

# IAEA Technical Cooperation & the NPT

by Paulo M. C. Barretto & Ana María Cetto

*Si vis pacem para pacem*  
*If you want peace prepare for peace.*

This restatement of the old Roman dictum on war formed the basis for the agreement on the world's Nuclear Non-Proliferation Treaty (NPT) in 1968. It is as valid now as it was then.

The NPT rests on three interlinked pillars: cooperation in peaceful uses of nuclear energy, verified nuclear non-proliferation, and nuclear disarmament. This article looks specifically at the first pillar and its linkage with the second one.

## Rights & Obligations

Non-nuclear weapon States are the vast majority of NPT Parties. For them, the Treaty foresees a system of rewards and benefits in return for foregoing any development or possession of nuclear weapons, binding them, as a consequence, to verification of this commitment. The Treaty thus embodies two twin and mutually reinforcing goals: one of promoting the benefits of nuclear energy and the other, of verifying that materials and facilities involved are under control and used only for peaceful purposes.

The right of NPT Parties to have access to information, exchange of equipment and materials is explicitly recognized in Article IV of the Treaty. This Article stipulates that “*all Parties of the Treaty undertake to facilitate ... and have the right to participate in the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in position to do so shall also cooperate in contributing alone or together with other States or inter-regional organizations to the further development of the applications of nuclear energy for peaceful purposes....*” (Emphasis added).

A successful campaign after the 1995 NPT Review Conference increased the NPT membership from 178 to near universality, and today 189 States are Parties to the Treaty. In the same period the IAEA's membership increased from 127 to 138.

Today all IAEA Member States are participating in the Agency's Technical Cooperation Programme (TCP) in var-

ying mixed capacities of donors or recipients. In terms of utilization of nuclear energy and applications, they represent a wide spectrum of interests and needs:

- ❖ Some 28 Member States are developed countries that offer their expertise and knowledge;
- ❖ Twenty-three are among the Least Developed Countries, whose needs relate to the more basic applications in the areas of human health, water management and agriculture;
- ❖ Of the 87 Member States, about 60 have small-to medium-sized infrastructures for nuclear energy;
- ❖ Six to eight are initiating or considering a nuclear power programme and another 17 have operating nuclear power plants.

Hence, the majority of Member States receive support in the form of information, know-how, equipment, materials and assistance in general through this multilateral channel. Further, through the Agency's support, Member States are in a position to cooperate and contribute to the development of peaceful applications of nuclear technology.

## Is the System Working?

How well are countries complying with their NPT obligations when it comes to peaceful nuclear uses? An examination covering the last decade would show that some transfer of technology has taken place through bilateral channels, although in a limited fashion and scale. Some of these bilateral cooperation activities are, in reality, related to commercial contracts. Apart from the IAEA, multilateral cooperation has been insignificant.

Indeed the IAEA, although not referred to in Article IV of the NPT, plays a major role in planning and implementing multilateral cooperation stipulated in the Treaty. It encourages and assists research, development and application of atomic energy; it provides technical advice, training, materials, services and equipment; fosters exchange of scientific and technical information; develops standards and guidelines for the appropriate utilization of nuclear technology and materials, and builds strategic partnerships to increase the leverage of the limited resources available. At all times,

the Agency seeks to support the use of nuclear technology in a way that is safe for humans and the environment. All these activities are related to key statutory functions of the IAEA.

Efforts to assist Member States are impressive. Since its inception in 1957, the Agency has provided direct assistance valued at more than \$1.3 billion to participating Member States, of which over \$600 million has been disbursed in the last 10 years.

The assistance has come from voluntary contributions — which constitute the basis of the IAEA Technical Cooperation Fund (TCF) created as the main financing mechanism. An annual target for TCF contributions is set for two years in advance following consultations with Member States, who are asked to pledge contributions against their share of the target.

It should be noted that the IAEA is the only organization in the entire UN system that has its own resources and a programme for direct support to its Member States. In addition to the Agency's own staff, including both technical experts and project managers, thousands of experts recruited among Member States every year are directly involved in the Agency's technical cooperation projects.

The TCF system worked well until the mid-1980s, when pledges and payments started to decrease, attaining a low of 65% of the target in 1992. This alarming situation has improved since then — in the last three years the rate of attainment averaged 80%, still much below the figure set by the Member States themselves, and in 2004 it increased to 87.6%. The target for 2005 has been set at \$77.5 million, with an expected rate of attainment of 90%.

In addition to TCF contributions, countries can donate extrabudgetary resources for projects that have been approved by the IAEA Board, but cannot be covered by the TCF. In this case the donor country has the right to select the project or projects and countries of interest to them.

The recent trend has been an increase in extrabudgetary resources, which rose to \$11.8 million in 2003. Further, the countries receiving support are steadily increasing their own shares in the form of government cost-sharing, which in 2003 accounted for approximately \$4 million. Additionally playing an important role are “in-kind” contributions of experts and facilities provided by project participants.

