

**IAEA's Programme on Development, Testing and Harmonization of
MODEls and DAta for Radiological Impact Assessment
(MODARIA II)**

S U M M A R Y
of the
First MODARIA II Technical Meeting
IAEA Headquarters, Vienna
31 October – 4 November 2016

Opening

This was the first Technical Meeting (TM) of the IAEA's MODARIA II programme, which will run from 2016 to 2019 and is a continuation of the MODARIA I programme (2012–2015).

The TM was attended by 145 participants from 47 Member States, with a large fraction of the participants having also been involved in the previous MODARIA I programme, but it was pleasing to welcome many new experts. It was also pleasing to see that a number of experts from countries from Asia, the Americas and Africa were at the meeting. Expanding the base of the participation to the MODARIA programme to countries which have not been traditionally involved in this IAEA activity can only be beneficial to improve international collaboration, common understanding and the application of best practice to regulatory control around the world.

On opening the meeting both Mr Peter Johnston, Director of the Division of Radiation, Transport and Waste Safety (NSRW) and Mr Andrew Orrell, Head of the Waste and Environmental Safety Section (WES/NSRW) underlined the importance of the MODARIA II programme to the overall plan of activities in the area of waste safety and remarked on the need that environmental models should be adequate for the task of assessing the radiological impact in the context of regulatory control. They also emphasized that there has to be a clear link between the work done during MODARIA II and the IAEA Safety Standards, in particular the IAEA Basic Safety Standards. I also underlined this aspect in my introductory speech emphasising that the ultimate goal of MODARIA is to facilitate the implementation of the radiation protection requirements set out in the IAEA Safety Standards dealing with exposures to the public and the environment.

The MODARIA II work programme

Following on, Mr Gerhard Proehl, of the Waste and Environmental Safety Section and IAEA Scientific Secretary for the MODARIA II programme, provided an overview of the achievements of MODARIA I and of the objectives for the MODARIA II programme. Seven Working Groups (WGs) have been included in the MODARIA II programme:

- Working Group 1 on Assessment and Decision Making of Existing Exposure Situations for NORM and Nuclear Legacy Sites;
- Working Group 2 on Assessment of Exposures and Countermeasures in Urban Environments;
- Working Group 3 on Assessments and Control of Exposures to the Public and Biota for Planned Releases to the Environment;
- Working Group 4 on Transfer Processes and Data for Radiological Impact Assessment;
- Working Group 5 on Exposure and Effects to Biota;

- Working Group 6 on Biosphere Modelling for Long Term Safety Assessments of High Level Waste Disposal Facilities; and finally
- Working Group 7 on Assessment of Fate and Transport of Radionuclides Released in the Marine Environment.

The main topics covered by these WGs were selected during a Consultants' Meeting held between 29 February and 2 March 2016 and reflect the suggestions for a follow-up programme made during a Special Plenary Session held during the final MODARIA I TM. The experts dedicated to act as Working Group Leaders presented the objectives of each WG and gave an overview of the respective WG intended work plans.

Working scheme

The format of the meeting followed the same general scheme adopted for previous MODARIA TMs, with the opening day dedicated to plenary activities followed by discussions within different WGs, which were established to deal with specific topics.

All seven WGs met separately during the remainder of the meeting. Some of the WGs represent the natural continuation of the work carried out during MODARIA I (e.g. WGs 2 and 6) others cover new areas (e.g. WG 3) or include changes to the programme carried out during MODARIA I. Common topics between different WGs had been identified during the preparatory work and a number of joint meetings between WGs were held during the course of the week. It was good to see that the discussions were generally conducted in a very positive and enthusiastic manner, with many participants contributing to proceedings.

Plenary presentations on topics of general interest

Three special presentations were given on the morning of Wednesday, 2 of November 2016:

- Recent efforts to risk informed decision making for environmental clean-up in the DOE complex was given by Mr Ming Zhu, Office of Environmental Management, US DoE;
- IAEA safety requirements and guidance addressing protection of people and the environment and needs for radiological impact assessment, given by Mr Diego Telleria (WES/NSRW); and
- A summary on a Technical Workshop on Remediation of Radioactive Contamination in Agriculture, held in Vienna 17–18 October 2016, given by Mr Carl Blackburn of the Joint FAO-IAEA Division of Nuclear Techniques in Food and Agriculture.

These presentations were extremely useful and very much in line with MODARIA's stated aim to provide a forum for the exchange of information in the area of regulatory control for the protection of people and the environment.

Suggestions by the participants

A number of participants asked for timely and efficient publication of reports from MODARIA I, since the work done through MODARIA cannot be referenced properly unless it is published as an official IAEA document, and that there is a risk that by the time the report is published the content has been superseded by other reports. The responsible IAEA Scientific Secretaries and the Working Group Leaders were therefore encouraged to enable timely dissemination of the MODARIA II results. My suggestion would be that rather than publishing only separate reports for each individual Working Group we could have a single report for the whole MODARIA II programme that captures the main points and conclusions of the work carried out and could be kept updated as working material during the course of MODARIA II and could be published shortly after its conclusion followed by separate and more detailed reports on each of the Working Groups.

Participants also enquired whether future MODARIA II TMs could be used for training purposes or to give presentations on specific topics. It is thought that MODARIA II TMs should be used to give participants and the IAEA the opportunity to present work and activities related to assessments and regulatory control, as one of the main aims of MODARIA is to provide a platform for the exchange of information. However, careful consideration needs to be given as to whether actual training courses should be held during TMs as they require substantial organisational effort and may be intended for people who are not directly involved in the MODARIA programme. Nevertheless dissemination of the work of MODARIA II is something that needs to be developed further, given the diminishing resources available at national level for this type of work. This could be done through the IAEA website but also other means through which the work of the MODARIA could be more extensively publicised could be explored.

Acknowledgement

Finally, I would like to thank all the participants of the Technical Meeting, the Working Group Leaders, the IAEA Scientific Secretaries and the other IAEA members of staff for their support and for making my first MODARIA II TM a particularly enjoyable experience. I am looking forward to working with all of the experts involved in the MODARIA II programme over the next three years.

Tiberio Cabianca
MODARIA II Chair

15 December 2016