

by
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BUILDING A STRONGER FRAMEWORK OF NUCLEAR LAW

The IAEA's Legislative Assistance Services

From the earliest beginnings of efforts to utilize nuclear energy and ionizing radiation for addressing economic and social needs, governments have recognized that well-structured legal arrangements are essential to adequately protect public health, safety and the environment from the unique risks of these technologies. The basic concept of sovereignty affirms that each nation State must develop its own legislative framework to ensure such regulatory control. This framework will be based on various factors, including the State's legal and cultural traditions, scientific, technical and industrial capacities, and financial and human resources. However, the nature of nuclear energy and ionizing radiation makes a State's internal legal arrangements for controlling such activities a legitimate interest of other States and the international community as a whole. For example, certain nuclear-related activities can pose the risk of transboundary contamination or injury.

The increasingly global nature of nuclear technology raises potential issues of civil liability for injury or damage allegedly caused by actions outside the jurisdiction of the affected State. Recent attention has also focused on the risks that nuclear materials obtained in one State might be used to commit terrorist acts in another State. A State's legislative and regulatory framework is also relevant to its ability to participate in nuclear commerce and to receive

technical cooperation from both commercial and governmental entities. Lack of adequate legal controls on materials or technology that may pose risks of radiological injury could be seen as a reason to withhold transfers or assistance that could result in damage or liability to the provider or to the international community as a whole. Even if a State's legislative framework is well-developed and complete, if it is based on standards or procedures that are inconsistent with those generally recognized in the nuclear energy field, impediments to trade, cooperation or assistance can emerge.

Finally, in light of these interests, a number of international legal instruments have begun to include provisions requiring that States Parties to these treaties or conventions establish a legislative or legal framework to govern a specific activity. Article 7 of the Convention on Nuclear Safety (INFCIRC/449 of 1994) and Article 19 of the Joint Convention on the Safety of Spent Fuel Management and Radioactive Waste Management (INFCIRC/546 of 1997) are examples of such a requirement. For all these reasons, States have increasingly recognized a need to develop or enhance their legislative arrangements concerning their current or planned nuclear activities.

IAEA Legislative Assistance Activities

For many years the IAEA has provided assistance to its Member States, on a voluntary basis, in developing national legislation in the nuclear field.

Beginning in 1997, the Agency has redefined its process of legislative assistance, with a view toward helping Member States develop comprehensive, harmonized and up-to-date systems of nuclear legislation. The IAEA legislative assistance program has evolved to include three primary elements:

- Interaction with individual States entailing a long-term relationship and an ongoing process;

- Interface between legal and technical issues, requiring lawyers and technical experts to interact with each other and to work jointly;

- A multi-means approach to transfer knowledge and know-how through the combination of workshops, training, assistance in drafting legislation, and the development of reference material for the assessment and drafting of national nuclear legislation.

The IAEA General Conference has recognized and supported this approach in recent resolutions (GC(45)/RES/10 of 2001 and GC(46)/RES/9 of 2002.)

A Long-Term Relationship

The IAEA recognizes that the development of adequate nuclear legislation cannot be accomplished overnight. In most countries, the legislative process is a complex and protracted one; one in which many governmental bodies interact to determine and adjust important needs and values, within a State's constitutional framework. Even the most basic legislative enactment can take many months or even years from initial conception to final adoption. Further, effective implementation of nuclear legislation is even more important than merely promulgating a law. Lessons learned during the process must be reflected in a continuing assessment that may lead to adjustments or amendments to the law over time. For that reason, States seeking IAEA legislative assistance are expected to make a commitment to enable their legislative activities to be periodically reviewed and discussed.

The Technical and Legal Interface

A central feature of the IAEA's legislative assistance program is based on the understanding that establishing and maintaining an adequate legal framework for regulatory control of nuclear energy and ionizing radiation must involve the full participation of both technical and legal experts. Legally trained persons, with no understanding of

the special character of nuclear materials and technology or radiation safety, may advocate inappropriate rules or principles derived from other areas of law. Although seemingly convenient and consistent with the overall national legal structure, such approaches may not provide adequate protection for the special risks of nuclear techniques or, conversely, may place inappropriate burdens on the technology. Conversely, in situations where nuclear legislation is developed solely by scientific or technical experts, without legal input, the nuclear law may be impossible to implement effectively or efficiently because it cannot be integrated into the complex web of legal arrangements governing all activities in a State. Therefore, IAEA legislative assistance activities involve technical experts from internal Departments (typically the Departments of Nuclear Safety and Technical Cooperation). Legal experts from the Office of Legal Affairs play a leading role in implementing, developing and monitoring legislative assistance projects. Similarly, States participating in legislative assistance projects are expected to ensure the active involvement of both technical and legal experts.

