



Meeting:	Joint Interim Meeting of the IUR Taskforce Radioecology in Arid Environments and MODARIA II Working Group IV subgroup 3 – Transfer Parameters in non-temperate Systems
Meeting Chair:	Mr K. Eleftheriadis, Environmental Radioactivity Laboratory, Institute of Nuclear & Radiological Science & Technology, National Center for Scientific Research "Demokritos" (NCSR)
Date:	Athens 6 – 7 April, 2017
Conference Venue:	NCRS Demokritos, Greece
Minutes prepared by	G. Voigt

Meeting Attendees

IAEA Scientific Secretary

Mr S. Fesenko Department of Nuclear Sciences & Applications
 Terrestrial Environment Laboratory, NAEL
 International Atomic Energy Agency Laboratories

China, People's Republic of

Mr Q. Wu Associated Professor, Department of Physics Engineering
 Tsinghua University

Germany

Ms N. Semioshkina r.e.m. GbR (Radiation Environment Management Consulting)

Austria

Ms G. Voigt r.e.m. GbR (Radiation Environment Management Consulting)

Greece

Ms E. Bairaktari Secretary, Environmental Radioactivity Laboratory
 Institute of Nuclear & Radiological Science & Technology,
 Energy & Safety National Center for Scientific Research "Demokritos" (NCSR)



Mr K. Eleftheriadis Director of Research, Environmental Radioactivity Laboratory
Institute of Nuclear & Radiological Science & Technology
National Center for Scientific Research "Demokritos" (NCSR)

Ms H. Florou Director of Research, Head of Environmental Radioactivity
Laboratory, Institute of Nuclear & Radiological Sciences &
Technology, Energy Safety (INRASTES)
National Center for Scientific Research "Demokritos" (NCSR)

Ms K. Kehagia Greek Atomic Energy Commission (GAEC)

Mr K. Potiriadis Head, Department of Environmental Radioactivity
Division of Licensing & Inspections
Greek Atomic Energy Commission (GAEC)

Spain

Mr. Danyl Perez Sanches Departamento de Medio Ambiente, CIEMAT



Chair, Konstantinos Eleftheriadis welcomed the participants including Danyl who was connected via Video Conferencing from CIEMAT, Spain. Unfortunately, some participants were not able to come or had to cancel their participation in the last minute. The meeting was mainly addressed to discuss interim results and how to proceed further.

After a short round of introduction of all participants, H. Florou started with the presentations and introduced her ongoing projects specifically those on ecosystem research in her group. Constantinos Potiriadis reflected on the environmental radioactivity laboratory activities and addressed their inspections, monitoring and measurements of NORMs, WBC, chemical analysis and scrap metal analysis. Mr. Wu from China shortly reported on his services for radiation monitoring and radioecological impact assessments of his Department in the Tsinghua University in Beijing. He was already involved into EMRAS and modelling comparisons. K. Eleftheriadis presented results of air born radioactivity, resuspension and dispersion modelling which are important specifically considering arid environments as the important pathways to dose to man via inhalation of radioactive particles originating from sand and particle transport over long distances.

N. Semioshkina and G. Voigt presented the excel sheet templates, and the group discussed in detail about the structure of the data bank. Over 200 publications in 23 countries with arid climates at present had been collated so far.

Members of the group will continue to provide published or unpublished data from their networks and connections.

- Danyl Perez-Sanches will provide radioecological data of Niger collected by AREVA.
- Konstantinos Eleftheriadis will set up a contact to corresponding organisations in Algeria, Morocco and Tunis

The group agreed that the data evaluation (TFs soil-plant, plant-animals) should reflect the recommended **TRS 1616 classification** so that values can be directly compared:

1. No laboratory experiments but only field experiments
2. Field experiments under normal agricultural conditions (i.e. fertilizing, irrigation)
3. Conversion factors dry ↔ wet
4. 4 Soil type classes
5. 8 Vegetation classes.

For the quality assurance and control the group agreed on the following factors to be taken into account as measure:



-
1. Intercomparison studies conducted e.g. ALMERA or similar – 1 point
 2. Sampling strategy and protocols (systematic sampling) available – 1 point
 3. Data evaluation and statistics provided – 1 point
 4. Equipment and metrology clearly described – 1 point

With this a maximum of 4 points will reflect High Quality data.

All data will be analysed accordingly to deduce transfer parameters and made available for the IAEA data base. Transfer to fruit and to other products (plant and animals) will be treated separately in the IUR taskforce data bank taking into account the TRS 1616 considerations. The transfer factors obtained can be directly used for comparison studies as presented by S. Fesenko, who demonstrated first results with significantly higher TFs Cs-137/Sr-90 in tropical environments, compared to tendentially lower TFs in subtropical environments.

K. Kehagia presented the results of U-238/U-234 and Ra measurements in seawater, surface river water and freshwater from her monitoring studies. H. Florou presented her latest results on concentration ratios in natural biota and her comparisons of natural reference organisms with model comparisons using the ERICA tool. N. Semioshkina presented the r.e.m. report on consumption habits and agricultural practices in Arab countries. It was agreed that a chapter on identification of relevant critical groups and pathways should be included. The draft report will be circulated for comments and additions to the IUR/MODARIA II subgroup members.

The IUR/MODARIA II group again confirmed their intention to publish a special issue of JER and an IUR report. Next meeting is foreseen in October/November in Vienna during MODARIA II. The meeting was concluded with a visit at the Environmental Radioactivity Dept of the Greek Atomic Energy Commission, the Environmental Radioactivity laboratory of DEMOKRITOS including their Air sampling and Aerosol microphysics station run at the site part of the Global Atmosphere Watch and Ro5 networks.

