Document Preparation Profile (DPP)
Version 4, September 2011

1. IDENTIFICATION

Document Category  Safety Guide
Working ID:       DS421
Proposed Title:  Protection of the public against indoor exposure to natural sources of radiation
Proposed Action: new document – revision of earlier DPP following decision by RASSC and WASSC to change the scope of document

Review Committees: RASSC
Technical Officer(s): Trevor Boal

2. BACKGROUND/RATIONALE

This is a new publication that is included in the long term structure for Safety Guides. There is currently no Safety Guide that provides guidance on protection of the public against indoor exposure to natural sources of radiation in existing exposure situations. The Safety Requirements “Radiation protection and safety of radiation sources: International Basic Safety Standards” (the BSS) includes requirements on government and national authorities in relation to existing exposure situations, including exposure due to natural sources of radiation. Requirement 50 of the BSS states “The government shall provide information on levels of radon indoors and the associated health risks and, if appropriate, shall establish and implement an action plan for controlling exposure due to radon indoors.” Requirement 51 states “The regulatory body or other relevant authority shall establish reference levels for radionuclides in commodities”. Commodities include construction materials. In relation to public exposure, requirement 48 of the BSS requires that “the government and the regulatory body or other relevant authority shall ensure that remedial actions and protective actions are justified and that the protection and safety is optimized”. This Safety Guide will provide guidance on how to implement these requirements and the associated requirements of the BSS.

3. OBJECTIVE

This Safety Guide is intended to provide guidance on the application of the requirements of “Radiation protection and safety of radiation sources: International Basic Safety Standards” for indoor exposure to natural sources of radiation in existing exposure situations, taking into account the recommendations of the ICRP. Guidance is to be provided on the principles of justification and optimization of protection by national authorities when considering the control of natural radiation sources, such as indoor radon and natural radionuclides in building materials.

4. JUSTIFICATION
There is currently no Safety Guide in the Safety Standard Series covering public exposure to natural radiation sources, such as radon indoors and to radionuclides in building materials.

The Safety Guide currently being developed: DS432: Radiation Protection of the Public and the Environment will provide guidance on the following topics in a generic nature: justification in all exposure situations (planned, emergency, existing); optimization of protection in all exposure situations; dose and risk constraints in planned exposure situations at the design and planning stages; role of reference levels in emergency and existing exposure situations; and representative person in all exposure situations.

5. PLACE IN THE OVERALL STRUCTURE OF THE RELEVANT SERIES AND INTERFACES WITH EXISTING AND/OR PLANNED PUBLICATIONS

The proposed Safety Guide interfaces with the following Safety Standards:


DS432: Radiation Protection of the Public and the Environment.

RS-G-1.7: Application of the Concepts of Exclusion, Exemption and Clearance

ICRP Publication 103: The 2007 Recommendations of the International Commission on Radiological Protection

ICRP Publication 82: Protection of the Public in Situations of Prolonged Radiation Exposure

ICRP Publication 65: Protection against Radon-222 at Home and at Work

6. OVERVIEW

The Safety Guide will focus on public exposure in existing exposure situations, dealing with exposure of the public to natural radiation sources, such as radon in dwellings and other buildings of high occupancy factors for members of the public, and exposure to radionuclides of natural origin in building materials.

The Safety Guide will provide detailed guidance on applying the requirements of the BSS, including the development of action plans for controlling public exposure due to radon indoors and from radionuclides in building materials, the provision of information on exposure due to radon and the associated health risks, the collection of data through representative radon surveys, the establishment of reference levels for radon in dwellings and other buildings of high occupancy for members of the public and for building materials, the development of prevention and mitigation measures to control exposure to radon, and to ensure that such measures are justified and optimized, and the development of mechanisms to ensure the effectiveness of the preventive and corrective measures. The Safety Guide will provide specific technical information about radon mapping techniques, public information programmes, measurement techniques, building protocols, and mitigation techniques in Annexes.

A proposed Table of Contents is attached.

The World Health Organization will be invited to cosponsor the Safety Guide.
7. PRODUCTION SCHEDULE: Provisional schedule for preparation of the document, outlining realistic expected dates for:

<table>
<thead>
<tr>
<th>STEP</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP 1: Preparing a DPP</td>
<td>DONE</td>
</tr>
<tr>
<td>STEP 2: Approval of DPP by the Coordination Committee</td>
<td>September 2011</td>
</tr>
<tr>
<td>STEP 3: Approval of DPP by the Safety Standards Committees or the relevant group where appropriate</td>
<td>December 2011</td>
</tr>
<tr>
<td>STEP 4: Approval of DPP by the CSS</td>
<td>March 2012</td>
</tr>
<tr>
<td>STEP 5: Preparing the draft</td>
<td>2006-2011</td>
</tr>
<tr>
<td>STEP 6: Approval of draft by the Coordination Committee</td>
<td>September 2011</td>
</tr>
<tr>
<td>STEP 7: Approval by the Safety Standards Committees for submission to Member States for comments or the relevant group where appropriate</td>
<td>December 2011</td>
</tr>
<tr>
<td>STEP 8: Soliciting comments by Member States</td>
<td>April-July 2012</td>
</tr>
<tr>
<td>STEP 9: Addressing comments by Member States</td>
<td>August 2012</td>
</tr>
<tr>
<td>STEP 10: Approval of the revised draft by the Coordination Committee Review in NS-SSCS</td>
<td>September 2012</td>
</tr>
<tr>
<td>STEP 11: Approval by the Safety Standards Committees for submission to the CSS or the relevant group where appropriate</td>
<td>December 2012</td>
</tr>
<tr>
<td>STEP 12: Endorsement by the CSS</td>
<td>March 2013</td>
</tr>
<tr>
<td>STEP 13: Establishment by the Publications Committee and/or Board of Governors (for SF and SR only))</td>
<td>April 2013</td>
</tr>
<tr>
<td>STEP 14: Target publication date</td>
<td>2013</td>
</tr>
</tbody>
</table>

8. RESOURCES

Estimated resources involved by the Secretariat: 20 person-weeks

Estimated resources by Member States: selected experts for 4 Consultant meetings, review by RASSC, review and comment by Member States.
TABLE OF CONTENTS

1. INTRODUCTION
2. NATIONAL RADON POLICY AND THE ROLE OF THE NATIONAL AUTHORITY
3. CONTROL OF INDOOR EXPOSURE DUE TO RADON AND THORON
4. CONTROL OF INDOOR EXPOSURE DUE TO GAMMA RADIATION

ANNEXES:
   I. SOURCES OF INDOOR RADIATION EXPOSURE
   II. RADON SURVEYS AND MAPPING OF RADON PRONE AREAS
   III. RADON AND THORON MEASUREMENT TECHNIQUES
   IV. RADON PREVENTIVE MEASURES IN NEW DWELLINGS
   V. RADON MITIGATION OF EXISTING DWELLINGS
   VI. RADON AWARENESS PROGRAMMES
   VII. APPLICATION OF THE BUILDING MATERIALS COMPLIANCE ALGORITHMS