

## Terms of Reference

# **INTERNATIONAL NETWORK OF LABORATORIES FOR NUCLEAR WASTE CHARACTERIZATION (LABONET)**

This document is sets of the Terms of Reference (ToR) for the International Network of laboratories for Nuclear Waste Characterization (LABONET). It outlines the historical background, technical context, objectives, participants, activities, methods of work and funding for this network.

## **1. BACKGROUND**

The LABONET network was launched in 2011. The original ToR for the network is given in Appendix A. The network ran a number of activities between 2011 and 2017 including training meetings and technical meetings. In 2017 the ToR for the network was revised to gain closer alignment with the needs of Member States and to reflect the priorities of the IAEA.

The safe management and disposal of low and intermediate level radioactive waste is, in part, reliant upon the accurate and quality assured characterization by non-destructive and destructive methods, and determination of the radionuclide inventory, chemical, physical properties in the different steps of waste management. Relevant procedures, standards and practices have been developed and continue to be refined in waste characterisation facilities in Member States. Sharing of information between facilities and practitioners underpin the ongoing development of such procedures, standards and practices.

A number of Member States with less developed programmes may not have such facilities and laboratories. For these countries, achieving satisfactory characterization programmes is a complex technical challenge requiring both intellectual and financial resources.

The IAEA wishes to support organizations, either currently engaged in or seeking to develop, such characterization programmes, through their inclusion in LABONET network to cooperate and coordinate relevant actions, training and technical advances.

Exchange of information and best practice in the operation of characterization laboratories is expected to underpin both public and regulatory confidence that radioactive wastes are being securely managed and responsibly stored and disposed.

LABONET network will focus its attention on proven practices and successful implementation. The network will build on world class research and characterization activities both nationally and internationally by sharing information between Member States.

## **2. STRUCTURE**

Membership in LABONET will be open to individuals as well as organizations. The network welcomes the participation of commercial entities where their activities within the network are not commercial in nature. The LABONET network comprises:

### **A. IAEA**

### **B. Scientific Secretary**

Liaise with WATEC representatives to promote LABONET activities within the IAEA and encourage participation in LABONET events.

### **C. Members:**

Members may join the network upon invitation by the Steering Committee. Once appointed, the Members will remain in LABONET network until resignation. LABONET recognise two categories Members:

1. Individuals involved in characterization of low and intermediate level waste (scientific, technical or management responsibilities).
2. Organizations with mature waste characterization capabilities suitable for development, demonstration and/or training and a willingness to share their resources with other member states.
3. Organizations engaged in planning, implementing, improving or operating capabilities for characterization of low and intermediate level waste, and who are willing to participate in the activities of LABONET.

### **D. Working Groups**

The majority of LABONET activities will be undertaken as projects through the Working Groups. Working groups:

1. Comprise members specifically appointed by the Steering Committee
2. Are chaired by a member appointed by the Steering committee.
3. Deliver measurable and targeted outputs that are relevant to member states and supported by the IAEA.
4. Report to the Steering Committee as required
5. Organise technical visits and meetings to progress their projects as required, subject to funding.
6. May interface with other working groups, other networks or external organisations.
7. Are disbanded after the delivery of agreed outputs or at the end of the agreed budget and timeframe.

### **E. Steering Committee**

The Steering Committee is composed of individual members and the Scientific Secretary for LABONET. New Steering Committee members are appointed by the Scientific Secretary with concurrence of existing Steering Committee members. The Steering Committee provides advice to the IAEA and provides oversight / direction of LABONET activities. Collectively the Steering Committee shall have:

1. Internationally recognised expertise and experience in waste characterisation
2. Influence in other international fora on waste characterisation
3. Access to resources, capabilities and facilities in waste characterisation
4. Understanding of waste characterisation needs of wider member states.
5. Cover the full spectrum of LABONET activities.

The collective responsibilities of the Steering Committee are to:

1. Liaise with member states to understand the needs of Member States in waste characterisation
2. Influence and persuade LABONET members to ensure their active participation in the network activities

### **F. LABONET Chairperson**

The Chair of the LABONET is a member of the Steering Committee appointed by the Steering Committee to a 3-year term. The Chair of the LABONET has the following specific responsibilities:

1. Leads the Steering Committee and is the single point of accountability for Steering Committee actions.
2. Support the Scientific Secretary to coordinate LABONET activities
3. Organise and Chair all network and steering committee meetings, unless delegated to another Steering Committee member or at the discretion of the Scientific Secretary.
4. Convening regular Steering Committee meetings (e.g. teleconference), facilitated by the Scientific Secretary.
5. Ensure that minutes are compiled for all Steering group meetings.

#### **G. LABONET Vice-chairperson**

The Vice-Chair of the LABONET is a member of the Steering Committee appointed by the Steering Committee to a 3-year term and will support the chairperson as required.

#### **H. Sponsors**

Organizations that will work with the IAEA to provide either financial or technical support to LABONET activities. These may include commercial entities.

