

1st Plenary and Working Group Meetings of the IAEA Programme on Environmental Modelling for Radiation Safety (EMRAS)

**Minutes of the meeting held at the
International Atomic Energy Agency's (IAEA) Headquarters, Vienna
1–5 September 2003**

The meeting chaired by Ms. Kathleen Thiessen from SENES Oak Ridge, USA, was attended by 78 participants from 24 Member States and by a number of NSRW and NAAL staff members from the IAEA (see the attached Participants List). The first and the last days of the meeting were devoted to plenary discussions, and during the second to fourth days the Working Groups held their own separate meetings. Progress on the Working Groups' operation was discussed at short Plenary Sessions in the morning of the second to fourth meeting days.

These Minutes present a brief record of the Plenary Meetings. Notes from the Working Group Meetings have been prepared by the corresponding chairs and IAEA Scientific Secretaries.

The meeting was opened by Mr. Gordon Linsley, Section Head of the Waste Safety Section, NSRW. He stated that the objectives of the EMRAS programme were to improve and maintain assessment abilities in the various member countries. Mr. Linsley stressed that topics to be included in EMRAS should be relevant to real radiological issues. There should be sufficient people interested in a Working Group to make it viable, e.g., a suggestion for a model testing group might be that a minimum of 7 modelling groups should be involved. From the IAEA's perspective, there is a limit on the number of Working Groups possible based on the number of IAEA staff available to act as Secretariat. A new programme of radioecology at the IAEA's Seibersdorf Laboratories was expected to bring modellers closer to experimentalists. The EMRAS Programme was expected to run from 2003 to 2006, i.e., for four years.

Mr. Linsley introduced Ms. Kathleen Thiessen from SENES Oak Ridge, USA, as the Chair of the meeting. Ms. Thiessen made her opening remarks and discussed the Preliminary Agenda with the audience. She welcomed the participants and expressed her expectations for a productive week.

The meeting continued with an overview of the Agency's programmes on environmental modelling, made by Mr. Linsley. He reminded the audience of the history of environmental assessment modelling of radionuclides, which began in the 1970s, and explained the rationales of the series of international projects on this subject, i.e., BIOMOVS (initiated in 1985 by SSI, Sweden), VAMP (1988–1994 (IAEA)), and BIOMASS (1996–2001 (IAEA)), the EMRAS Programme therefore being the follow-up there to.

The detailed presentation of the activities of the IAEA's Seibersdorf Laboratories in the area of Protection of the Marine and Terrestrial Environment was made by Mr. Peter De Regge, Head of Laboratory.

During his presentation Mr. Mikhail Balonov, EMRAS Scientific Secretary from NSRW, described the preparatory activities, current status, and operation plan for the EMRAS programme. He suggested discussion on both general and specific EMRAS objectives, as well as its expected outputs. Mr. Balonov explained that themes proposed for EMRAS were brought up both from the IAEA regular programmes in the environmental area and from wide

public and informal discussions held in 2001–2002 at numerous international meetings. He then introduced suggested themes for the meeting's consideration and raised some organizational issues, such as the type and regularity of meetings, role of the Steering Committee, etc. Some suggestions for Working Groups' operation were put forward at the end of the presentation.

During the afternoon of the first meeting day, the seven invited Working Group Leaders reported on the preparatory work and their visions of the particular group activities. Detailed information on these presentations can be found in the Minutes of corresponding Working Group Meetings and in the PPT-documents of their presentations.

Before separation of the meeting participants into Working Groups, the meeting Chair and the audience discussed the composition and functions of the EMRAS Steering Committee (SC). The Steering Committee will comprise the EMRAS Chair, Working Group Leaders and IAEA staff, i.e., EMRAS Scientific Secretary, SC Secretary and NAAL representative. The functions of the Steering Committee were agreed as follows:

“To advise the Agency in the conduct of the EMRAS Programme. In particular, at annual SC meetings and through regular communications:

- to discuss status and progress of the WGs and make appropriate recommendations to the Agency;*
- to discuss and resolve common managerial issues;*
- to elaborate on the EMRAS publication policy with respect to scientific literature and Web.”*

The Steering Committee will meet during the present and future Plenary and Working Group Meetings at the IAEA's Headquarters in Vienna; and, if necessary, additional meeting will be organized.

By the end of the first meeting day, the meeting participants separated into the seven Working Groups and began separate Working Group Meetings. During the next day it was reported that six Working Groups were established and started their work as planned. The potential participants of the suggested Working Group 3, “Fruits & Forest”, with the particular title “Model validation for radionuclide transport in fruit plants and forest ecosystems: application of the experimental data sets and assessment of management options”, had decided to join Working Group 1 on “Revision of IAEA Technical Report Series No. 364, Handbook of parameter values for the prediction of radionuclide transfer in temperate environments”. because of their small number (6 persons).

The following Working Groups, with participants numbering between 10 and 20, were established at the meeting:

- (1) Revision of IAEA Technical Report series No. 364 “Handbook of parameter values for the prediction of radionuclide transfer in temperate environments”.
- (2) Modelling of tritium and carbon-14 transfer to biota and man.
- (3) The Chernobyl ¹³¹I release: model validation and assessment of the countermeasure effectiveness.
- (4) Model validation for radionuclide transport in the aquatic system “Watershed-River” and in estuaries.

