**RICOMET 2020 webinar on**

**Holistic Approaches to Environmental Remediation**

01/09/2020

Co-organised in cooperation with IAEA-ENVIRONET MAESTRI Project, ENA and SHARE

**Programme:**

**1. Introduction of the webinar**

Christophe Xerri | Division of Nuclear Fuel Cycle and Waste Technology of the Nuclear Energy Department, IAEA

**2. The ENVIRONET- MAESTRI Project on Management Systems Supporting Environmental Remediation Projects**

Catrinel Turcanu | SCK CEN, Belgium

**3. Environmental Remediation in Affected Areas in Japan: challenges and lessons learned**

Hiroyuki Kuroda and Tadashi Inoue | Ministry of Environment, Japan

**4.** **Including Economic Factors in Remediation End State Option Assessments**

David Collier | White Ox, U.K

**5.** **Sustainable Environmental Management**

Bieke Abelshausen | SCK CEN, Belgium

**6.** **Social Multi-Criteria Evaluation for environmental management**

Giuseppe Munda | JRC-Ispra, European Commission

**7.** **Q&A  from the audience**

**8.** **Closing remarks**

Horst Monken-Fernandes | IAEA

**Moderated by** Catrinel Turcanu, SCK CEN, Belgium. Chat area moderator: Robbe Geysmans, SCK CEN, Belgium

**Introduction to the WEBINAR** |Christophe Xerri, Division of Nuclear Fuel Cycle and Waste Technology of the Nuclear Energy Department, IAEA

Decision making in the scope of Environmental Remediation needs to consider a wide range of technical and non-technical factors. Identifying and addressing the relevant social and economic issues may increase the quality of decisions, the successful implementation of projects and their long term sustainability. This is particularly the case in complex projects when definition of end-states is not straightforward  and/or where environmental interventions involve the deployment of complex techniques/technologies that require enhanced interactions with a broad range of stakeholders. This webinar will take the form of a panel where experts in environmental remediation projects, policy making, regulatory aspects and social sciences will reflect on why and how can social and economic aspects be considered alongside more technical factors, based on their experience in research and practice related to decision-making in the scope of environmental remediation projects.

**The Environet MAESTRI Project on Management Systems Supporting Environmental Remediation Projects** |Catrinel Turcanu, SCK CEN, Belgium

The MAESTRI Project **Management Systems Supporting Environmental Remediation Projects** is currently being developed in the scope of the Network of Environmental Management and Remediation (ENVIRONET). The MAESTRI project aims at developing a structured framework that considers, in an integrated manner, the different dimensions and activities that are relevant to the proper management of sites that have been contaminated by ongoing or past activities. It will provide practical guidance attending to: considerations underlying the decisions on the management of contaminated sites (e.g. institutional, environmental, safety, economic, social, ethical); sustainability assessment of management options; evaluation of social, economic and environmental aspects of site management options; and application of evaluation tools to support a transparent, consistent, comprehensive and inclusive decision-making process. The project recognises that participation of relevant social actors should be an integral part of the site management process, leading to better decisions and enhanced human well-being. It will also provide a framework for sharing of practical experiences of MS on related aspects of the environmental management of contaminated sites.

**Environmental Remediation in Affected Areas in Japan: challenges and lessons learned** | Hiroyuki Kuroda, Tadashi Inoue, Ministry of Environment, Japan

The presentation will address three points of main policies taken by the Ministry of the Environment, Japan (MOEJ) after TEPCO Fukushima Daiichi Nuclear Power Plants Accident. The first is how MOEJ implemented and completed off-site decontamination except for Difficult-to-Return Zones (DRZ) in affected area. The second is how MOEJ is handling with large amounts of removed soil generated from off-site decontamination work. The third is how MOEJ shared lessons learned with international communities. I will also explain future-oriented projects for regeneration in Fukushima.

**Including Economic Factors in Remediation End State Option Assessments** | David Collier, White Ox, U.K

The author specialises in option assessment processes where there is a significant social dimension to the project and stakeholder views must be considered. This includes decisions about the extent of clean-up of sites contaminated with radioactive materials. Decisions in such circumstances must take account of the costs of remediation and disposal and of strategic objectives, whilst also reflecting the priorities and insights of local communities. Engagement and decision-making frameworks used in these circumstances must be understandable and cost-effective to operate. and must lead to robust decisions which will pass regulatory scrutiny and be accepted by stakeholders.

This presentation will discuss how costs, strategic objectives and other factors can be balanced. It refers to UK case studies where existing plans are being reconsidered in the light of recent regulatory guidance that opens up more possibilities for leaving contamination in-situ rather than removing it.

**Sustainable Environmental Management** | Bieke Abelshausen, SCK CEN, Belgium

In the past decade, the inclusion of sustainability considerations in the remediation of contamination from anthropogenic and natural sources has gained increasing importance. Several initiatives and actions have been established that attempt to conceptualise and apply the principles of sustainability to contaminated land management. With this, an evolution from technical solutions towards ‘green and sustainable remediation’ can be noted in the last decade, also in the nuclear field. As environmental management evolves towards sustainability, the interrelationship between the three sustainability pillars (environmental, social, economic) becomes more apparent. The introduction of the social and economic pillars however requires a more complex approach to environmental management. In response to this increased complexity, various trends have emerged. For the purpose of this presentation, focus will be placed on asset based community development. Within this approach, a novel framework was developed that categorizes assets in a society in 7 capitals (natural, cultural, human, social, political, financial and built) encompassing the three pillars of sustainability. The benefits this framework has include an opportunity to address complexity and the interrelationships that exist within societies, and in relation to their natural environment. Furthermore, it assures the embedding of environmental management within a society / community, resulting in more sustainable results, with little adverse effects.

**Social Multi-Criteria Evaluation for environmental management** | Giuseppe Munda, European Commission, JRC Ispra, Italy

The presentation gives a short introduction to Multi-Criteria Decision Aid (MCDA) and Social Multi-Criteria Evaluation (SMCE), which has been explicitly designed for public policy. SMCE is a useful methodological and operational framework for assessing policy impacts. In this framework, mathematical models aim at guaranteeing consistency between the plurality of assumptions and models used and results obtained. SMCE builds on formal modelling techniques serving the purposes of decision and policy making. Its multi-dimensional approach allows tackling policy domains where the plurality of social views and the multiplicity of technical criteria for assessing public policy objectives can be considered together in a coherent and transparent manner.

**Closing remarks** | Horst Monken Fernandes, IAEA, scientific secretary of ENVIRONET