

**Session V: “Challenges of the Nuclear Renaissance:
The Key Role of Nuclear Safety”**

World Nuclear Association (WNA)

**Views on the Evolution of International
Radiation Protection Policies Proposed
by ICRP**

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ICRP Proposed Evolution of International RP Policies

Since 2003, the focal point of the revision of international RP policies has been:

- **An evolving draft proposal by the International Commission on Radiological Protection (ICRP)**

Once this proposal will be finalized (2006-2007), ICRP recommendations generally translate:

- **Into international and national standards that govern industry operations worldwide**

ICRP Proposed Evolution of International RP Policies

ICRP initial genuine overall objective was to simplify and consolidate the current RP system

Its draft proposal (May 2004) has been widely perceived by the stakeholders as bringing in 'Profound Changes' to the current RP system:

- **Towards more stringency and a weaker scientific rationale**

The Most Fundamental of ICRP's Profound Changes

- 1. More restrictive “Maximum Dose Constraints” - to control radiation exposures - are introduced**
- 2. The RP system would become based on natural background radiation (without radon!)**
- 3. Beyond a broad RP policy on animals and plants, subsequent steps (towards new standards) are prematurely introduced**

ICRP Proposed Evolution of International RP Policies

Beyond the 'Profound Changes', there seem to be other key reasons for the overall negative reaction that the ICRP draft proposal provoked

Two of these reasons appears to be that:

- **The general RP context does not warrant such changes**
- **The overall rationale in the ICRP draft proposal is insufficient**

General RP Context that Does Not Warrant the ICRP's Profound Changes: Key Factors

1. There is a widespread recognition of the need for regulatory stability
2. The current RP system is working well for the industry practices
3. ICRP new scientific evidence indicates that the overall risk from exposure to ionizing radiation is actually slightly lower
 - So why a more stringent system of protection?
4. There is a wide agreement that the current RP system has provided an appropriate standard of environmental protection

The Overall Rationale in the ICRP Proposal is Insufficient

Our views are that the current RP system can and should be improved through consolidation and simplification

- **With substantive changes being focused to correct specifically identified shortcomings and weaknesses**
- **With explanations on how these changes specifically help**

It is precisely this overall rationale that is insufficient in the ICRP proposal

ICRP later published 5 draft foundations documents to try to address this key issue but these fall short of bringing explanations that would allow to modify our position

The Overall Rationale in the ICRP Proposal is Insufficient

For a careful and smooth evolution, it is essential that any proposed changes do not unnecessarily disturb the RP system

Continuing to build an international consensus towards an improved draft proposal is also important

Since 2002, WNA has offered its views on the evolving ICRP draft proposal in this context at several key occasions

The WNA RPWG just had a constructive meeting with the ICRP in view of contributing to the on-going ICRP effort and we are committed to continue this important dialogue

The next ICRP draft proposal is expected early (?) next year with a perspective to finalize it in 2007

ICRP's Profound Changes:

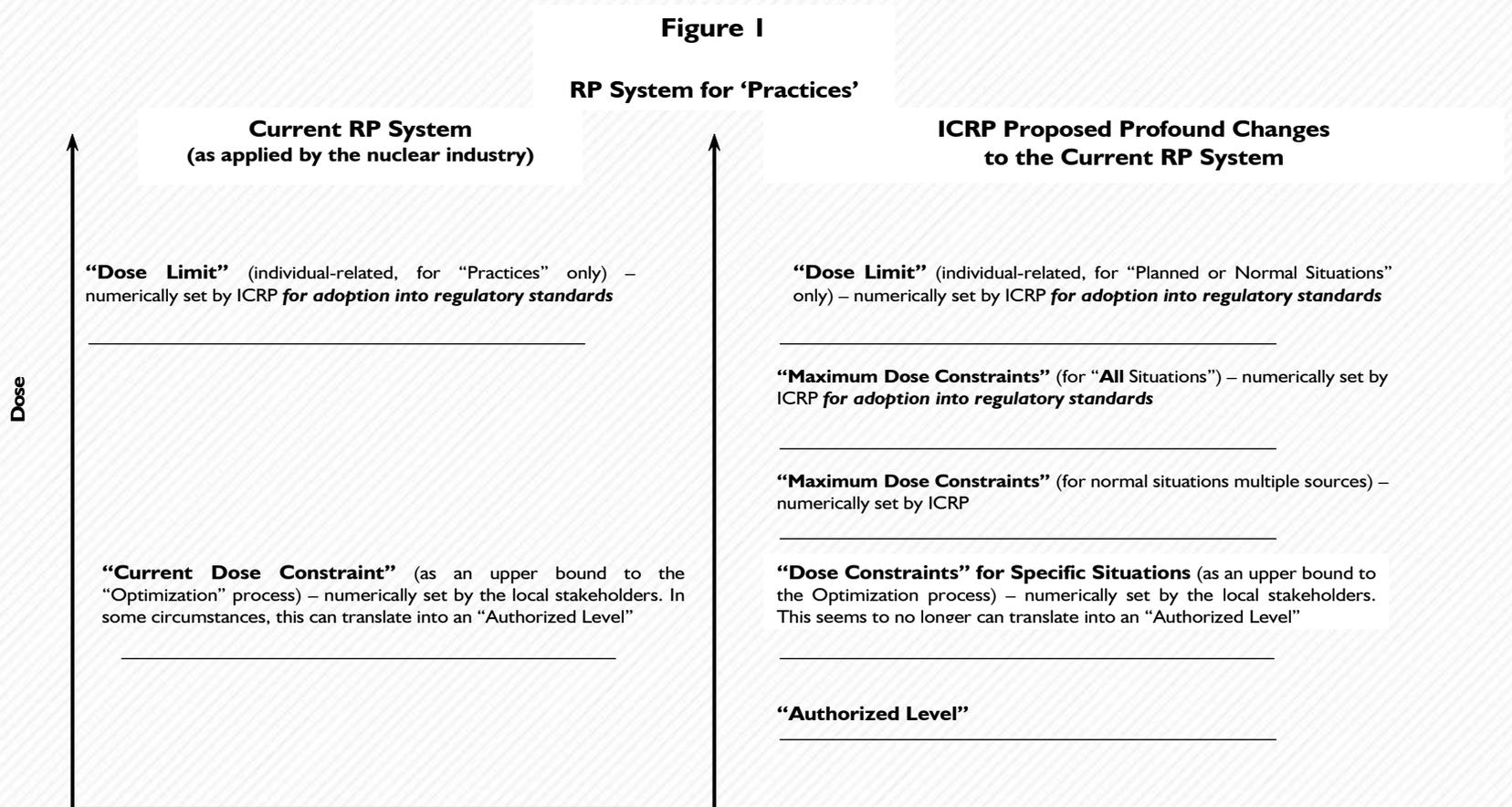
I. More Restrictive “Maximum Dose Constraints”