- (5) Modelling of naturally occurring radioactive materials (NORM) releases and of the remediation benefits for sites contaminated by extractive industries (U/Th mining and milling, oil and gas industry, phosphate industry, etc).
- (6) Remediation assessment for urban areas contaminated with dispersed radionuclides.

The list of the corresponding Working Group Leaders and IAEA Scientific Secretaries is attached.

During the final Plenary Meeting on Friday, 5 September 2003, the six Working Group Leaders presented the results of the Working Group activities achieved during the meetings held on Tuesday to Thursday (see detailed Working Group Minutes).

During her concluding presentation, the meeting Chair, Ms. Thiessen, emphasised the substantial progress made during the week of the first meetings with regard to the project activities. A large number of countries and many experts in environmental modelling participated in the meetings, including many who had not previously been involved in international model testing programmes. The contribution of the participants in the form of model validation scenarios and experimental data sets was evaluated as surprising which presumed future success of the launched project; previous programmes had depended at least partly on hypothetical scenarios, and the increasing availability and use of environmental data sets is welcomed. In general, most working groups are dealing with areas of assessment modelling for which the capabilities are not yet well established; they are evaluating existing approaches for modelling the relevant situations and are identifying those areas most in need of attention. The TRS 364 revision is bringing together what is known about parameters across several important aspects of assessment modelling. There is also increased attention being paid to the significance of a situation with respect to potential dose and risk, to the effects of countermeasures and remediation efforts, to both short- and long-term time-dependence, and to a wider variety of radionuclides.

The EMRAS Scientific Secretary Mr. Balonov, reported from the earlier Steering Committee Meeting that all of the Working Group Leaders expressed their satisfaction with the meeting preparations and with the subsequent progress of the Working Groups. Regular interaction between the Working Groups should be supported during the whole project's implementation. Special attention should be given to the co-operation of Working Group 1 on the revision of TRS-364 with the other Working Groups which could provide Working Group 1 with the new updated and validated information in their respective fields.

The IAEA plans to launch and support both the EMRAS Web-site and Web-sites of the particular Working Groups. All of the necessary information will therefore be distributed both to project participants and to other people interested in the project subject through these Web-sites.

As a result of discussions with the audience, 11–15 October 2004 was suggested as the next Plenary and Working Group Meeting dates and IAEA Headquarters in Vienna as the meeting venue. However, in early November 2003 it was revealed that the suggested meeting dates overlapped with another international meeting where a number of EMRAS participants would participate. Furthermore, problems were also encountered when trying to reserve the necessary meeting rooms during the last quarter of the year. It has therefore been decided that the above-mentioned meeting will run for 4 days and will take place **8–11 November 2004**, at IAEA's Headquarters in Vienna. For details of how to register your intention to participate, please see final the page of these minutes.

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held at IAEA Headquarters, Vienna
1-5 September 2003

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* Frank Harris has left the IAEA and no replacement Working Group Scientific Secretary has been appointed to date. In the meantime, any NORM Working Group queries should be directed to Mr. Mikhail Balonov.

**How to register your participation in the
2nd Combined Meetings of the IAEA Programme on
Environmental Modelling for Radiation Safety (EMRAS)
IAEA Headquarters, Vienna, 8–11 November 2004**

Please send an email in the following format, **no later than 11 October 2004**:

The image shows a screenshot of an email client window titled "EMRAS Registration - Message (Rich Text)". The window contains a form with the following fields and sections:

- To:** C.Halsall@iaea.org (An arrow points to this field with the text: "Only use this email address")
- Subject:** EMRAS Registration (An arrow points to this field with the text: "Use this as the subject for your email")
- Form Fields:**
 - Family Name:
 - Position:
 - Sub-organization/Department:
 - Organization Name:
 - Address:
 - City:
 - ZIP/Postal Code:
 - Country:
 - Main Telephone No.:
 - Main Fax No.:
 - Organization Email Address:
 - Organization Website Address (if applicable):
 - Direct Telephone No.:
 - Direct Fax No.:
 - Personal Email Address:
- Text:** YES, I plan to attend the 2nd Plenary and Working Group Meeting of EMRAS (IAEA HQ, Vienna, 8-11 November 2004)
- Text:** I intend to participate in:
 - THEME 1, WG 1: TRS 364
 - THEME 1, WG 2: Tritium & C-14
 - THEME 1, WG 3: I-131
 - THEME 1, WG 4: Aquatic
 - THEME 2, WG 1: NORM
 - THEME 2, WG 2: Urban Remediation
- Text:** I will need a formal invitation LETTER FOR VISA purposes. (An arrow points to this text with the text: "Only request this if it is necessary for you to apply for a visa in order to travel to Vienna")

Annotations on the right side of the form include:

- "Use this as the subject for your email" (pointing to the Subject field)
- "Please make sure that you provide your complete, up-to-date contact details" (pointing to the contact information fields)
- "Only indicate those Working Group(s) you would like to actively participate in" (pointing to the list of working groups)

It is only necessary to send us an email if you intend to participate in the meetings, there is no need to send a message telling us that you cannot attend.

Please note that email is the preferred method for communicating your intention to participate. If you don't have access to email, please send a fax providing the same information, to the number given below.

Please send the your email directly to:

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