These trends are an explicit recognition of the fact that, to the extent that resources permit, the IAEA is fulfilling its mandate to extend the benefits of the nuclear technology to all interested Member States. Hence, at the multilateral level we can say that the system supporting peaceful nuclear uses has satisfactorily worked, with an increasing number of countries benefiting from it.



(Pavitek/IAEA)

Countries increasingly seek IAEA technical assistance for activities related to safety and security of nuclear and radiological materials. The IAEA, for example, supported missions to Georgia to recover and secure radioactive sources.

## Barriers & Benefits

When preparing its programme of technical cooperation, the IAEA does not differentiate between NPT and non-NPT Member States. Projects are assessed exclusively in terms of their technical soundness and practical feasibility, the stated government priorities, the country's own commitment to the project, and the potential benefit for the country.

The situation for extrabudgetary funding used to be different as many important donor countries showed a clear preference for States Parties to the NPT. Being party or non-party to the NPT was indeed an important issue during the 1970s, 1980s, and 1990s before the Treaty reached near universality.

Over the last five to ten years, more controls and barriers have been introduced to the transfer of materials, equipment, information and nuclear technology in general, and in particular for the areas related to nuclear power and its fuel cycle. These controls and barriers have arisen from proliferation concerns and also, more recently, a required higher standard for safety and environmental protection.

The IAEA is increasing its engagement in safeguards and security activities. At the same time, the number of Member States requesting support in the form of technical cooperation continues to rise. These changes combined pose a challenge to the Agency's mission to extend the benefits of nuclear technology to all its interested Member States.

While the Agency's technical cooperation activities are open to all Member States, guidelines state that resources

should be allocated primarily to meet the needs of developing countries. (See IAEA document INFCIRC/267).

Over the years, the Agency's technical cooperation programme has been very sensitive to the changing needs and interests of developing countries. For example, over the past decade there has been a continuous decrease in requests in areas of nuclear power; on the other hand there has been an increase in areas of human health, nuclear safety, nuclear security, environmental protection, physical protection of radiation sources and management of radioactive waste. Sustained efforts in developing countries over the past ten years have been directed at improving safety when it comes to nuclear facilities and radiation sources, and strengthening the legal infrastructure and emergency preparedness.

The IAEA's Department of Technical Cooperation is continuously seeking ways and means to enhance the effectiveness and efficiency of the programme, for example, by creating partnerships with donor organizations to multiply the impact of its projects. This effort was duly commended in the final document of the 2000 NPT Review Conference.

## Risks & Rewards

Mechanisms are in place to ensure that the Agency's technical cooperation activities are not diverted or used for non-peaceful uses.

It should not be forgotten that in 1971, just after the NPT entered into force, the IAEA Board of Governors approved a standard agreement regulating the conditions for the provision of technical assistance. This agreement was revisited in the late 1970s and, after much discussion by the Board, a revised text was approved in February 1979 as the "Revised Guiding Principles and General Operating Rules to Govern the Provision of Technical Assistance by the Agency" (INFCIRC/267). These guiding principles are applicable "to any technical assistance provided by the Agency irrespective of the funds or gifts involved...".

The document contains, in the Annex, the provisions established by the Board in September 1977 for the application of safeguards in relation to granting of technical assistance. This revised text (which became known as the Revised Supplementary Agreement, RSA), requires that Member States requesting assistance should, first, conclude an RSA with the IAEA. This agreement is the country's statement that all activities resulting from the assistance are solely for peaceful purposes and that facilities involved are subject to safeguards. The agreement stipulates that technical cooperation projects to be approved by the Board are subject, if needed, to the safeguards provisions.

The IAEA Departments of Safeguards and Technical Cooperation work together to oversee the application of this provision. Their experts take part in a review proc-

ess that monitors and screens any possibility of misuse of nuclear technologies from the time the project is requested to the stage of final implementation. Based on a thorough review of existing and upcoming IAEA projects, for example, the Deputy Director for Technical Cooperation was able to assure the Board in November 2004 that the 2005-2006 Technical Cooperation Programme "contains no elements of proliferation concerns" relevant to sensitive technologies as specified in the principles and rules governing IAEA technical assistance.

In conclusion, we can say that the IAEA's activities related to Article IV of the NPT cover a wide range; they are diverse in scope yet focused on priority needs of countries. These activities continue to enjoy interest and support from all countries, whatever their involvement in the Agency's Technical Cooperation Programme.



Through the IAEA Technical Cooperation Programme among other channels, the world's civil research reactors using high-enriched uranium are being converted to use fuel that poses lower proliferation concerns.

An effective Agency safeguards system remains the cornerstone of a nuclear non-proliferation regime aimed at stemming the spread of nuclear weapons and moving towards disarmament. At the same time, an effective technical cooperation programme is the complement to this cornerstone, and it needs to be preserved and strengthened to keep the balance foreseen by the NPT. This programme is fundamental and unique to the IAEA in that it seeks to extend the benefits of nuclear technology to all. It is desirable that, at the 2005 NPT Review Conference, the Parties renew their commitment towards these twin and mutually reinforcing goals and fulfill them in the coming years.

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