Maximum dose constraint are given a primary, broader and stricter role than:

- **The current dose limits**
 - **1 mSv/y for the public and 20 mSv/y for workers**
- **The current dose constraints**
 - **Which are currently set by the local stakeholders as an upper bound of the optimization (or ALARA) process**

ICRP's Profound Changes:

I. More Restrictive “Maximum Dose Constraints”



Note - Complementary information to Figure I are included in Annex D.

ICRP Profound Changes:

2. RP System Based on Natural Background (without Radon)

Equivalent to “lowering the bar” of comparison!

- Worldwide, background dose per individual that averages 2-3 mSv/y (range of 1-10 mSv/y) would become 1 mSv/y (range of 0-1.5 mSv/y)

The RP system would no longer be connected to scientific evidence of potential harm on human health

- The current dose limits are based on human health risk which accounts for these scientific evidence – keeping this link is extremely important

ICRP's Profound Changes:

3. Beyond a Broad RP Policies on Animals and Plants

Subsequent steps (toward new standards) are prematurely introduced as an integral part of the RP system: Context

- There is wide agreement that the current RP system has provided an appropriate standard of environmental protection
- However, there is also a wide acknowledgment that the system needs to be further developed for completeness to fill a “conceptual gap”:
 - That is the exposure of animals and plants where human exposure is not the predominant concern
- Modest development that would help dealing with these situations is welcome

ICRP's Profound Changes:

3. Beyond a Broad RP Policies on Animals and Plants

At an early development stage, ICRP prematurely proposed provisions that directly aim at protecting non-human species

- **The key issue is that this points towards new standards that can potential change the control of radioactive discharge**
 - and consequently the level of operations
- **This control is currently based on human protection. Changing it, without sufficiently mature knowledge, can potentially bear huge implications for the nuclear industry**

ICRP's Profound Changes:

3. Beyond a Broad RP Policies on Animals and Plants

The early IAEA leadership on this development has been useful in framing the debate. It led to the common position:

- To first develop an international consensus on a sound international framework for environmental RP
- Then, if necessary, to develop and define the form and content of new or revised proposed standards

This is to be achieved through an IAEA plan (yet to be approved) that set clear direction for future work and the co-ordination of activities

It is understood that ICRP would put forward its development work for deliberation as part of this IAEA process before considering including it

The Worldwide Industry Participation in the Revision of International RP Policies

Taking steps to bring industry views to bear on the course of RP policy is of critical importance for our business and its future

Since 2002, the WNA Working Group on Radiological Protection has played this role at the international level

This industry representation depends on the WG participation of experienced professionals

To maximize our impact, we are continuously seeking to enhance this representation (geographical regions and all nuclear industry sectors)

The Worldwide Industry Participation in the Revision of International RP Policies

Next to the ICRP proposal, IAEA standards are scheduled to be revised

We are very pleased to announce the new WNA participation status on the IAEA committees developing nuclear safety standards

- **The Nuclear Safety Standard Committee (NUSSC)**
- **The Radiation Safety Standard Committee (RASCC)**
- **The Waste Safety Standard Committee (WASSC)**

This means that through this, the worldwide nuclear industry will have a suitable platform to be involved in the related IAEA deliberations

This becomes increasingly important with the globalization of international standards that goes with the world renaissance of nuclear power



The Worldwide Industry Participation in the Revision of International RP Policies

Our take-home message to you:

- **Make sure that your senior experts bear on this international RP debate and on the development of IAEA nuclear safety standards**
- **We encourage you to ask these experts to join our team of industry excellence in the WNA Working Groups on:**
 - **Radiological Protection**
 - **Waste Management and Decommissioning**

A Few Words About the Risks of Low-Dose

We have developed a well rounded WNA Position Statement on this sensitive topic – I invite you to consult it

- **We appreciate the diversity of views on this sensitive topic and we encourage those that carry these views to make them available to international authoritative bodies**

- UNSCEAR, ICRP, IAEA,...

- **We would like to point out that accounting for the most recent data, international authoritative bodies have not found sufficient evidence to change their position**

- **Understandably, our WNA position is in line with the current position of international authoritative bodies**

A Few Words About the Risks of Low-Dose

Each of us should also bear in mind that:

- **Nuclear operators hold the prime responsibility in the area of protection and nuclear safety, including for exposures to low doses**
- **Well protecting our workers and the public is an important part of our business and of its development over the long-term**

In line with this key responsibility, we are therefore understandably prudent and cautious

While we are open mind about scientific developments and outbreaks, validating these developments is essential, prior to consider smooth changes to our policies