



# **Interregional Training Course on Cost Estimation and Financing for Environmental Remediation**

**Hosted by**

The Government of South Africa

**through the**

National Nuclear Regulator

**19 – 23 August 2024**

**Ref. No.:TN-INT2020- 2402891**

## **Information Sheet**

### **Purpose**

The purpose of the event is to train the participants on cost estimating elements and methodologies, development of appropriate funding, and financing mechanisms for environmental remediation projects considering innovative approaches involving the transformation of legacies into assets and valorisation of mine tailings.

### **Working Language(s)**

The working language(s) of the event will be **English**.

### **Deadline for Nominations**

Nominations received after **12 July 2024** will not be considered.

## **Project Background**

This Interregional Project INT2020 is developed with the aim of building capacity in Member States to facilitate the implementation of remediation and decommissioning progress by providing a series of articulated training events that will lead participants to acquire a more solid and integrated view of the different elements that are necessary to progress with D&ER Projects. Instead of organising training events covering a diverse set of ad-hoc topics, this project is innovative in the sense that it puts together a series of articulated training modules that will gradually contribute to the consolidation of skills that need to be in place to contribute to the planning, management, implementation, and oversight of D&ER Projects. As D&ER is a multi-disciplinary process, a holistic approach will be pursued, and single aspects will be considered from multiple angles. This project is expected to increase progress in planning and delivery of D&ER projects by providing practical skills and enhancing the understanding of all drivers and constraints (a holistic approach) and an appreciation of the full suite of stakeholders and disciplines. This training programme will be imbued with a sense of realism. To this end, wide use will be made of case studies, anecdotal evidence, and personal experience. The project will entail a collaborative approach making use of innovative training mechanisms such as integrated web-based tools (e-learning and webinars).

## **Expected Outputs**

The expected output of this training course is to have an increased number of qualified individuals and organisations engaged in Environmental Remediation activities with improved understanding of cost components of a remediation projects and awareness of possible traditional and innovative funding mechanism that can overcome the barrier of project implementation due to the lack of such funds.

# Participation

The training is intended for participants with diverse backgrounds and jobs, including policy makers, regulators, operators, and contractors. The expected participation of trainees from different countries, backgrounds and jobs will allow them to network, share their experience, and help one another to understand and solve problems in creative ways. The training course is open to a maximum of 25 participants from the following countries:

The course is open to 25 participants from potential target Member States for INT2020: Algeria, Angola, Argentina, Armenia, Azerbaijan, Bangladesh, Belarus, Brazil, Bulgaria, Chile, China, Croatia, , Czech Republic, Egypt, Estonia, Georgia, Greece, Hungary, Indonesia, Iraq, Jamaica, Jordan, Kazakhstan, Kyrgyzstan, Kuwait, Latvia, Libya, Lithuania, Malawi, Malaysia, Mexico, Moldova, Mongolia, Morocco, Mozambique, Namibia, Niger, Pakistan, Peru, Philippines, Poland, Romania, Russian Federation, Saudi Arabia, Serbia, Slovakia, Slovenia, South Africa, Tajikistan, Thailand, Tunisia, Turkmenistan, Turkey, North Macedonia, Uganda, Ukraine, United Arab Emirates, United Republic of Tanzania, Uzbekistan, Bolivarian Republic of Venezuela, Viet Nam and Zambia

## Scope and Nature

The course will include lectures, case studies, and hands-on and facilitated group exercises. Prior to the course, participants will be required to complete e-learning modules and participate in an advance webinar (see below).

Topics covered in the course will include:

### Cost Estimation

- Defining scope and boundary conditions for cost estimate;
- One-time and reoccurring costs;
- Present value costs;
- Impact of site-specific characteristics;
- Cost drivers across life cycle of project;
- Using a CSM
- Certainty of the cost estimate
- Estimating uncertainty
- Lifecycle costing considerations for remediation
- Fundamental differences of financing remediation of legacy sites vs remediation of operating facilities
- Cost estimation approaches
  - a) Work Breakdown Structure
  - b) Analogous estimating
  - c) Three-point estimating
  - d) Expert judgement estimating
  - e) Parametric estimating (e.g., RACER tool)
- Evaluating and comparing remediation options
- Evaluating cost proposals
- Accounting for uncertainties
- Cost estimation process
  - a) Steps of the estimating process
  - b) Screening of alternatives
  - c) Detailed analysis of alternatives
  - d) Cost checklist
  - e) Documenting cost estimates

## **Financing Mechanisms**

- Tax Incentives for Environmental Remediation Costs;
  - a) Current expensing of capitalizable remediation costs;
  - b) Income tax credits;
  - c) Property tax abatements and exemptions;
  - d) Tax incremental financing (TIF);
- Bond Finance Programs;
- Loan Fund Programmes;
- Debt Forgiveness;
- Private Loan Enhancements;
- Valorisation of Wastes
- Repurposing the Site
- National Schemes.

## **Funding**

- Funding (Sources, differences in agency requirements, etc);
  - a) The United Nations Compensation Commission (UNCC);
  - b) European Bank for Reconstruction and Development (EBRD);
  - c) European Commission (EC);
  - d) The Instrument for Nuclear Safety Cooperation (INSC);
  - e) North Atlantic Treaty Organization (NATO).

Participants will be required to present (1) personal introductions, (2) information about ER characterization activities and challenges related to their work assignments and/or responsibilities, and (3) an “action plan” detailing how they will use apply new knowledge and resources gained from the course.

