

# **The role and activities of the ILO concerning the radiation protection of workers (Ionizing radiation)**

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## **Introduction**

The protection of the worker against sickness, disease and injury arising out of employment is one of the tasks assigned to the ILO in the words of the Preamble of its Constitution. Over the years, the ILO concern for protection of the worker has evolved to assume a broader coverage of the fundamental objectives embodied in the ILO Constitution and the Declaration of Philadelphia. The 1984 International Labour Conference Resolution concerning the improvement of the working conditions and environment, laid down the following principles:

1. work should take place in a safe and healthy working environment;
2. conditions of work should be consistent with workers' well-being and human dignity;
3. work should offer real possibilities for personal achievement, self-fulfilment and service to society.

Based on the above fundamental objectives and principles, the Programme on Safety and Health at Work and the Environment (SafeWork) of the ILO aims to increase the capacity in member States to prevent occupational accidents and work-related diseases and improve the working conditions. In pursuing this aim, SafeWork uses as a means of action the development of international labour standards and the formulation of guidance, the provision of technical advisory services including technical cooperation activities, and the dissemination of information through its publications. In the process, the work of SafeWork promotes productive and remunerative employment in a healthy environment, which is a major contribution to poverty alleviation, worker protection and sustainable development.

The development of international standards in the form of Conventions and Recommendations is one of the main functions of the ILO. These standards, which are adopted by the International Labour Conference, cover labour and social issues. As a package, they constitute the International Labour Code which defines minimum standards in the labour and social fields. Between 1919 and 2008, 188 Conventions and 199 Recommendations were adopted. Close to 50 per cent of these instruments relate directly or indirectly to occupational safety and health. Conventions and Recommendations relevant

to occupational radiation protection are listed in the Annex; among them Convention No. 115 and Recommendation No. 114 deal specifically with the protection of workers against radiation (ionizing).

Conventions are comparable to multilateral international treaties; they are open to ratification by member States and, once ratified, become binding obligations. A government that has ratified a Convention is expected to apply its provisions through legislation or other appropriate means as indicated in the text of the Convention. The government is also required to report regularly on the application of ratified Conventions. The extent of compliance is subject to examination by ILO machinery. Complaints about alleged non-compliance may be made by the governments of other ratifying States or by employers' or workers' organizations, and procedures exist for investigating and acting upon such complaints. Conventions that have not been ratified have the same value as Recommendations.

Recommendations are intended to offer guidelines for action by member States. Often, a particular Recommendation will elaborate upon the provisions of a Convention on the same subject. Member States have certain important procedural obligations in respect of Recommendations - namely, to submit the texts to their legislative bodies, to report on the action resulting therein, and to report occasionally at the request of the Governing Body on the measures taken or envisaged to give effect to the provisions, but no specific substantive obligations are entailed.

ILO standards have exerted considerable influence on the laws and regulations of member States. Many texts have been modelled on the relevant provisions of ILO instruments. Drafts of new legislation or amendments are often prepared with ILO standards in mind so as to ensure compliance with ratified Conventions or to permit the ratification of other Conventions. Trade unions use ILO standards to support arguments in bargaining and in promoting legislation. Governments frequently consult the ILO, both formally and informally, about the compatibility of proposed legislative texts with international labour standards.

Further guidance is provided in codes of practice to be used as reference work by anyone in charge of formulating detailed regulations or responsible for occupational safety and health. They are also drawn up with the objective of providing guidance to those who may be engaged in the framing of occupational safety and health programmes. Codes of practice are adopted by meetings of experts and their publication is approved by the ILO Governing Body. Codes of practice are not intended to replace national laws, regulations or accepted standards. The codes of practice also offer guidelines to employers' and workers' organizations. Their provisions should be read in the context of conditions in the country proposing to use this information and the scale of operation involved. More than twenty codes of practice have been drawn up so far, covering various branches of economic activity or specific risks.

In 1987 the ILO published a code of practice on radiation protection. Subsequently, and with a view to establishing basic requirements for protection against the risks associated with exposure to ionizing radiation and for the safety of radiation sources that may deliver such exposure, six international organizations (FAO, IAEA, ILO, OECD/NEA, PAHO, WHO) jointly developed and co-sponsored the International Basic Safety Standards for Protection against Radiation and for the Safety of Radiation Sources (BSS). These standards were published by the IAEA in 1994 and represent unified requirements and guidance which are common to the six sponsoring organizations.

