



Challenges to the System of Radiological Protection

The Lessons of Fukushima from an IRPA Perspective

Roger Coates, IRPA Vice President



IRPA and Associated Societies

What is IRPA?

The International Radiation Protection Association

IRPA is an international association of individual RP practitioners joining through national or regional societies.

If you are a member of an Associate Society, you are a member of IRPA.

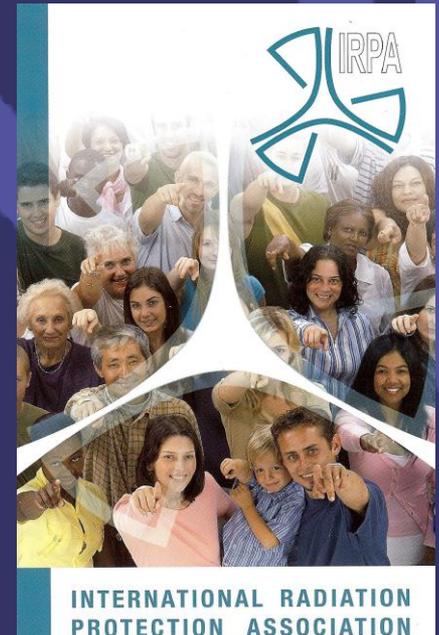


IRPA Update

- 49 Associate Societies
- Representing 62 countries
- Almost 18,000 individual members

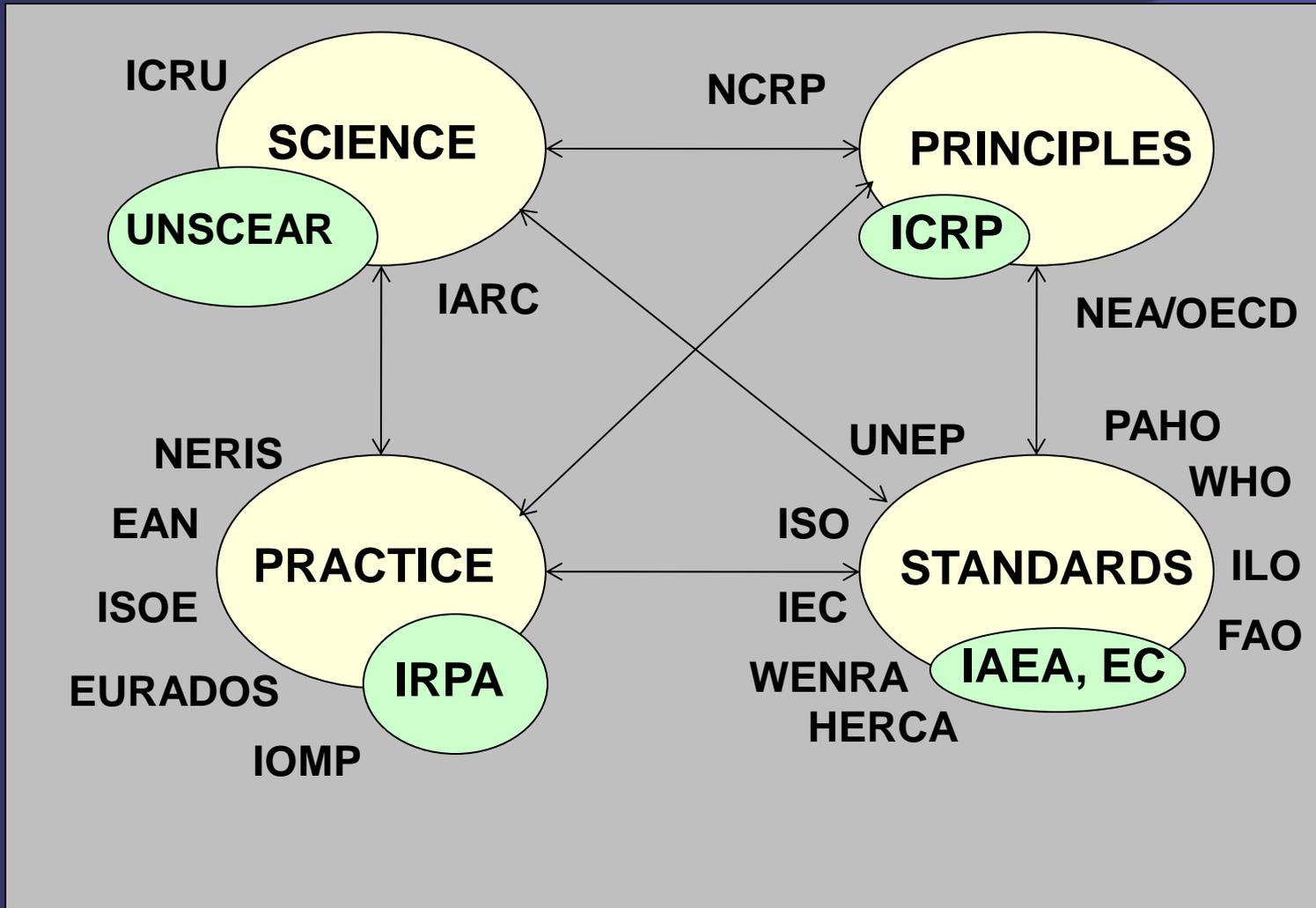
Value and strength of IRPA:

*Enormous resources of **practical knowledge and experience** in radiation protection and related specialist fields*





The Pillars of Radiation Protection





IRPA and Associated Societies

IRPA Vision

IRPA is recognized by its members, stakeholders and the public as the *international voice of the radiation protection profession* in the enhancement of radiation protection culture and practice worldwide.



The Principal Lessons from Fukushima (1)

Issues of a technical nature:

- Severe accident management
- Environmental modelling and integrated assessments
- Emergency Planning and Preparedness
- Dose Assessment and Dose Quantities
- Waste Management and Contamination
- Import controls
- Etc

In the main, resolution of such issues should be led by government, regulators, industry and expert advisers, but with input from the wider RP community and stakeholders.



The Principal Lessons from Fukushima (2)

Other more fundamental issues:

- **Structure of the System of Protection**
 - Is it too complex?
 - Is it adequately underpinned – social values & ethics etc?
- **Ease of communication of our System**
 - Can we explain it adequately to non-specialists? Does it seem believable?
- **Public understanding generally**
 - Are we putting enough effort into engaging with our stakeholders (including 'the public')?

All these issues interact!



IRPA's Key Role

These 3 fundamental issues must be IRPA's focus:

- A simpler system of protection, underpinned with clear societal values, with more emphasis on public understanding
- We must bring the experiences of 18,000 practitioners to bear on this challenge.

Front line practitioners must be involved:

- We have first hand experience of the challenges
- We will have to implement whatever changes are made
- We will inevitably be in the communication front line



Illustration of the Challenge - Public Exposure

- **Limit** - 1 mSv/y
 'Limit' is often understood to delineate 'safe' from 'danger'
- However, everyone gets at least ~ 3 mSv/y from natural background – without being thought of as 'dangerous':
 - many get up to 10 mSv/y and more
- But 'activities' are only allowed 0.3 mSv/y
- And some 'activities' only get 0.01 mSv/y!
- But when the going gets tough, then 20 mSv/y is 'OK'!

**How do we explain
this easily and credibly?? !!**





The Way Forward ??

Don't know the answer, but at least we now recognise that we have to look for it!

IRPA stands willing to help bring the experiences and wisdom of 18,000 RP practitioners to bear on this challenge.

The 'normal' international RP community comprises senior governmental officials, regulators and specialized RP advisers:

- involving the practitioners can add a different dimension.



IRPA's Key Challenge

IRPA Vision

IRPA is recognized by its members, stakeholders and the public as the *international voice of the radiation protection profession* in the enhancement of radiation protection culture and practice worldwide.

The Principal IRPA Challenge: Making this Vision a reality



The international voice of the RP profession

- This needs improved and intensive links between IRPA, Associate Societies and individual members
- How do we identify the *issues*?
 - Scan the international horizon
 - Feedback from practitioners
- Co-ordinate through a new IRPA Committee
 - The RP Strategy and Practice Committee
 - Specific issues dealt with through specific Task Groups



But we acknowledge the need to be quick and responsive, and work as a team



An Example: Eye Lens Dose Limit



The BSS process which introduced a new eye lens dose limit was perhaps rushed?