## **Participants’ Qualifications and Experience**

Participants in the training events will need to have advanced competency in the course language (English); be currently employed with regulator, industry, university/educational program, or other organization with involvement in D&ER activities; and have a formal university education in an appropriate field (including engineering, science, law, business, and social science) or adequate level of experience in a “relevant” field. For attending this module (or any other module of the project) candidates will need to complete designated eLearning module(s). Only candidates that can prove that they have successfully completed the e-Learning module will have their applications further examined. For those who have achieved this stage the next step will be to attend a webinar prior to attending Face to Face (FTF) training. The webinar will task each participant with an assignment that need to be delivered during the training period.

## Additional Requirements

Participants will need to successfully complete designated eLearning module(s) prior to the course. Completion of these modules will be verified via the IAEA Learning Management System (CLP4NET). The required eLearning modules include:

- Cost Estimation Basics
- Project Management and Planning Basics
- End-State and Future Use Determinations

Participants are also stimulated to review the IAEA Publication **Developing Cost Estimates for Environmental Remediation Projects, IAEA Nuclear Energy Series No. NW-T-3.8 (2019)** at [https://www-pub.iaea.org/MTCD/Publications/PDF/P1857\\_web.pdf](https://www-pub.iaea.org/MTCD/Publications/PDF/P1857_web.pdf) and will be required to participate in a webinar held in advance of the training course. The webinar will orient participants to the course, facilitate introductions, and establish a pre-course assignment to be completed before the start of the course.

Daily attendance will be required and monitored along with submission of requested evaluations and completion of assignments in order to receive a course certificate.

## Application Procedure

Candidates wishing to apply for this event should follow the steps below:

1. Access the InTouch+ home page (<https://intouchplus.iaea.org>) using the candidate's existing Nucleus username and password. If the candidate is not a registered Nucleus user, she/he must create a Nucleus account (<https://websso.iaea.org/IM/UserRegistrationPage.aspx>) before proceeding with the event application process below.
2. On the InTouch + platform, the candidate must:
  - a. Finalize or update her/his personal details, provide sufficient information to establish the required qualifications regarding education, language skills and work experience ('Profile' tab) and upload relevant supporting documents;
  - b. Search for the relevant technical cooperation event (**EVT2402891**) under the 'My Eligible Events' tab, answer the mandatory questions and lastly submit the application to the required authority.

**NOTE:** Completed applications need to be approved by the relevant national authority, i.e. the National Liaison Office, and submitted to the IAEA through the established official channels by the provided designation deadline.

For additional support on how to apply for an event, please refer to the [InTouch+ Help page](#). Any issues or queries related to InTouch+ can be addressed to [InTouchPlus.Contact-Point@iaea.org](mailto:InTouchPlus.Contact-Point@iaea.org).

Should online application submission not be possible, candidates may download the nomination form for the training course from the [IAEA website](#):  
<https://www.iaea.org/services/technical-cooperation-programme/how-to-participate>.

**NOTE:** A medical certificate signed by a registered medical practitioner dated not more than four months prior to starting date of the event must be submitted by candidates when applying for a) events

with a duration exceeding one month, and/or b) all candidates over the age of 65 regardless of the event duration.

## **Training on Basic Security in the Field (BSITF)**

In order to comply with UN system-wide security measures, it is required that all training course participants complete the online security awareness training BSAFE (which replaces BSITF and ASITF), prior to traveling to locations where UN security phases are in effect. The aim of these course is to educate participants on how best to avoid or minimize potential dangers and threats, and to demonstrate what individuals can do if they find themselves in insecure situations. The course is available online (<https://training.dss.un.org/course/category/6>).

Once an individual has completed the training, he/she must go back to the main training page to receive the certificate. If the button to get the certificate is not immediately visible, please refresh the page. BSAFE is maintained by UNDSS; in case of problems with the system, please contact UNDSS through the "Contact Us" page on the training website (<https://dss.un.org/dssweb/contactus.aspx>).

This certificate is compulsory for any IAEA-supported activity and should be submitted, along with the Nomination Form, through the competent authority in your country (NLO). Copies of the certificate should be kept by the candidate for his/her records as the BSAFE certificate does not expire.

## **Administrative and Financial Arrangements**

Nominating authorities will be informed in due course of the names of the candidates who have been selected and will at that time be informed of the procedure to be followed with regard to administrative and financial matters.

Selected participants will receive a stipend from the IAEA sufficient to cover their costs of lodging, daily subsistence and miscellaneous expenses. They will also receive either a round-trip air ticket based on the most direct and economical route between the airport nearest their residence and the airport nearest the duty station through the IAEA's travel agency American Express, or a travel grant, or they will be reimbursed travel by car/bus/train in accordance with IAEA rules for non-staff travel.

**NOTE:** The event will be hosted by the Government of Japan, therefore nominated participants who require a visa to enter Japan should submit the necessary application to the nearest diplomatic or consular representative of Japan as soon as possible.

## **Disclaimer of Liability**

The organizers of the event do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in approving his/her participation, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.

## **Note for female participants**

Any woman engaged by the IAEA for work or training should notify the IAEA on becoming aware that she is pregnant.

The Board of Governors of the IAEA approved new International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The Standards deal specifically with the occupational exposure conditions of female workers by requiring, inter alia, that a female worker should, on becoming aware that she is pregnant, notify her employer in order that her working conditions may be modified, if necessary. This notification shall not be considered a reason to exclude her from work; however, her working conditions, with respect to occupational exposure shall be adapted with a view to ensuring that her embryo or foetus be afforded the same broad level of protection as required for members of the public.

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