
Contribution of some leading radiation protection societies to the current reflexions on the possible improvement of the ICRP policy system

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Abstract: Professor Roger Clarke, Chairman of the International Commission on Radiological Protection (ICRP), published an article entitled "Control of Low Level Radiation Exposure: Time for a Change?", which was a preliminary proposal for the revision of the current system of radiation protection. The progress towards new recommendations from ICRP and the Roger Clarke's article was the subject of an international debate which has been held during the Hiroshima IRPA 10 Congress in May 2000.

1. INTRODUCTION

In the autumn 1999 the International Radiation Protection Association (IRPA) invited its member Societies to comment on Professor Roger Clarke's 'Controllable Dose' paper and subsequent article "Control of Low Level Radiation Exposure: Time for a Change?" which was published in the Journal of Radiation Protection Vol. 19 No. 2, 107-225 (1999). It was considered that such a review undertaken by the radiation protection practitioner community would provide a timely stock take of the effectiveness of the current framework for radiological protection, and provide important input to ICRP's early deliberations on new or revised recommendations for the future.

The IRPA 10 Congress held in Hiroshima in May 2000 formed the obvious focus for bringing together the response from the various Societies. Many Societies had formed working groups or undertaken member consultation exercises, in order to develop a view on the Clarke paper. A specific session of the Congress (T-20(1)) was devoted to the progress towards new recommendations from ICRP.

2. SUMMARY OF THE T-20(1) SESSION OF IRPA 10

Pr. Clarke set the scene for the discussions. He clarified that the main objectives of the exercise were to examine possibilities for changes in the philosophy and frame work of the existing system, where particular difficulties arose in understanding, clarity and operational implementation. The main endpoint for this was a system that would be simpler and easier to use, and most importantly one that would achieve greater public understanding and support. He reiterated that this was evolution not revolution and in many ways flowed from qualifications introduced in ICRP 60 and developed in subsequent publications. It was also necessary for changes in emphasis to be made to recognize the shift in societal expectations towards a more equity-based ethical system. Dr. Clarke then set out the key features of his proposed new system, highlighting the areas where he had already responded to comments on his original suggestions.

Following this introduction, presentations were made by the French, German/Swiss, USA, Nordic, South African, UK, Japanese and Spanish societies on the results of their preliminary consultations. A paper was also presented prepared by the CRPPH of OECD/NEA. Responses from the floor included delegates from Australia and New Zealand, Japan, the Netherlands, Hungary and India, and referred to further position papers that had been developed.

Although it was not the intention of the IRPA 10 session to reach any consensus, nonetheless some early common themes emerged from the papers and discussions.

The process and mechanisms for engaging the protection community through IRPA and the societies in the review of new ICRP proposals were universally welcomed and applauded.

The basic principles of justification, optimisation and dose limitation have proved sound. Hence in any ICRP review, it was necessary first to concentrate on rectifying defects or weaknesses in the present system before introducing more radical changes or even a new system of protection. In making such changes it would be important to take account of the benefits and the costs of change.

While the current system for radiation protection may be viewed as complex and difficult to explain to and reconcile with lay audiences, it is important to differentiate between what can sensibly and reasonably be simplified and what is actually a presentational and communications problem. These two require different solutions and the involvement of different mix of experts in researching and developing these solutions.

A unified and fully integrated system for radiation protection while laudable may only seek to further complicate and confuse. It may be necessary to acknowledge that a limited number of activities eg., radiotherapy, while satisfying certain core RP criteria, will be better dealt with by a series of application specific, risk management recommendations and guidelines. The current system allows for differing regimes for different types of exposure situations. These flow directly from the varying risk and exposure management requirements effective in each category of exposure.

As far as possible any RP framework should be robust to thinking on dose-effect relationships. In significant areas of radiation protection practice, the resolution of the LNT debate will not radically alter standards or requirements for protection. It is important to separate out the underpinning science and the associated limitations, and the risk management aims and objectives. This should be first and foremost a framework for responsible risk management and risk control.

In several areas of the present system, eg., justification, optimisation and quantified risk assessment and collective dose, the fundamentals were appropriate, but there is still a lack of clear interpretation as to how they are to be applied in practice, in a manner that is transparent and acceptable to practitioners, workers, and the public. If the framework is considered to be a compendium of indicators and tools, then these need to come with full instructions as to the proper and appropriate use. ICRP could help in this, but it is also a matter for organisations including IRPA, IAEA, and NEA. There is a need too to place RP in the context of other occupational risks.

Other stakeholders including professionals, interest groups and the public, need to be brought into the debate. Professionals are cautioned that they too often assumed knowledge of what concerned and confused the public and other non-specialist groups without checking these assumptions. The mechanisms for wider consultation and involvement need to be developed and the role of IRPA and societies in these clarified.

It will be necessary to address in its own right protection of the environment, including biota, in the new system but much work needs to be done before this can be achieved. Important lessons can be learnt from other areas eg., chemicals, where protection of the environment is further developed than for radiations.

Great care is necessary with language, terminology and concepts, especially in not introducing new definitions unless they are absolutely necessary. Allied to this, is the need for early commitment to an effective communications strategy with both the RP community and other stakeholders with the aim of achieving widescale engagement in and ownership of the evolving protection framework.

More thinking and development are needed on the way in which quantities such as collective dose, "trivial" dose and concepts such as referencing dose/exposures to background levels, action levels and ALARA/ALARP are to be understood and used in the new system. In particular, the logic and

mechanisms for wholesale abandonment of collective dose, for pre-setting a trivial dose level and replacing dose limits with action and investigation levels, are not apparent.

Whatever revisions to the current system are proposed, these should be carefully “road tested” for their application before being firmly adopted.

The continued involvement of the RP practitioners in the development of ICRP thinking is strongly advocated, and the next version of the proposals is eagerly awaited.

The debate is still in progress. He contributes to further developments in the thinking of Professor Clarke and in the evolution of the “new” philosophy.