Dissemination of information is a major means of action of the ILO as regards occupational safety and health. Three major complementary tools should be mentioned: the ILO Encyclopaedia of Occupational Health and Safety, 4th edition, 1998 (4 volumes, some 1,000 authors from 50 countries); the International Occupational Safety and Health Information Centre (CIS); and the International Occupational Safety and Health Hazard Alert System which disseminates rapidly, through a world-wide network, scientific and technical information on newly discovered or suspected occupational health hazards.

The ILO has also a number of other means of disseminating information such as the publication of its Occupational Safety and Health Series and the organization of scientific and technical meetings, congresses or symposia.

Technical cooperation activities to protect the life and health of workers are very wide, ranging from the technical back-stopping of the regional, area and country office and of the technical departments at the headquarters, and the provision of experts to study particular problems or the award of grants for study and further training, to the setting up of occupational safety and health institutes, centres or laboratories, providing the necessary equipment and training of staff.

The objectives of the ILO's programmes of activities in the field of occupational safety and health aim essentially at:

- reducing the number and seriousness of occupational accidents and diseases;
- adapting the working environment, equipment and work process to the physical and mental capacity of the worker;
- enhancing the physical, mental and social well-being of workers in all occupations;
- encouraging national policies and programmes of member States and supplying appropriate assistance.

The objective of the ILO SafeWork programme is to assist countries in designing and implementing national programmes supported by cost-effective measures and activities conducive to a significant reduction in occupational accidents and diseases and adverse effects on the environment.

The protection of the worker against ionizing radiations falls naturally within the scope of ILO's programme of action on occupational safety and health which uses, in a coordinated manner, the various means of action available to the ILO to give governments, employers' and workers' organizations the necessary help in drawing up and implementing programmes for the improvement of working conditions and environment.

### **Review of Past Activities**

Already in 1934, the ILO adopted an international instrument providing that persons sustaining occupational injuries caused by ionizing radiations would receive compensation and Convention No. 121 (1964) concerning benefits in the case of employment injury includes, under its Schedule 1, the compensation of diseases caused by ionizing radiations.

In 1949, the ILO published what is probably one of the first sets of practical international standards on radiation protection which were incorporated into the "Model Code of Safety Regulations for Industrial Establishment". These provisions were revised and considerably extended in 1957 and were incorporated as Part II in the ILO Manual of Industrial Radiation Protection. Other parts of this manual consisted of guides on radiation protection in industrial operations particularly concerning the use of industrial X-ray and gamma-ray radiography and fluoroscopic equipment and the use of luminous compounds.

In June 1960, the International Labour Conference adopted Convention (No. 115) and Recommendation (No. 114) concerning the protection of workers against ionizing radiations. The Convention applies to all activities involving exposure of workers to ionizing radiations in the course of their work and provides that each Member of the ILO who ratifies it shall give effect to its provisions by means of laws or regulations, codes of practice or other appropriate methods. It has been ratified by 48 countries. The Convention and Recommendation lay down basic principles and establish a fundamental framework for radiation protection of workers. They also contain provisions which concern the protective measures to be taken, the monitoring of radiation and the medical supervision of workers (the text of these international instruments is given in Annexes 2 and 3).

The general principles which apply to the protection of workers against ionizing radiation are the following:

- (i) Workers who are neither engaged in radiation work (i.e. who are not exposed to radiation sources which are directly related to their work or required by their work) nor engaged in work activities that involve or may involve exposure to radiations higher than public exposure should receive the same level of protection as if they were members of the public and are subject to the general radiation protection regulatory system which applies to the members of the public; and

(ii) Workers who are engaged in work with radiation sources (radiation workers), the emergency workers involved in a rescue or in a remedial action after a radiological accident and the workers who are engaged in work activity involving exposure or potential exposure higher than public exposure should receive an appropriate level of protection governed by the occupational radiation protection regulatory system. Protection of the public and occupationally exposed workers is an integral part of the radiation protection regulatory system taken as a whole.

Several other international standards adopted by the International Labour Conference are also relevant to the protection of workers against ionizing radiations, notably Convention (No. 139) and Recommendation (No. 147) concerning the prevention and control of occupational hazards caused by carcinogenic substances and agents as well as Convention (No. 148) and Recommendation (No. 156) concerning the protection of workers against occupational hazards due to air pollution, noise and vibration in the working environment.

