

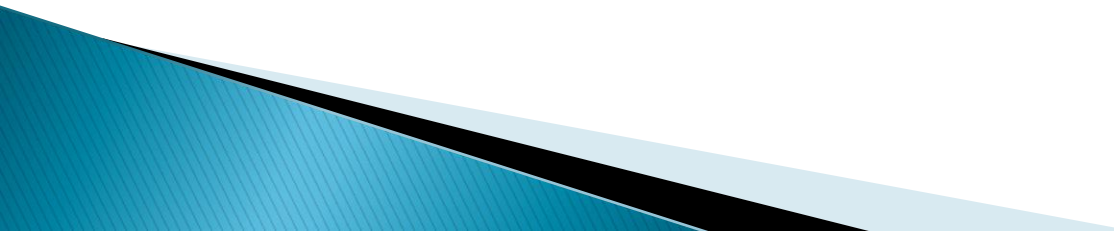
# Protection of the Environment

- ICRP Committee 4 activities
- Personal comments on draft D5b

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# Responsibilities of the ICRP Committees

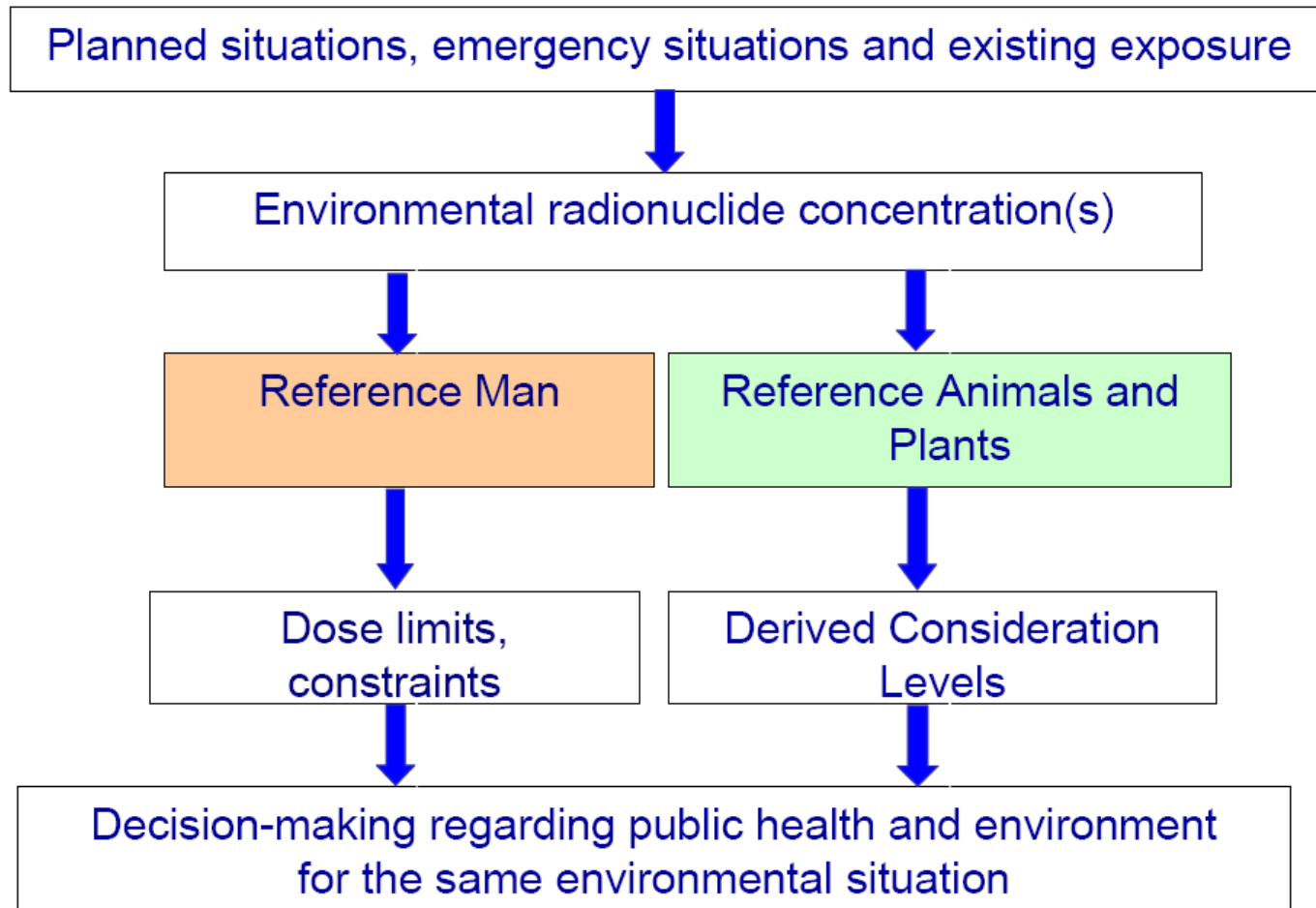
## Main Commission

- ▶ Committee 1: Radiation effects
  - ▶ Committee 2: Doses from radiation exposure
  - ▶ Committee 3: Protection in medicine
  - ▶ Committee 4: Application of Commissions Recommendations
  - ▶ Committee 5: Protection of Environment
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# The role of C4 in the issue of Protection of the Environment

- ▶ Committee 4 is concerned with providing advice on the application of the recommended system of protection
- ▶ The draft RAP report is being edited by C5
  - C4 believes that work is needed in parallel to understand and articulate how RAP tool can be integrated into the practical application of the Commission's recommendations
  - Therefore a C4 Working Party on Releases to the Environment (including one Member of C5) was created at the ICRP meeting in October 2007

# Common approach for protection of human and biota



# Terms of Reference of the WP (1)

To:

- ▶ Investigate the tools developed by Committee 5 for protection of environment in the context of the ICRP system of protection for man by looking at exposure scenarios where man is protected, and seeing what the predicted impact is on flora and fauna, and then comparing to the bands of protection suggested by Committee 5.

The IAEA promised to support the Working Party to facilitate the work

# Co-operation with EMRAS and PROTECT

- ▶ At the EMRAS Biota WG meeting in November 2007 it was decided to start co-operation  
**PROTECT/IAEA EMRAS/ICRP C4**
- ▶ **Two scenarios** have been assessed by D. Copplestone and J. Brown
  - Releases from a new build nuclear power station into the **terrestrial environment**