Workshops and Training

The IAEA has sponsored workshops or seminars in many areas of its responsibility, as a particularly efficient means for communicating to a large audience detailed and complex information. This well-developed approach has also been used for legislative assistance, utilizing two basic types of workshops. The first is a regional workshop dealing with the basic elements of a legal framework for nuclear regulation. Legal and technical experts from inside and outside the Agency make presentations on recent developments in international nuclear law and on key principles and elements of nuclear law and regulation. Case studies involving active participation by workshop attendees are used to show how fundamental principles can be applied in a practical way to situations that could arise in the implementation of national laws and regulations.

A second type of workshop focuses on implementation of nuclear legislation. In addition to presentations by experts and case studies, participants are asked to provide information on the status and possible developments in their national nuclear legislation. These national presentations are important in showing others how issues have been resolved by other States

and in encouraging harmonization of legislation. For States receiving Agency assistance, an updated report is expected on the status of nuclear legislation, including implementation efforts.

Drafting Assistance

Because each State's nuclear law must reflect its own specific legal traditions and conditions, IAEA assistance in drafting legislation begins with preparation of an initial text by experts from the State seeking assistance. It is normally expected that the State will provide the text in a working language, typically English. The Office of Legal Affairs then identifies a recognized expert in nuclear law to review the text, and to provide in consultation with the Office of Legal Affairs detailed comments. The general approach taken by designated experts is to analyze a Draft Law from three perspectives. First, it is assessed in light of basic legislative drafting principles applicable to all laws; namely, whether it is clear, internally consistent, complete, enforceable, well-structured and whether it contains gaps or overlaps in coverage of subjects or confusing assignment of responsibility for implementation, and the like. Second, the review evaluates the extent to which the Draft Law is consistent with accepted international practice regarding the use of nuclear energy or ionizing radiation, primarily as reflected in IAEA standards documents. Although such standards are not mandatory for IAEA Member States (except with regard to Agency-sponsored projects), they are important guidelines for good practice and can also help States harmonize their legal frameworks with those of other States utilizing nuclear materials and technologies. Third, the review assesses the extent to which the Draft Law complies with the terms of international legal instruments in the nuclear field to which the State is a party or might reasonably expect to become a party.

The review provides recommendations and raises issues that legislative drafters or involved agencies might wish to consider in further development of the Draft Law. Following the first review of the text, a number of further assistance activities can be undertaken at the request of the Member State. One typical step is to convene a meeting over several days, usually at IAEA headquarters in Vienna, to discuss the comments on the Draft Law. This meeting will involve both legal and technical experts.

Further steps can involve preparation of a revised Draft Law and further review by an expert in consultation with the Office of Legal Affairs. Meetings can also be arranged between the IAEA and government officials (and, if appropriate, with legislators) in the capital of the assisted State, at appropriate stages in the legislative consideration of a Draft Law. The Agency's fundamental approach at all stages is to provide comments and recommendations on how to achieve a text that best meets international standards and commitments. Actual drafting of language is considered the primary responsibility of State representatives.

In the past five years, drafting assistance of this kind has been provided to more than 50 IAEA Member States in Europe, Africa, Asia and Latin America.

Reference Materials for Nuclear Legislation

An important IAEA activity involves the development of written materials that can be used both in direct assistance activities and by Member States in their own process of legislative development. In recent years the Agency has developed a range of materials covering a number of subjects.

One issue that was considered early in the process of developing IAEA legislative assistance materials was whether it would be practical or useful to develop a model law or statute that Member States could adopt (with appropriate changes reflecting national characteristics) as a basic law for nuclear energy and radiation safety. Following attempts to draft one, it was decided that fundamental differences in the legal, technical, economic, social and political circumstances of different States rendered a model law impractical. Nuclear legislation must fit within the overall body of laws established by a State for the general governance of its society and economy. Adopting a model text, however well-considered, that does not reflect the national situation could create more complications and difficulties than it might resolve. Instead, it was thought preferable to develop generic materials based on fundamental principles and elements that could be included in a State's national legislation in a manner that was sensitive to national needs and conditions.