There are a number of instruments which establish the general framework and institutional arrangements for the protection of workers against occupational hazards in general. These are also relevant to the radiation protection of workers. In particular, there are the Occupational Safety and Health Convention (No. 155) and Recommendation (No. 164) concerning occupational safety and health and the working environment, adopted in 1981 and laying down for the first time at the international level the foundations of a national policy branching out to undertakings, in order to introduce a comprehensive and coherent system of prevention of occupational hazards. Convention (No. 161) and Recommendation (No. 171) concerning occupational health services, adopted in June 1985, provide for the establishment of occupational health services which should progressively be developed for all workers in all branches of economic activities. These instruments cover, in particular, the functions, organization and conditions of operation of such services.

The IAEA and the ILO co-sponsored a manual on radiological safety in uranium and thorium mines and mills, which was published in 1976 by the IAEA to supplement the above-mentioned ILO/IAEA Code of Practice on this matter. The revision of this manual took the form of a guide on monitoring in the mining and milling of radioactive ores published by the IAEA in cooperation with the ILO and WHO. The ILO has published jointly with IAEA a Code of Practice on Radiation Protection in the Mining and Milling of Radioactive Ores which was revised in cooperation with the WHO in 1983, the revised text was published by the IAEA on behalf of the three sponsoring organizations. This publication was updated and published by the IAEA in 2004 as a joint IAEA/ILO Safety Guide.

Together with the IAEA and the WHO, the ILO has taken part in the production of a number of guides published by WHO on radiation protection in hospitals and general practice which is currently being revised. A manual on the medical supervision of radiation workers has been published by the IAEA

under the auspices of the three organizations; its previous revision was carried out by IAEA in cooperation with WHO and ILO, and was published in the form of a training manual on radiation protection for occupational health physicians. This publication is, at present, being reviewed and revised for a possible publication as a Safety Guide. Safety Guides and Safety Practices provide guidance and information on how to implement the requirements.

A publication on mutual emergency assistance for radiation accidents was published by the IAEA in cooperation with FAO, ILO and WHO; it was updated in 1980 with the cooperation of UNDRO. In 1969 a publication on Planning for the Handling of Radiation Accidents (IAEA, ILO, FAO, WHO) was produced and in 1976 a Manual on early medical treatment of possible radiation injury with an appendix on sodium burns was issued.

The IAEA and ILO have jointly prepared many documents. Example of recent joint publications with the IAEA & other international organizations relevant to radiation protection of workers include:

1. Fundamental Safety Principles, 2006
2. Safety Report on Applying Radiation Safety Standards in Radiotherapy, 2006
3. Safety Guide on Occupational Radiation Protection in the Mining and Processing of Raw Materials, 2004
4. Safety Report on Radiation Protection against Radon in Workplaces other than Mines, 2003
5. Preparedness and Response for A Nuclear or Radiological Emergency, Safety Standards Series No. GS-R-2
6. Safety Guide on Building Competence in Radiation Protection and the Safe Use of Radiation Sources, 2001
7. Safety Guide on Occupational Radiation Protection, 1999
8. Safety Guide on Occupational Exposure due to External Sources of Radiation, 1999
9. Safety Guide on Occupational Exposure due to Intakes of Radionuclides, 1999
10. Safety Report on Health Surveillance of Persons Occupationally Exposed to Ionizing Radiation: Guide for Occupational Physicians, 1998
11. International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, 1996
12. Safety Fundamentals: Radiation Protection and the Safety of Radiation Sources, 1996
13. Manual on radiation protection in hospitals and general practice, volumes 1-4, 1977 (updating in process)

The ILO, IAEA and WHO co-sponsored a number of symposia and other meetings. For example, in 1963, a Symposium on Radiation Protection in Mining and Milling of Uranium and Thorium was organized by the ILO and the French Atomic Agency Commission in cooperation with the WHO and the IAEA. In 1983, the ILO co-sponsored a seminar organized in Gabon by IAEA

on the same subject for developing countries in Africa. A joint IAEA/ILO technical advisory mission took place in Niger in 1991. In 1992, the ILO and WHO cooperated with the IAEA in a joint mission to Namibia with the purpose of making an in-depth assessment of radiation protection in uranium mining and milling. The IAEA has cooperated with the ILO in organizing a number of joint international conferences on radiation protection and safety of radioactive sources such as:

