or the Core Group planning the future programme, similar to how it was originally established with Terms of Reference in the original EURAD programme. The External Advisory Board could have better defined roles and description of duties, and also representing wider technical or industrial scope coverage fulfilled by the appointed members. For instance, it could help to also have someone appointed representing IAEA, OECD-NEA, regulatory (WENRA) and/or Civil Society views. It is within this External Advisory Board where the Waste Owners and Waste Generators could be giving their feedback to the programme (see Section 3.4.1).

4.1.2 General Improvements to Programme

PREDIS also has identified a few issues that should be improved in the future EURAD-2 programme's description. These are noted below for consideration by the Core Group:

- Include a more detailed description to the Quality Management Plan and Factsheet on Roles and Responsibility regarding expected communication routes and responsibilities, to improve the integration of Linked Third Parties.
- Closer follow up by the PMO on the Quality Management Plan to ensure proper functioning of roles and responsibilities of all parties
- Include a better definition of "Strategic Studies", including what type of activities and outputs such work packages should have, and what types of issues they should address other than R&D.
- Could there be an integrated EURAD-2 mechanism for 100% direct cost funding of certain educational actions within R&D work packages? For instance, allocating a budget providing full-funding of a certain number of PhD students per work package, selected based on application/competition with clear pre-defined processes for the evaluation criteria. The awarding could work similar to an internal Maria Curie programme. The award criteria could include a clause that the PhD should be done in the framework of co-supervision basis between at least two partner institutions from different Member States. A yearly PhD prize competition could be organised to enhance students' competitiveness and excellence.
- The Programme Management budget should consider allocation for work of the Bureau that directly aids the strategic implementation and operation of the programme.
- The Programme Management budget, upon approval of the European Commission, should consider a small allocation of effort to the Colleges' administration (as communities of practice), to facilitate feedback from the beneficiaries and linked third parties that serves the overall successful strategic implementation of the EURAD-2 programme.

4.2 Summary

PREDIS is committed to open and transparent dialogue with the European Commission, our partners, our End Users, and the EURAD programme to develop a future EURAD-programme proposal. We will strive for successful implementation of EURAD-2 together. This memo expresses the views of the Management Team and Task 2.4, though moving forward PREDIS will also continue to gather feedback from the wider Stakeholder community. We hope that the future programme will build on the best practices and lessons learned from both the PREDIS project and EURAD programme. We recognise that compromises will likely need to be made, yet we fully trust that a successful governance plan and agreements for the EURAD-2 programme structure can be reached through the planning process by the identified Core Group.