

STATEMENT FROM THE 1989 PARIS MEETING OF THE INTERNATIONAL COMMISSION ON RADIOLOGICAL PROTECTION

Composition of the Main Commission

The Main Commission met from April 17-21, 1989. A new Commission was appointed to serve during the period 1989-1993 with the following membership.

D. Beninson (Chairman)	J. Liniecki
H. Jammet (Vice-chairman)	C. B. Meinhold
R. H. Clarke	F. Mettler
H. J. Dunster	I. Shigematsu
A. K. Gouskova	G. Silini
W. Jacobi	W. K. Sinclair
D. Li	

The Executive Committee of the International Society of Radiology will be informed of these changes.

The first meeting of the new Commission and its Committees will take place in Oxford from October 2-12, 1989.

A Progress Report on the Preparation of New Recommendations

A draft text of the new basic recommendations was discussed and a basis provided for the Commission's Task Group to use in the preparation of a new draft for submission to the new Commission in October 1989. The new draft is expected to have the following general form.

Chapter 1. Introduction

Chapter 1 deals with the history of the Commission and its recommendations. It sets out the aims and form of the report. It indicates why the Commission concerns itself only with the protection of man and only with ionizing radiation. A list of the current Publications of the Commission is given in Annex A.

Chapter 2. Physical Quantities Used in Radiological Protection

Chapter 2 explains in simple terms the principal quantities used in radiological protection. The formal definitions are given in Annex B.

Chapter 3. Biological Aspects of Radiological Protection

Chapter 3 provides an introduction to the stochastic and deterministic biological effects of ionization and leads onto a discussion of the problems of establishing a quantitative measure of the detriment associated with an exposure to ionizing radiation. More detailed biological information including radiation risks is provided in Annex C. The use of this information as a basis for radiation protection policy is discussed in Annex D.

Chapter 4. The Conceptual Framework of Radiological Protection

Chapter 4 deals with the general policy of radiological protection. It introduces the idea of source-related and individual-related assessments. It develops the ideas of the justification of the

introduction of a practice; the optimization of protection within a practice; the use of constraints to limit the inequity that may result from unconstrained optimization; and the need for dose limits to protect individuals who may be exposed as a result of more than one practice.

Chapter 5. The System of Protection in Normal Situations

Chapter 5 introduces the way in which the Commission deals with Occupational Exposure (the exposure of people at work), with Medical Exposure (the exposure of people as part of their medical diagnosis or treatment), and with General Exposure (all other exposures to ionizing radiation). It sets out the main structure of the recommended control procedures and, where relevant, sets out the need for constraints, and where necessary, the recommended values of dose limits. The chapter outlines the problems of dealing with sources, such as radon in dwellings, where the controls cannot be applied directly to the source and therefore involve intervention in the environment. It also introduces the problems of dealing with exposures that may, but may well not, occur. The probability of such an occurrence is important as well as the expected magnitude of doses.

Chapter 6. The System of Protection in Emergency Situations

Chapter 6 deals with intervention following accidents and with other transient situations in which there is a need for action.

Chapter 7. Practical Implementation of the Commission's Recommendations for Normal Situations

Chapter 7 starts from the need for practical guidance at the design and operational level and shows how this should link back to the requirements of regulatory authorities and the recommendations of the Commission. It gives advice on monitoring and on possible bases for exemption from regulatory requirements.

Chapter 8. Practical Implementation of the Commission's Recommendations for Emergency Situations

Chapter 8 deals with the practical problems of restricting the doses resulting from accidents and other transient situations in which there is a need for action. It introduces the subject of emergency planning.

Chapter 9. Quick Reference Material

Chapter 9 contains the main recommendations and policy statements of the report, without any details or explanations. It provides cross-references to the earlier chapters.

Outstanding Issues

Several important issues still remain to be decided. Some of these are indicated here.

Detriment

In *ICRP Publication 26*, detriment was used as a measure of the expected harm in an exposed population and its descendants. The complexities of such a concept were explored in *ICRP Publication 45*, *Quantitative Bases for Developing a Unified Index of Harm*. The Commission now sees the need to take into account additional features of the detriment, particularly the long delay between exposure and the expression of the consequences in the individual. The importance of this point will be increased if the Commission uses some form of a multiplicative

risk projection model. The Commission is considering adopting an approach to detriment, which allows probability, severity, and time delay to be taken into account in the optimization of protection and when using detriment in the selection of constraints and dose limits.

Controlled and Uncontrolled Sources

The earlier distinctions between controlled and uncontrolled sources have given rise to some confusion. It is unlikely that this can be completely avoided by changes in the system of protection, but the Commission plans to adopt a system that distinguishes between situations on the basis of the point or points at which control can be exercised. It seems likely that this approach will provide a more logical basis for defining the situations in which dose limits play a role in the system of protection.

Dose Constraints and Limits

In its first progress report, the Commission drew attention to the possibility of using source-related dose constraints to supplement the application of dose limits. This approach looks very promising and is being developed. The Commission has not yet decided on the values of dose limits to be included in the new recommendations. It is engaged in a comprehensive review of the available data.

Effectance

The concept of effectance, previously known as effective dose equivalent, has not been changed. The basic definition of dose equivalent involves the absorbed dose and the quality factor at a point. A quality factor at the point is defined for a spectrum of radiations at that point. The Commission is investigating the advantages of recommending the more general use of defined approximations for the effective quality factor for specified radiations and calling these "radiation weighting factors" to distinguish them from the accurate values of the effective quality factor at a point.

Publication of an ICRP Report

A report entitled "Age-dependent Doses to Members of the Public from Intakes of Radionuclides: Part 1" was approved for publication and will appear in *Annals of the ICRP*. The report considers the following elements: hydrogen, carbon, strontium, zirconium, niobium, ruthenium, iodine, caesium, cerium, plutonium, americium and neptunium.

Paris, April 1989.