  - Hypothetical **marine releases** based on peak (1970's) discharges from a regulated nuclear complex

# The ICRP exposure situations

## Planned exposure situation

- ▶ Everyday situations involving the planned operation of sources including
  - decommissioning
  - disposal of radioactive waste
  - rehabilitation of the previously occupied land
- ▶ Practices in operation are planned exposure situations

## Existing exposure situation

- ▶ A situation that already exists when a decision on control has to be taken including
  - natural background radiation
  - residues from past practices that were operated outside the Commission's recommendations
  - long term contamination resulting from an accident

# Terms of Reference of the WP (2)

To:

- ▶ Evaluate **existing ICRP documents** and statements related to discharges and exposure, and provide advice on the **need for new or revised ICRP reports** that will **provide the linkage** between the framework and tools for protection of the environment and the overall system of protection.



# A few personal comments on draft D5b

Comments are from the point of view of  
application/regulator  
– not scientific

# General comments (1)

- ▶ Are “Generic screening levels” and “Regulatory action levels” needed?
  - ICRP 103: (307) “...The Commission does not therefore propose any form of ‘dose limits’ with respect to environmental protection. ...”
  - Draft RAP: (353) “... The Derived Consideration Levels are NOT intended to be regarded as ‘dose limits’ or ‘substitute’ values for them. ...”
    - ...still they will serve like that...
  - Generic screening levels – yes
  - Regulatory action levels – premature

# General comments (2)

- ▶ **Taxonomic** screening levels?
  - Sounds reasonable **but**
  - Why 450  $\mu\text{Gy}/\text{h}$  and not 400 or 500  $\mu\text{Gy}/\text{h}$ ?
- ▶ What is “refined assessment”?
  - More site specific data?
  - Same data but application of 45 times higher screening levels for plants and invertebrates?

