

STATEMENT

from

the Consensus Conference on Protection of the Environment

which was part of the Seminar

Radiation Protection in the 21st Century:
Ethical, Philosophical and Environmental Issues

held at

The Norwegian Academy of Science and Letters, Oslo
October 22-25th, 2001

Chaired by

Per Strand and Deborah Oughton

and

arranged, on behalf of Nordic Nuclear Safety Research (NKS), by the Norwegian Radiation Protection Authority and the Agricultural University of Norway in cooperation with the International Union of Radioecology (IUR)

Radiation Protection in the 21st Century: Ethical, Philosophical and Environmental Issues Consensus conference on Protection of the Environment¹

Final Consensus Statement

Introduction

The next decade is likely to bring significant improvement in radiation protection.. A number of international bodies are currently considering the development of systems for protection of the environment from ionising radiation. The nuclear industry, authorities and regulators are faced with increasing challenges on the practical application of policy, notably the need to address more widely such values as transparency and stakeholder involvement.

The conference aims were to provide a forum for discussion of current issues in radiation protection and the environment, an input into international developments related to the protection of the environment, and to encourage wider participation in the debate.

In order to discuss these issues, 45 international experts representing various disciplines including Environmental Science, Health Physics, Radioecology, Ethics and Philosophy convened at the Norwegian Academy of Science and Letters, Oslo, 22-25th October 2001. The participants represented a wide spectrum of perspectives bearing on the question of radiation protection of the environment. Participants met in working groups and *in plenum* to develop the main areas of agreement, which are as follows.

Guiding Principles

Humans are an integral part of the environment, and whilst it can be argued that it is ethically justified to regard human dignity and needs as privileged, it is also necessary to provide adequate protection of the environment.

In addition to science, policy making for environmental protection must include social, philosophical, ethical (including the fair distribution of harms/benefits), political and economic considerations. The development of such policy should be conducted in an open, transparent and participatory manner.

The same general principles for protection of the environment should apply to all contaminants.

Statements

- As part of the effort to revise and simplify the current system of radiological protection for humans, there is a need to address specifically radiological protection of the environment. .
- There are several reasons to protect the environment including ethical values, sustainable development, conservation (species and habitat) and biodiversity.
- Our present level of knowledge should allow the development of a system that can be used to logically and transparently assess protection of the environment using

¹ A seminar arranged by: the Norwegian Radiation Protection Authority, and the Agricultural University of Norway, on behalf of NKS, in cooperation with IUR.

appropriate end points. The development of the system ought to identify knowledge gaps and uncertainties that can be used to direct research to improve the system.

- The best available technology including consideration of economic costs and environmental benefits should be applied to control any release of radionuclides into the environment in a balanced manner with respect to other insults to the environment.
- When a product or activity may cause serious harm to the human population or to the environment, and significant uncertainties exist about the probability of harm, precautionary measures to reduce the potential risk within reasonable cost constraints should be applied. In making such assessments and decisions, an improved mechanism for incorporating developing scientific knowledge needs to be established.
- To assess the impact on the environment there is a need to take into account inter alia radiation type, type of organism, and biological endpoints (impact-related). In order to improve the transparency of assessing environmental impacts, the authoritative bodies should consequently give consideration to the development of quantities and units for biota, with the intent to avoid unnecessary complexity.

Participants giving their consent to the Statement*:

Rudolf Alexakhin
Ingar Amundsen
Peder Anker
Steinar Backe
Ingrid Bay
Torkel Bennerstedt
Richard Bramhall
Francois Brechignac
Anne Brekken
Gordon C. Christensen
David Copplestone
Dagfinn Føllesdal
Riitta Hanninen
Mogens Bagger Hansen
George Hunter
Per Hedemann Jensen
Rick Jones
Karsten Klint Jensen
Carl-Magnus Larsson
Sigurdur Magnusson
Hilary Mobbs
Randall C. Morris
Kenneth Mossman
Deborah Oughton
Jan Pentreath

Lars Persson
Carol Robinson
Jørn Roed
Brit Salbu
Lindis Skipperud
Helge Smidt Olsen
Graham Smith
William Standring
Helene Stensrud
Per Strand
Ulf Tveten
Arnfinn Tønnessen
Jack Valentin
Dennis Woodhead

* The consensus statement reflects the views of the individual participants themselves and not, necessarily, those of the organisations they represent"