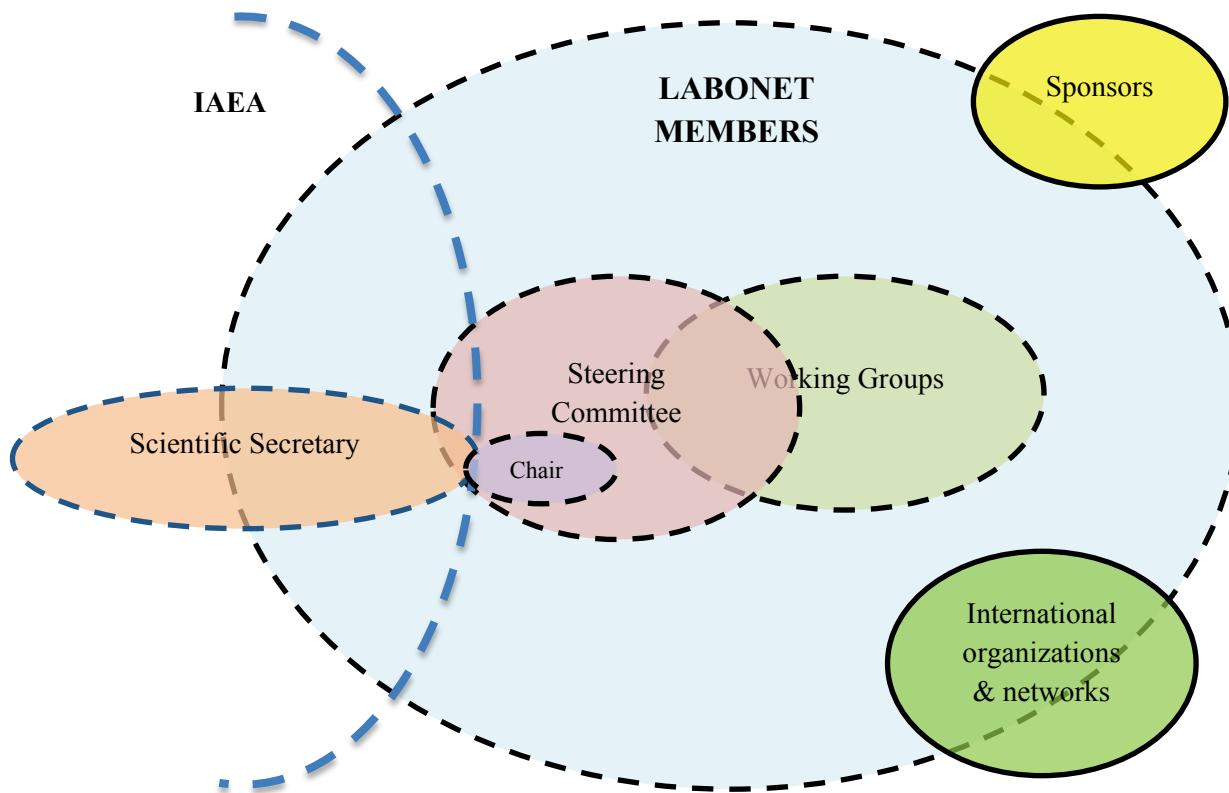


Fig. 1 Schematic Arrangement of LABONET

### **3. OBJECTIVES**

The Network is intended to increase effectiveness and efficiency in sharing international experience in the application of proven, quality assured practices for the characterization of low and intermediate level radioactive waste. In particular the LABONET network will to:

- A. Facilitate exchange of knowledge and experience among organizations with characterization facilities.

- B. Support organizations or Member States with less advanced capabilities for characterization of radioactive waste, by facilitating access to the relevant skills, knowledge, management practices and approaches and expertise from Member States with mature characterization capabilities.
- C. Develop and implement training and demonstration activities with a global, regional or thematic focus, providing hands-on, user-oriented training and demonstration of proven procedures and technology.
- D. Plan and implement projects through dedicated working groups within the framework to address recognised needs of Member States in waste characterization.
- E. Propose Coordinated Research Projects (CRP) to the IAEA for relevant technical needs of Member States.
- F. Contribute waste characterisation expertise to the IAEA and be a forum in which experts' advice and technical guidance may be provided on the IAEA's relevant programs.

#### **4. SCOPE**

Waste characterization is an essential component of the integrated waste management strategy. Characterization actions are performed during various stages of the radioactive waste life cycle: during generation (including waste retrieval activities), processing (treatment, conditioning), during storage and during disposal. The characterisation programme must also address the requirements of the phases of the life cycle. As such, the scope of the LABONET encompasses all activities associated with the characterisation of radioactive waste.

#### **5. TARGET AUDIENCE**

The Target Audience of LABONET output is broad and comprehensive. It includes:

- Waste holders
- Regulators
- Scientific research institutions
- Contractors
- NGO's
- General public
- Academics
- Students
- Trainers
- IAEA
- Government / policy makers
- Media and public relations professionals

#### **6. ACTIVITIES**

- A. Develop and maintain e-Learning characterization curriculum
- B. Develop and maintain LABONET WiKi
- C. Facilitate inter-comparison tests and reports
- D. Publish papers at international conferences
- E. Provide independent technical advice and reviews for member states and organisations (independent from IAEA peer reviews)
- F. A resource pool of experts for IAEA activates such as expert missions, training course and peer reviews
- G. Conduct projects related to Member States' needs on Waste Characterisation undertaken by Working Groups

The above activities will be primarily accomplished through working groups. LABONET General Meetings will be a platform for all Working Groups to meet together, to engage with wider membership of LABONET. Steering Committee Meetings will review activities of the Networks, Working Groups and provide recommendations to the IAEA.

## **7. KEY OUTPUTS**

The LABONET network will deliver the following products and services to the Member States and the IAEA.

### **A. Products**

1. e-Learning modules
2. LABONET WiKi articles
3. Inter-comparison tests and associated reports
4. Methodologies and guidelines on waste characterisation
5. Publications and reports

### **B. Services**

1. Technical advice and reviews for member states and organisations (independent from IAEA peer reviews)
2. A resource pool of experts for IAEA activates such as expert missions, training course and peer reviews

## **8. FUNDING**

LABONET activities are covered by the appropriate combination of the IAEA budgetary, technical cooperation, and extra budgetary resources and in-kind contributions of members and Sponsors.

## **9. REVIEW**

These terms of reference will be periodically reviewed at least once every three years.