# Suggestions for editing 1

- ▶ Page 19: However, as [always] within the ICRP system of radiation protection, any action taken must be justified to *do more good than harm*.
- ▶ Page 33: Can be managed by [ALARA principle] the process of optimisation.
  - No term “ALARA” in ICRP 103
  - In the context of optimisation: “As low as reasonable achievable, taking into account economic and societal factors”

# Suggestions for editing (2)

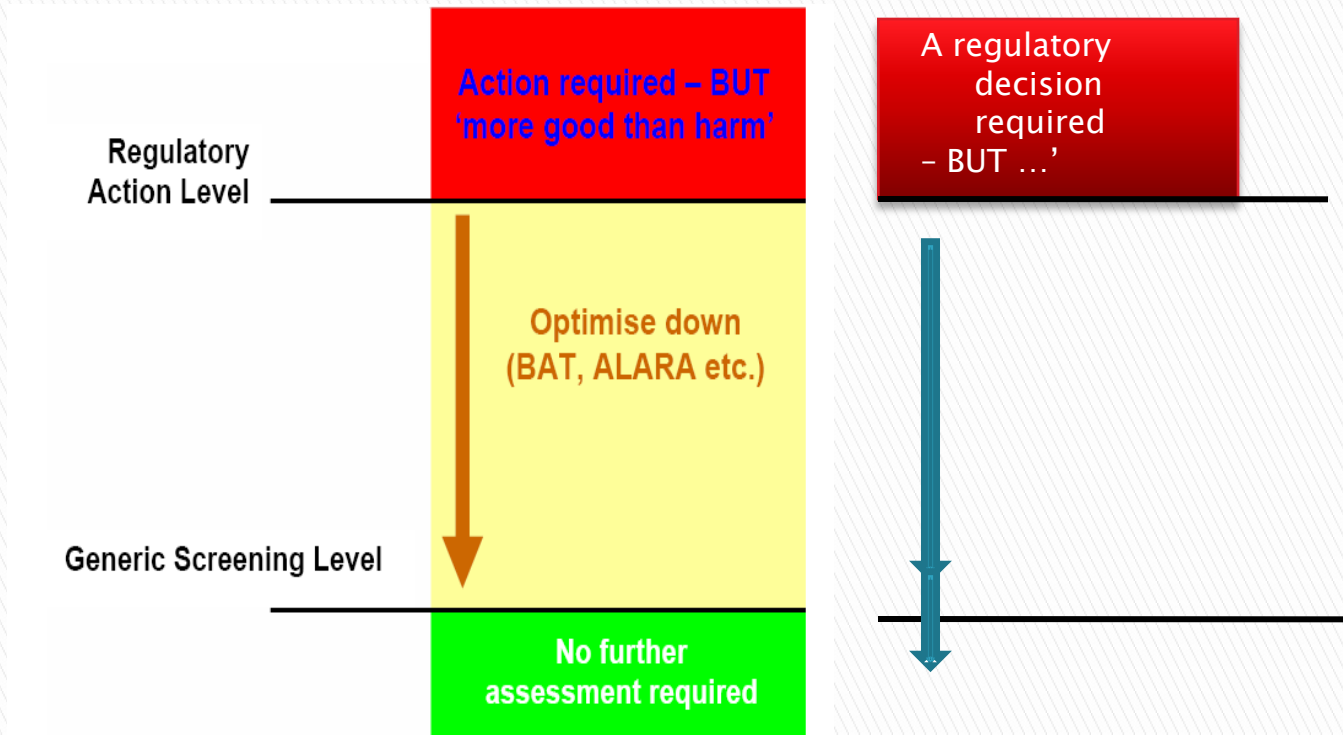


Figure 1. Tiered approach to assessing risks from radionuclides in the environment.