



الوكالة الدولية للطاقة الذرية
国际原子能机构
International Atomic Energy Agency
Agence internationale de l'énergie atomique
Международное агентство по атомной энергии
Organismo Internacional de Energía Atómica

5th EMRAS Biota Working Group Meeting

7–9 November 2006

IAEA Headquarters, Vienna

MINUTES

Attending:

Participant*

Mikhail Balonov, IAEA Scientific Secretary
Karine Beaugelin-Seiller (KBS)
Nick Beresford (NAB) co-chair
Justin Brown (JB)
David Copplestone (DC)
Sergey Gaschak (SG)
Rudie Heling (RH)
Ali Hosseini (AH)
Brenda Howard (BJH) co-chair
Isao Kawaguchi (IK)
Tatjana Nedveckaitė (TN)
Geert Olyslaegers (GO)
Carol Robinson (CR)
Tatiana Sazykina (TS)
Sergey Spiridonov (SS)
Mike Wood (MW)
Jordi Vives i Batle (JV)
Tamara Yankovich (TY)
Charley Yu (CY)

Affiliation

IAEA
IRSN, France
CEH, UK
NRPA, Norway
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IRL, Ukraine
NRG, Netherlands
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CEH, UK
NIRS, Japan
Institute of Physics, Lithuania
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SPA Typhoon, Russia
RIARE, Russia
Liverpool University, UK
WSC Limited, UK
AECL, Canada
ANL, USA

*Initials used to refer to participants within minutes and actions as appropriate.

MINUTES

Exercise 1

Paper has been submitted to *Radiation Research* – thanks to JV for taking the lead on this.

Exercise 2

A draft paper had been circulated to co-authors week prior to the meeting by NAB; this was available for all participants at the meeting (N.B. this should not be wider circulated or quoted at this stage). On the basis of the identified outliers and z-scores a number of observations had been made in the paper regarding various predictions. Explanations for these had then been proposed. The observations and proposed explanations were discussed by the group and some additional suggestions made.

A proposed timetable to progress the draft to submission in early spring 2007 was agreed upon (see actions). GO requested that he be allowed to more fully complete the exercise and the group agreed to this. Otherwise the only changes to existing submissions should now be corrections of any errors.

Perch Lake

Nine participants have submitted predictions for this scenario: AECL, NRPA, ERICA (by CEH), NRG, SPA-Typhoon, EA, Inst. of Physics, IRSN, and J. Smith (CEH not attending). TY presented a comparison of predicted to measured activity concentrations, and model-model comparisons of estimated doses. Predicted activity concentrations were also compared to ranges predicted by AECL; it was suggested that ranges in the measured data also need discussing.

ANL have not been able to run RESRAD-BIOTA for the scenario. The group felt that the scenario needed predictions of RESRAD-BIOTA to be of most benefit; RESRAD-BIOTA being only one of three widely available approaches. JB and MW agreed to each run RESRAD-BIOTA for the scenario and ask CY to comment on their results prior to submission. CY agreed to this and offered to let NAB have the web address of the latest version of RESRAD-BIOTA which is not yet more widely available (*N.B. this is for the use of scenario participants only and not wider dissemination*).

A programme of work was agreed upon such that a draft manuscript for the scenario can be circulated prior to the June 2007 meeting of the group (see actions).

SS requested copies of presentations be made available. Group agreed to copies of ppt files without results being placed on BWG website.

Chernobyl

To date only ERICA (by CEH), NRPA, EA and Inst. of Physics have made submissions for this scenario. AECL will run the scenario and SPA-Typhoon is considering doing so. NAB agreed to run RESRAD-BIOTA for the scenario and will ask CY to comment on results prior to submission. TN is considering her continued participation in this case study.

NAB presented a comparison predicted activity concentrations to available measurements. It was also possible to compare external gamma dose rate estimates to the measurements using TLDs attached to small mammals. The usefulness of having previously conducted Exercises 1 and 2 was evident with some differences in predictions being able to be rapidly explained.

As for Perch Lake, a programme of work was agreed upon such that a draft manuscript for the scenario can be circulated prior to the June 2007 meeting of the group (see actions). JB agreed to run FASTER for an expanded range of vertebrates with assistance from CEH.

BWG Report (TECDOC)

NAB reported that there had been agreement at the Steering Committee meeting that the BWG adopt a somewhat different format to the groups final report (published as a 'Tech. Doc.'). The following structure was suggested to, and agreed by the BWG, by NAB/BJH:

1. Introduction
2. Participating models – 5 pages per model **WELL** referenced to underlying documentation.
 - Include a paragraph on general applications of models
 - Scenario specific information leave to scenario/exercise chapters
3. Exercise 1
4. Exercise 2
5. Perch Lake
6. Chernobyl
7. Discussion
- Recommendations
 - Annex
- Scenario descriptions

The four chapters on results will be adaptations of the papers prepared for them. A timetable for producing some chapters as drafts prior to the June workshop was agreed (see actions). Contents of the Discussion and Recommendations will be discussed in June.

DC intends to turn the existing 'Reference Organism' document into a draft paper for discussion. A decision on where to include this within the report will be made in June.

April 2007 IAEA Conference (Vienna 23–27 April 2007)

There is an expectation that the WGs will each present during a session on morning of Thursday, 26th April. The papers will be published in a refereed journal. Two dates have been given for submission of manuscripts: February 2007 (during the Steering Committee meeting) and June 2007. Depending upon which of these is correct the group agreed that the paper submitted would be either Exercise 2 (Feb) or a discussion paper based on all our activities (June). If the deadline is February then the group acknowledged that the Exercise 2 deadlines would require revising and bringing forward.