- International Conference on Occupational Radiation Protection: Protecting Workers against Exposure to Ionizing Radiation, 26 - 30 August 2002, ILO Headquarters, Geneva, Switzerland
- International Conference on National Infrastructures for Radiation Safety: Towards Effective and Sustainable Systems , 1 - 5 September 2003, Rabat, Morocco
- International Conference on the Safety and Security of Radioactive Sources: Towards a Global System for the Continuous Control over Sources throughout Their Life Cycle, 27 June to 1 July, 2005, Bordeaux, France

The IAEA, WHO, ILO and OECD Nuclear Energy Agency co-sponsored the revision of the 1967 edition of the IAEA Basic Safety Standards for Radiation Protection in the light of the ICRP publication, No. 26, 1977. This revision was carried out by an advisory group of experts, which held three meetings in Vienna in 1977, 1978 and 1980. The revised Basic Safety Standards for Radiation Protection were published in 1982 by the IAEA on behalf of the four sponsoring organizations.

Consequently, the joint IAEA/ILO/WHO/NEA-OECD Basic Safety Standards for Radiation Protection (1982) represent a common basis on which each organization may develop specialized documents according to their own scope of competence and to the specific needs of their member States. Furthermore, for IAEA operations and operations undertaken with the assistance of IAEA, WHO and the ILO, the Basic Safety Standards should be applied in the light of national rules and regulations. The four organizations and ICRP co-sponsored a topical seminar on application of the Dose Limitation Systems for Radiation Protection in 1979.

The ILO prepared a brochure concerning the relevant provisions of the Basic Safety Standards (BSS-1982) in cooperation with IAEA and in consultation with WHO and OECD-NEA. The purpose of this brochure (No. 55 of the ILO Occupational Safety and Health Series) was to present these provisions in simple language, so that it can reach a wide audience and, in particular, all those directly concerned with the protection of workers against ionizing radiations, even if they are not specialists in this field. This publication was submitted as a technical contribution on the BSS by the co-sponsoring organizations at the UN Conference on Peaceful Use of Nuclear Energy which took place in 1986.

A meeting of experts was held in Geneva in September 1986 to revise the ILO Manual of Industrial Radiation Protection. It approved a Code of Practice for

the Radiation Protection of Workers (Ionizing Radiations). The purpose of the Code of Practice is to provide guidance on steps to be taken to ensure effective protection of workers against ionizing radiations in the light of new knowledge of radiation protection. In particular, it provides practical guidance for the implementation of the provisions of the Basic Safety Standards for Radiation Protection (BSS- 1982) at enterprise level.

In 1989, the ILO published guidelines for the radiation protection of workers in industry (ionizing radiations). These guidelines (No. 62 of the Occupational Safety and Health Series) provide technical information on protection against radiation in specific installations and for specific equipment, in order to assist the competent authority, employers, workers and their organizations, as well as all those concerned with the protection of workers against ionizing radiations. They describe the requirements for the control of exposure to radiation of workers engaged in radiation work with external sources and unsealed sources. More recently, the ILO and the IAEA cooperated in the preparation of a draft Safety Guide on Occupational Radiation Protection in the Decommissioning of Nuclear Facilities.

An International Trade Union Consultative Meeting took place in Vienna in April 1989. It was organized at the initiative of the International Confederation of Free Trade Unions (ICFTU) with the IAEA and the participation of the ILO. The meeting called for close cooperation between the ILO and the IAEA with a view to ensuring that trade unions are involved in the development of nuclear safety policy and in the implementation of occupational safety and health standards. Subsequently, the ILO and the IAEA were closely involved in the WANO/ICFTU consultation on Nuclear Safety which was held in Geneva in February 1993.

With a view to promoting the involvement of labour departments in formulating regulations and establishing systems for radiation protection and control of radiation sources at the regional level, the ILO actively participated in an IAEA Regional Seminar on the Establishment of a System for Notification, Registration, Licensing and Control of Radiation Sources which took place in October 1997 in Beijing. Under the invitation of the Chinese Nuclear Safety Authority, the ILO participated in a Chinese national seminar on the preparation of China's National BSS. This shows that the ILO attaches high attention to the promotional activities at national level on the implementation of the BSS and on the cooperation between the nuclear and labour departments as well as the active involvement of workers' and employers' organizations in occupational radiation protection.

