

# EMRAS II

## WG 5:

# Radionuclide Transfer to Wildlife

# Activities

- Key output TRS on transfer to wildlife
  - Core ‘drafting group’
- Interact with WG:
  - Data input
  - Peer review
- On-line database – all contributions acknowledged in TRS
- Three workshops in 2009 to discuss/input novel data
- Publication in Radiation Environ Biophys

TRS:

# RADIONUCLIDE TRANSFER TO WILDLIFE

EMRAS II Jan 2010



Centre for  
Ecology & Hydrology

NATURAL ENVIRONMENT RESEARCH COUNCIL

# Timetable

- Database website launched
- May –workshop – aquatic transfer [IAEA Monaco] (linked with ICRP TG meeting)
- July - workshop terrestrial transfer & generic approaches [IAEA, Vienna]
- Nov –workshop transfer and core group meeting [CNSC, Ottawa]
- EMRAS II –draft for peer review by WG5

# Objectives

*Provide IAEA Member States with data for use in the radiological assessment of wildlife as a consequence of routine discharges of radionuclides to the environment and existing contamination situations. Application to accidental release is also considered.*

# CONTENTS [*DRAFT*]

## **1. INTRODUCTION**

*BACKGROUND*

*OBJECTIVES*

*SCOPE*

*STRUCTURE*

## **2. DEFINITIONS AND UNITS**

*DEFINITIONS*

### 3. CONCEPTS AND QUANTIFICATION

*TRANSFER PROCESSES AND HOW THEY  
ARE MODELLED*

*CURRENT APPROACHES USED IN  
AVAILABLE MODELS*

*'Reference' organisms*

*Equilibrium Concentration Ratios*

## 4. DATA MANIPULATIONS AND EVALUATION

*DESCRIBE DATABASE AND DATA  
MANIPULATIONS NEEDED TO DERIVE  
RELEVANT VALUES FROM THE  
LITERATURE*

*STATISTICAL TREATMENT*

*TERRESTRIAL*

*AQUATIC ECOSYSTEMS*

- Freshwater
- Marine



# 5. TRANSFER VALUES FOR WILDLIFE

*GUIDANCE ON HOW TO USE THE  
VALUES PROVIDED*

*TERRESTRIAL ENVIRONMENTS*

*FRESHWATER ENVIRONMENTS*

*MARINE ENVIRONMENTS*

# 6. APPROACHES FOR FILLING DATA GAPS

*GENERIC APPROACHES*

*BAYESIAN APPROACHES*

*GUIDANCE ON ALTERNATIVE DATA TO  
USE FOR MISSING VALUES*

*REFERENCES*

# Online transfer database

[www.wildlifetransferdatabase.org](http://www.wildlifetransferdatabase.org)

David Copplestone

Principal Scientist – Radioactive  
Substances

EMRAS II Vienna January 2010



# Database purpose

- Collate & summarise transfer data
- Outputs
  - IAEA handbook
  - ICRP transfer task group
- Database will remain available
- Fast, efficient updates

Note: The text explaining the database shall go here and david has to provide that to us.

If you are not registered, [Register Now](#)

If you have forgotten your login details please email us and we will send you a reminder ([Password Reminder](#))

User Name

Password

Login

## Registration form

When you click the "Register Now" button you will be taken back to the login screen where you can enter the username and password that you have just created.

(\*) marked fields are mandatory to fill

**Personal Registration Details**

\* Title  \* First Name  \* Last Name

\* Email Address  Job title

**Corporate Details**

\* Company name  \* Address line 1  Address line 2

\* Town / City  \* Country  Post code

Telephone No.  Website address  Fax No.