- Were the implications for application properly considered?
- Many practitioners are concerned at the potential impact.

Hence IRPA established a **Task Group**

- A report has been produced on the principal issues faced by practitioners regarding the implementation of the new limit.
- IRPA is engaging in the international discussions on the implementation issues.



Ethical Issues in the System of Protection

Cooperation between IRPA and ICRP: Essential engagement and involvement of practitioners

Key Objectives:

- Consolidation and (where possible) simplification of the System of Protection
- Scientific stringency aligned with ethical, social and political values, with cultural alignment
- A better basis for communication of radiation risk, leading to improved public understanding
- **Workshops** *with Associate Societies (Asia, Europe, N America ...)*
- **Sessions** *in Regional and International IRPA Congresses*



Challenge: Public Understanding of RP and Risk

Helping members of the public understand radiation and risk is becoming central to our activities as RP professionals

- but it is a very challenging activity.
- It compliments IRPA's Stakeholder Engagement guidance

IRPA and its Associate Societies are **independent**

– of governments, industries, regulators

and have a high potential to be trusted as a source of information

Public Understanding of RP and Risk (2)

What do Associate Societies do at the moment? Where are the good ideas?

We should share good practice.

Examples:

- Position Papers
- Press releases and media liaison
- Web site information
- Etc
- 'Talking Heads'
- Schools Events
- Talks service
- Public query service



Glasgow 2012 Schools Event



Broader Picture – Radiation Emergencies and the medical community

Fukushima experience:

Lack of basic knowledge of radiation effects within the general medical profession – doctors, nurses, first responders etc



RP Experts and Medical Physicists must help ensure that the wider medical profession is adequately equipped to understand radiation

IRPA and IOMP (International Organisation of Medical Physics) are working together to address this issue.



IRPA's Wider Programme – Embed Effective RP

Radiation Protection Culture

A 3-4 year IRPA work programme is coming towards fruition

- A new **Guidance Document** will shortly be available

OBJECTIVES:

- to foster a belief in the success of cultural approaches,
- to provide guidance to help equip radiation protection professionals to promote a successful RP culture in their organisation and workplace

WHY? Because **embedding RP at a cultural level** within an organization is by far the most effective way of delivering the performance to which we all aspire.

IRPA's Wider Programme – Prepare for the Future

Priorities

- To increase the efforts of IRPA to *support young practitioners and scientists* in their work in radiation protection, in their *education and training*, and in their efforts to become members of the radiation protection community

Glasgow 2012
Young Person's Prize





IRPA and our Associate Societies

We must be **an effective global family of RP Practitioners:**

- Promoting excellence in national and regional associate societies and radiation protection professionals
- Providing support, guidance and benchmarks of good practice
- Enhancing professional competence
- Providing exchange of information and facilitating networking
- Providing the interface and feedback between practitioners and the System of Protection



IRPA and the International RP Community

IRPA invites you to work with us to address these post-Fukushima challenges.

We can provide a platform for wider discussion and enhancing awareness through our International and Regional Congresses:

**14th IRPA International Congress
Cape Town, May 2016**

IRPA's 50th Anniversary!





And at the upcoming Regional Congresses

 **AOCRP-4**
IRPA Regional Congress, The Fourth Asian and Oceanic Congress on Radiation Protection
12-16 May 2014
PWTC, Kuala Lumpur

 **FS** **FOURTH EUROPEAN IRPA CONGRESS**
Radiation Protection Culture - A Global Challenge
June 23-27, 2014 - Geneva, Switzerland

 **4th African Regional IRPA Congress**
13-17 September 2014
Rabat, Morocco
AFRIRPA 4

 **Buenos Aires ARGENTINA**
April 12- 17, 2015
X Latin American Regional IRPA Congress



IRPA & the Future of RP

The challenges are significant

But we have 18,000 helpers!

Lets make the best use of them