A two page abstract requires submitting ASAP (NAB will prepare and circulate).

See <http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=145> for details.

Participant updates

Opportunity was taken to update the group on various institute/national/international activities.

BJH gave a summary of the FP6 EC EURATOM funded project PROTECT, which started on 1st October 2006.

WP2 of PROTECT extends the work of the BWG. BJH stated that it was hoped that workshops of this WP would be co-ordinated with the meeting of the BWG. BWG members interested in collaborating with the project should contact her or the relevant WP leader. There are some funds within PROTECT to assist with travel and subsistence for people to participate within the projects workshops.

MW presented a scenario based upon the Drigg sand dunes, situated close to the Sellafield reprocessing plant, which are protected nationally and internationally. MW asked: (i) if participants wanted to apply their models to the scenario then please contact him; (ii) did participants have any objection to his use of their models to the scenario.

DC presented an overview of Environment Agency assessments of potential impact of authorised radioactive releases on Natura 2000 sites in England and Wales (a paper summarising this work will be distributed to the BWG). DC also introduced various issues associated with radioisotope tracer studies raised by Australian colleagues with respect to protection of the environment.

NAB gave a brief overview of a project to provide information of the exposure of non-human biota to natural radionuclides. A web link to the final report will be communicated to the group when available.

NAB informed the group that the ERICA project would finish early in 2007. In February there will be an open meeting in Paris (14-15/02/07) during which the projects out comes will be presented to interested parties. In the afternoon of the 15th there will be a 'hands on' session to familiarise people with the ERICA Tool. For practical reasons numbers for this section will be restricted. If interested in attending please see www.ERICA-project.org. Early registration is advised (the meeting coincides with Valentines Day).

Next working group

Group agreed to hold next meeting in Norway week 25th June 2007. However, due to difficulties encountered whilst trying to make venue arrangements, it has been decided to hold the meeting at IAEA Headquarters in Vienna instead. The meeting (25–27th June 2007) will be followed by a workshop organised by the PROTECT project (28–29th June 2007).

There was also a willingness to meet for *circa* ½ day during the IAEA conference in April to progress scenarios.

ACTIONS AND AGREED TIMETABLES

Action	Responsible	Due date	Status (01/12/06)
Exercise 2			
Revise text re comments received & circulate	NAB	17/11/06	Done 16/11
Update tables for known errors (AECL, LIETDOS, FASSET) & circulate	NAB	17/11/06	Done 16/11
Provide reference for zg	JV	12/11/06	Not needed
Check <u>revised</u> tables	All	30/1/07	
Comments on revised text [inc. outlier suggestions]	All	30/1/07	
New inputs	GO	30/1/07	Done
Compile revised tables - JV	NAB	15/2/07	
Revise stats	JV	28/2/07	
Revised paper for comment	NAB	15/3/07	
FINAL comments on revised paper	All	30/3/07	
Exercise 2 deadlines depend upon date of submission of manuscripts to April 2007 conference (see above)			

Action	Responsible	Due date	Status (01/12/06)
<i>Perch Lake Scenario</i>			
Provide output collation for checking	TY	1/01/07	
Check and comment/confirm on outputs collation	All	30/01/07	
Supply RH with geometry for ICRP-salmonid and PL information excel	NAB	30/11/07	Done 28/11/06
Provide RESRAD-Biota Perch Lake predictions to CY for comment	JB/MW	15/3/07	
Input RESRAD predictions to TY	JB/MW	30/3/07	
Provide model descriptions and application to scenario text	All	30/3/07	
Circulate draft paper for discussion	TY lead	1/06/07	
<i>Chernobyl Scenario</i>			
Email NAB re participation in scenario	TN	30/11/07	Done (will participate)
Provide RESRAD-Biota Chernobyl predictions to CY for comment	NAB	15/3/07	
Provide NRPA with appropriate life history information for amphibians, birds and reptile.	NAB	1/02/06	
Provide model descriptions and application to scenario text	All	30/3/07	
Provide scenario results	TY & any others	30/3/07	
Circulate collated results for checking	NAB	15/04/07	
Confirm or correct results	All	30/04/07	
Circulate draft paper for discussion	NAB lead	1/06/07	
<i>BWG Report (TECDOC)</i>			
Introduction	NAB/BJH	1st week June	
Model chapter contributions	All participating models	1st May	
Exercise 1 – review paper	JV	1st week June	
Exercise 2 – review paper	NAB	1st week June	
<i>General</i>			
Send ppt files to CH (IAEA) for website	NAB	1/12/06	
Provide paper on Natura 2000 site assessments	DC	Attached to draft minutes (13/11/06)	Done
Draft paper based on reference organism text	DC	1/06/07	
Provide address of PROTECT project website	NAB	As available	http://www.ceh.ac.uk/PROTECT/
Supply web address for latest update of RESRAD-BIOTA	CY	15/11/06	
Confirm dates for June meeting	JV/BJH/NAB	Request for 1 st Dec 2007 by IAEA	
Draft and circulate April extended abstract [for comment by return]	NAB/BJH	20/11/06	Done 27/11/06 Submitted 1/12/06
Confirm availability for ½ d meeting during April conf. to NAB	All interested	01/01/07	