There has been a long-standing history on an efficient interagency cooperation on radiation protection which was strengthened by the establishment in 1986 of an Interagency Committee for Nuclear Accident Response (IAC/NR) which was later renamed as the Interagency Committee for the Response to Nuclear Accidents (ICRNA) and by the establishment in 1990 of an Interagency Committee on Radiation Safety (IACRS). ILO participates in both Interagency Committees and took an active part in the UN Task Force on Chernobyl. The Occupational Safety and Health Branch acts



as the ILO focal point for the Emergency Response System established by the IAEA to meet its obligations under the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency. The ILO participated in the Post-Accident Review Meeting (August 1986) and in the International Chernobyl Project; an overview of the project was published in 1991 by IAEA.

The establishment of the IACRS was an important step towards international harmonization of radiation protection and safety. The IACRS was constituted as a forum for consultation on and collaboration in radiation safety matters between international organizations. Within the framework of the IACRS, a Joint Secretariat was established for the preparation of the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources which would supersede the previous basic international standards (BSS, 1982) and reflect knowledge gained subsequently and developments in radiation protection and safety and related fields.

The unprecedented international effort to draft and review the Standards involved hundreds of experts from the member States of the sponsoring organizations and from specialized organizations. The meeting of the Technical Committee that endorsed the Standards in December 1993 was attended by 127 experts from 52 countries and 11 organizations.

These International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources (BSS) which were published in 1994 mark the culmination of efforts that have continued over the past several decades towards the harmonization of radiation protection and safety standards internationally. The Standards are jointly sponsored by the Food and Agriculture Organization (FAO), the International Labour Organization (ILO), the Nuclear Energy Agency of the Organization for Economic Cooperation and Development (OECD/NEA), the Pan American Health Organization (PAHO) and the World Health Organization (the sponsoring organization).

The Standards were based on the assessments of the biological effects of radiation made by the UNSCEAR and on recommendations from the ICRP (publication 60) and the International Nuclear Safety Advisory Group.

The "Safety Fundamentals" publication entitled "Radiation Protection and the Safety of Radiation Sources" was published in 1996 and jointly sponsored by FAO, IAEA, ILO, NEA / OECD, PAHO, and WHO. Its purpose is to define principles whose effective application will ensure appropriate protection and safety in any situation which involves or might involve exposure to radiation. This publication is intended to address not only those who are interested in radiation protection and safety, but also those technical and political decision makers who need to know the basic radiation safety principles but not necessarily the detailed technical provisions of the BSS. The Safety Fundamentals are a top-level publication in the IAEA Safety Series and provides the basis for the requirements in Safety Standards for the control of occupational, public and medical exposures and for the safety of radiation

sources. This publication is a companion document of the BSS which could be useful for governments officials, employers' and workers' organizations who need concise information on the objectives and principles which govern radiation protection and safety. The revision of the "Safety Fundamentals" publications on "Nuclear Safety" and on "Radiation Protection and the Safety of Radiation Sources" has been completed with the participation of several international organizations including the ILO and a single document which is entitled "Fundamental Safety Principles" was published in September 2006. This new document covers the overall field of nuclear safety, radiation safety, transport safety and waste disposal safety. The Fundamental Safety Principles are jointly sponsored with the EURATOM (European Atomic Energy Community), FAO (Food and Agriculture Organization of the United Nations), ILO, IMO (International Maritime Organization), OECD/NEA (Nuclear Energy Agency of the OECD), PAHO (Pan American Health Organization), UNEP (United Nations Environment Programme) and WHO (World Health Organization).

ILO's commitment to international cooperation not only contributed to the effective and efficient use of resources but also resulted both in a wider application of its Radiation Protection Convention, 1960 (No. 115) and in a more influential role of the ILO at the international level in the field of occupational radiation protection. For example the General Conference of the IAEA adopted at its forty-sixth regular session a Resolution concerning Measures to Strengthen International Cooperation in Nuclear, Radiation, Transport and Waste Safety and this Resolution "[r]equests the Director General (of the IAEA) to look into the possibility of the IAEA cooperating with the International Labour Organization and other relevant bodies in formulating and implementing, subject to the availability of resources, an international action plan for occupational radiation protection....." (IAEA General Conference Document GC(46)/RES/9 September 2002). A draft Action Plan for Occupational Radiation Protection prepared by the IAEA in collaboration with the ILO was included in the Report of the IAEA Director General to the 47th IAEA General Conference in 2003 (Annex III: GOV/2003/47-GC(47)/7 ) and the Action Plan was approved by the IAEA General Conference. In this Action Plan, the IAEA commits itself to cooperate with the ILO in the field of occupational radiation protection.