\* Create your username

\* Create your password

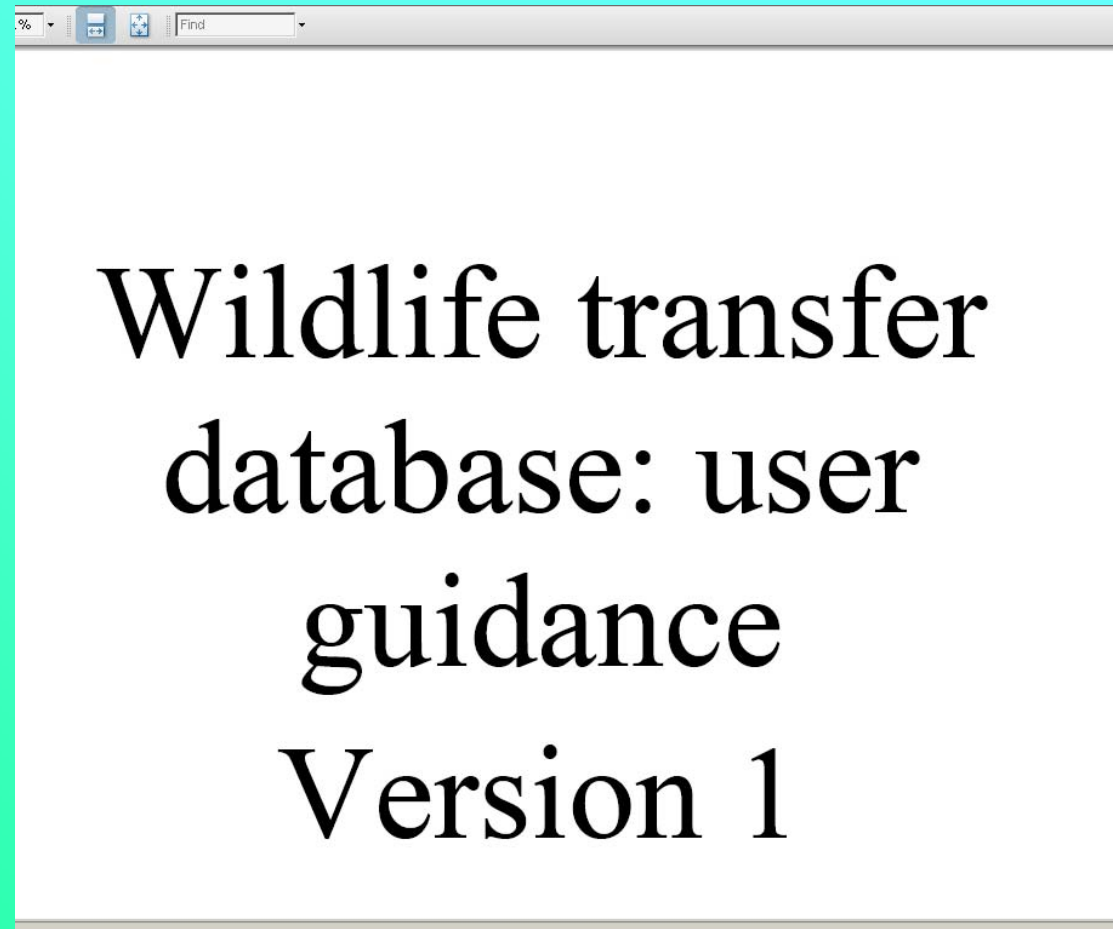
\* Confirm password

How do you intend to use the database?

Register Now! Reset

# Help file

- Guidance
- Background
  - Definitions
  - Data entry method/format
- Hyperlinked
- pdf document
- Download or read online



[Submit paper and any other relevant information to the data input reviewers](#)

Reference ID Number	<input type="text" value="10_91957"/>	Year	<input type="text"/>
Author	<input type="text"/>	Article Title	<input type="text"/>
Publication type	<input type="text" value="Abstract"/>	Location	<input type="text" value="Electronic"/>
Publication title	<input type="text" value="Aquatic Toxicology"/> <small>ADD MORE</small>	Part	<input type="text"/>
Volume	<input type="text"/>	Translation into English available	<input type="text" value="N/A"/>
Page Nos	<input type="text"/>		
Reference Language	<input type="text" value="English"/> <small>ADD MORE</small>		

Please select in order habitat, wildlife group, ICRP RAP and finally, if required, the lifestage box. Following this will ensure the correct lifestage for the ICRP RAP is selected

Habitat	<input type="text" value="Estuarine (terrestrial)"/>	Wildlife Group	<input type="text" value="Amphibian"/>	Species Common	<input type="text" value="Alder"/> <small>ADD MORE</small>	Species Latin	<input type="text" value="Alnus rugosa"/> <small>ADD MORE</small>
ICRP RAP	<input type="text" value="Frog"/>	Studytype	<input type="text" value="Field"/>	Sampling Date	<input type="text"/>		
Lifestage	<input type="text" value="None"/>	Notes	<input type="text"/>	Dynamic Info (e.g. biological (1/2))	<input type="text"/>	Element/Nuclide	<input type="text" value="Ac"/>

Media Type	<input type="text" value="—"/>	Media wetdry	<input type="text"/>	Media conc	<input type="text"/>	Media units	<input type="text" value="Bq/m3"/>
N for media	<input type="text"/>	SD for media	<input type="text"/>				

Tissue type	<input type="text" value="Wholebody"/>	Status of biota	<input type="text" value="Wet"/>	Biota conc	<input type="text"/>	Biota units	<input type="text" value="Bq/m3"/>
N for biota	<input type="text"/>	SD for biota	<input type="text"/>				

Concentration Ratio	<input type="text"/>	N of CR	<input type="text"/>	SD of CR	<input type="text"/>
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# This week

- Sessions
  - Monday afternoon
    - Handbook briefing
    - Database inputs – CR and conversion data
  - Thursday
    - Science presentations
    - Handbook discussion
    - New wiki on rad prot of the environment
    - Future actions

Radiological protection of the environment - sharing knowledge - Radiological protection of the - Windows Internet Explorer

http://wiki.ceh.ac.uk/display/rpmain/Radiological+protection+of+the+environment+--+sharing+knowledge;jsessionid=089C8FDA7

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Radiological protection of the envir...

Dashboard > Radiological protection of the environment - Sharing Knowledge

Radiological protection of the environment - sharing knowledge

## Radiological protection of the environment - sharing knowledge

Tools

1 Added by [Sabera Patel](#), last edited by [Nicholas Beresford](#) on Jan 23, 2010 ([view change](#))

### Table of Contents

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### Introduction

It is now generally accepted that there is a need to explicitly demonstrate that the environment is protected from authorised discharges of radioactive substances. In response a number of assessment tools (models) have been developed. As the need for environmental assessment increases there is a requirement to ensure that regulators, industry and their representatives are: conversant with assessment objectives; know how to use available tool; can interpret the results; understand the implications of how the tools are used.

The [Natural Environment Research Council](#) has provide funding, under the *Knowledge Exchange* programme, to develop training packages (including on-line training materials) on radiological environmental assessment aimed specifically aimed at regulators and industry and those who may conduct assessment on their behalf. The project is lead by the Centre for Ecology & Hydrology with collaborators from the England & Wales Environment Agency, Institute for Radiological Protection and Nuclear Safety (IRSN) and Westlakes Scientific Consulting. The training programme will be focussed towards the use of the *ERICA Tool* however

### News

Title	Author	Date Posted
<a href="#">This wiki replaces the PROTECT project website</a>	<a href="#">Nicholas Beresford</a>	Jan 22, 2010
<a href="#">First training course dates</a>	<a href="#">Nicholas Beresford</a>	Jan 21, 2010
<a href="#">New version of RESRAD-BIOTA</a>	<a href="#">Nicholas Beresford</a>	Dec 17, 2009

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