A primary resource for obtaining a basic understanding of the internationally recognized principles and elements of an adequate legislative and regulatory framework for nuclear activities is the IAEA Safety Standards Series. In a short article it is impossible to describe in detail this wide-ranging set of documents. IAEA documentation has been developed over many years by various advisory committees and approved by either the IAEA Board of Governors (Safety Fundamentals and Requirements) or by the Director General (Safety Guides). However, the most useful of these documents can be mentioned. Of particular significance is IAEA Safety Requirements Document No. GS-R-1 (2000) *Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety*. Section 2.4 sets forth a useful summary listing of elements that should be included in national legislation for the effective control of nuclear activities. In 2002 the Agency issued four important Safety Guides that touch upon elements that should be considered for inclusion in national legislation:

- No. GS-G-1.1 *Organization and Staffing of the Regulatory Body for Nuclear Facilities*
- No. GS-G-1.2 *Review and Assessment of Nuclear Facilities by the Regulatory Body*
- No. GS-G-1.3 *Regulatory Inspection of Nuclear Facilities and Enforcement by the Regulatory Body*
- No. GS-G-1.4 *Documentation for Use in Regulating Nuclear Facilities*

Building on the foundation of the IAEA Standards Series and relevant international conventions, the Agency will publish this year a volume focused particularly on the legal aspects of nuclear energy and ionizing radiation. The *Handbook on Nuclear Law* contains a discussion of the legislative process for developing national nuclear law, and describes the fundamental legal elements in specific subject matter areas (see box, this page). It is expected that the Handbook will be particularly useful for States in the early stages of developing their nuclear legislation or amending their laws.

A final resource for legislative assistance can be found in the national nuclear legislation of States with well-developed legal frameworks. The IAEA Office of Legal Affairs maintains files containing such legislation and can provide copies of relevant laws as an example of how certain States have addressed issues of legislative development. However, as with the concept of a model nuclear law, it is important that the

legislation adopted by other States not be used uncritically or mechanically by legislative drafters in another State. To be effective, nuclear laws must be integrated into the general legal framework of a State. A nuclear law that is simply reproduced from another State's law is unlikely to achieve its objective because it will be difficult or impossible to apply in practice.

Development of Global Nuclear Legislation

Considered in the context of human history, the fifty-odd years in which nuclear technology has emerged make it a young science. The first legal code promulgat

ed by Hammurabi in Babylon dates from the 18th century B.C.E. Thus, in the sweep of four thousand years of legal history, nuclear law is still in its infancy. Nuclear law has basically developed within the separate national legal systems of States utilizing nuclear energy. Although there has been communication and exchange, nuclear law has yet to attain the consistency and harmonization of some other legal fields. International instruments in the nuclear field have begun to adopt requirements that will impose a greater degree of uniformity over certain subjects. However, these requirements must be implemented in national legislation. The IAEA's legislative assistance program, in addition to enabling States to develop legal arrangements to control this young science in a responsible manner, can also assist in the development of a more harmonized and consistent international law of nuclear energy.

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IAEA Handbook on Nuclear Law

The IAEA is publishing a *Handbook on Nuclear Law* which will provide IAEA Member States with a new resource for assessing the adequacy of their national legal frameworks governing the peaceful uses of nuclear energy; and practical guidance for governments in efforts to enhance their laws and regulations, in harmonizing them with internationally recognized standards, and in meeting their obligations under relevant international instruments.

The *Handbook* responds to the growing demand from many national governments for assistance in the development of nuclear legislation and the need to harmonize their own legal and institutional arrangements with international standards. It also presents concise and authoritative instructional materials for teaching professionals (lawyers, scientists, engineers, health and radiation protection workers, government administrators) on the basic elements of a sound framework for managing and regulating nuclear energy.

The *Handbook* is organized into five general parts:

Part I provides a general overview of key concepts in the field: nuclear energy law and the legislative process; the regulatory authority; and the fundamental regulatory activities of licensing, inspection and enforcement.

Part II deals with radiation protection.

Part III covers various subjects arising from nuclear and radiation safety: radiation sources, nuclear installations, emergency preparedness and response, mining and milling, transportation, and waste and spent fuel.

Part IV addresses the topic of nuclear liability and coverage.

Part V moves to non-proliferation and security-related subjects: safeguards, export and import controls, and physical protection.

The *Handbook* also reflects and refers to the extensive range of IAEA Safety Standards covering all fields relevant to peaceful nuclear technology.

The authors of the *Handbook* are Carlton Stoiber, a lawyer with over thirty years' experience in the U.S. government in nuclear non-proliferation, safety and security; Alec Baer, professor of science and engineering at the University of Ottawa and former Chairman of the Board of Governors and the International Nuclear Safety Advisory Group (INSAG); Norbert Pelzer, professor of nuclear law at the University of Goettingen and a recognized expert in nuclear liability; and Wolfram Tonhauser, coordinator of the IAEA's Nuclear Legislative Assistance activities.

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