The expectations of the international radiation protection community are high as regards the cooperation on occupational radiation protection between ILO and IAEA. These expectations should be met; it is a matter of credibility as member States and the ILO constituents need harmonized international policy, standards and guidance on occupational radiation protection. It is worth noting that the Action Plan for Occupational Radiation Protection places the ILO Radiation Protection Convention, 1960 (No 115) in focus and places the BSS requirements on occupational exposure within the perspective of the implementation of the Convention's provisions. Because of the co-sponsorship by six organizations (FAO, IAEA, ILO, OECD/NEA, PAHO and WHO) the BSS are regarded as "the" requirements of the UN system concerning radiation protection and a similar remark may now be made as regards the ILO Radiation Protection Convention, 1960 (No. 115).

Over the last few years the IAEA General Conference adopted a number of Resolutions on “Measures to Strengthen International Cooperation in Nuclear, Radiation and Transport Safety and Waste Management”. GC (46)/ RES/9 – 20/9/2002; GC (47)/ RES/ 7 – 19/9/2003; GC (48)/ RES/10 – 24/9/2004. The ILO played an active role in the IAEA endeavors to strengthen international cooperation. The “International Conference on Occupational Radiation Protection: Protecting Workers against Exposure to Ionizing Radiation” took place at ILO Headquarters from 26 to 30 August 2002 and the International Action Plan for Occupational Radiation protection adopted at the IAEA 47th General Conference in 2003 are two good examples. The Action Plan for Occupational Radiation Protection is currently being implemented by the IAEA in collaboration with the ILO with the participation of the IOE and ITUC.

Within the same framework of “Measures to Strengthen International Cooperation in Nuclear, Radiation and Transport Safety and Waste Management”, the IAEA developed an “Action Plan for the Development and Application of IAEA Safety Standards” (GOV/2004/6). This action plan provide a basis for the IAEA to involve the other international organizations including the ILO in the revision of both the “Safety Fundamentals” and the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, 1996 Edition.

### **Current and Future Activities**

The current activities of the ILO are centred on the promotion of the active involvement of employers' and workers' organizations in occupational radiation protection and the implementation of the BSS and the Safety Fundamentals at both international and national levels. At the international level, the ILO is closely associated with the work of IAEA's Radiation Safety Standards Advisory Committee (RASSAC) which is vested with the important mission of reviewing the Agency's Safety Series documents on radiation protection and safety of radiation sources and the Agency's programme of work for the preparation of these documents. Within the framework of the IACRS, the ILO and other member organizations discuss international policies and standards on radiation protection and coordinate among themselves radiation protection activities carried out by individual member organizations.

The ILO has always maintained close links with international scientific communities, in particular with the ICRP, whose work is a primary basis for the development of international standards on radiation. For example, the ILO contributed to the work of the Task Group on Occupational Exposure of the ICRP and participated in the work of the ICRP Committee which reviewed the document. The general principles for the radiation protection of workers prepared by the Task Group lay a foundation for the development of a new Safety Guide on Occupation Radiation Protection.

For the purpose of avoiding duplication of efforts and allowing for an effective use of resources, the ILO has decided to focus its radiation activities on cooperation with the IAEA and other international organizations in the

preparation of a number of publications relevant to radiation protection of workers.

ILO participation in the revision of the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, 1996 was reported to the Governing Body at its 298th Session in March 2007 (GB.298/15/2). The ILO GB nominated the employers' and workers' experts to participate the revision of the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources alongside with the Office.

The Office is a member of the joint secretariat for the revision of the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources (BSS-1996 Edition). The ILO is leading the work on the revision of the chapter on "Occupational Exposure" and hosted a drafting meeting on occupational exposure in Geneva in April 2007 with the participation of the EC, IAEA, OECD/NEA, WHO, IRPA, IOE and ITUC.

### **Main Features of ILO Action**

The protection of workers against ionizing radiations represents a specific aspect of the protection of workers' health which falls within the larger framework of ILO action concerning occupational safety and health and the improvement of the working conditions and environment for all workers. Current ILO activities relevant to the protection of workers against ionizing radiations are of two kinds.

Firstly, a number of ILO activities concern all workers (including radiation workers) such as those relating to the promotion of national policies on occupational safety and health and the development of institutional arrangements for preventive action to protect workers' health.

Secondly, there are activities directly related to the protection of workers against ionizing radiations; examples of past activities on radiation protection of workers which were carried out by the ILO itself and by the ILO in cooperation with IAEA and WHO and other organizations concerned were given above. Such activities will continue and it is expected that the international cooperation in the field of radiation protection of workers will not only be pursued but strengthened.

## **ANNEX**

ILO Conventions and Recommendations Relevant to the Radiation Protection of Workers

Radiation Protection Convention No. 115 and Recommendations No. 114, 1960.

Occupational Cancer Convention No. 139 and Recommendations No. 147, 1974.

Working Environment (air pollution, noise and vibration) Convention No. 148 and Recommendations No. 156, 1977.

Employment Injury Benefit Convention No. 121, 1964, including the list of occupational diseases, as amended in 1980.

List of Occupational Diseases Recommendation, No. 194, 2002

#### ILO Instruments Relevant to Workers' Health in General

Occupational Safety and Health Convention No. 155 and Recommendations No. 164, 1981.

Occupational Health Services Convention No. 161 and Recommendations No. 171, 1985.

#### ILO and IAEA/ILO Publications Relevant to the Protection of Workers against Ionizing Radiations

Radiation protection of workers (ionizing radiations). Geneva, 1987. 71 pp. ISBN 92-2-105996-0. SFR 15. Translation: French, Spanish.

Guidelines for the radiation protection of workers in industry (ionizing radiations) (OSH Series, No. 62). Requirements for control of exposure to radiation of workers engaged in radiation work in specific installations and practices. Geneva, 1989. 36 pp. ISBN 92-2-106442-5. SFR 10.

Radiation protection in the mining and milling of uranium and thorium. 1976. 346 pp. ISBN 92-2-101504-1. SFR 35. Translation: French.

FAO / IAEA / ILO / OECD-NEA / PAHO / WHO: International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, IAEA Safety Series No. 115, Vienna, 1996;

FAO / IAEA / ILO / OECD-NEA / PAHO / WHO: Safety Fundamentals: Radiation Protection and the Safety of Radiation Sources, IAEA Safety Series No. 120, Vienna, 1996.

IAEA/ILO/WHO: Safety Report on Health Surveillance of Persons Occupationally Exposed to Ionizing Radiation: Guide for Occupational Physicians, IAEA Safety Reports Series No. 5, 1998

IAEA/ILO: Safety Guide on Occupational Radiation Protection, Safety Guide, IAEA Safety Standards Series No. RS-G-1.1, 1999

IAEA/ILO: Assessment of Occupational Exposure due to Intakes of Radionuclides, Safety Guide, IAEA Safety Standards Series No. RS-G-1.2, 1999

IAEA/ILO: Assessment of Occupational Safety Guide on Occupational Exposure due to External Sources of Radiation, Safety Guide, IAEA Safety Standards Series No. RS-G-1.3, 1999

IAEA/ILO/PAHO/WHO: Building Competence in Radiation Protection and the Safe Use of Radiation Sources, Safety Guide, IAEA Safety Standards Series No. RS-G-1.4, 2001

FAO/ IAEA/ ILO/ OECD-NEA/ PAHO/ OCHA/ WHO: Preparedness and Response for A Nuclear or Radiological Emergency, Requirements, IAEA Safety Standards Series No. GS-R-2, 2002

IAEA/ILO: Radiation Protection against Radon in Workplaces other than Mines, Safety Report, IAEA Safety Reports Series No. 33, 2003

IAEA/ILO: Occupational Radiation Protection in the Mining and Processing of Raw Materials, Safety Guide, Safety Guide, IAEA Safety Standards Series No. RS-G-1.6, 2004

IAEA/ILO/PAHO/WHO/ESTRO/IOMP: Safety Report on Applying Radiation Safety Standards in Radiotherapy, Safety Report, IAEA Safety Reports Series No. 38, 2006

IAEA/ILO/PAHO/WHO/ESTRO/IOMP: Safety Report on Applying Radiation Safety Standards in Radiotherapy, Safety Report, IAEA Safety Reports Series No. 38, 2006

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