

Fifty Years of Technical Cooperation



IAEA

Atoms for Peace: The First Half Century

1957–2007

From assistance to cooperation

The International Atomic Energy Agency (IAEA) was established in Vienna in 1957. The Statute of the IAEA, approved by 81 nations, founded the organization on three pillars: nuclear verification; safety and security; and the transfer of technology. Today, these three pillars still remain at the heart of the organization's work. However, the way in which the IAEA carries out this work, particularly with regard to technology transfer, has changed greatly over the years.

When the IAEA opened for business, nuclear science and technology were in their infancy. Many Member States had no nuclear capacity at all. The IAEA's 'technical assistance' programme, as it was then known, was modest. Early projects were small in scale and short lived, focusing mainly on building human capacities and creating institutions and facilities that would support the introduction of nuclear technology in a safe and effective manner.

Today, the picture is more complex. Instead of merely offering assistance, the IAEA focuses on cooperation for sustainable socioeconomic development, building on the skills and infrastructure that Member States have acquired over the past five decades. Member States are full partners in the process, guiding the IAEA's technical cooperation activities, setting national and regional priorities, and offering training opportunities and technical support to the IAEA and to other Member States. Technical cooperation between developing countries is facilitated and supported through regional cooperative agreements. Regional centres of expertise play an important role in sharing the benefits of nuclear science and technology among Member States.

Technical cooperation with the Member States shall increasingly promote tangible socio-economic impact by contributing directly in a cost-effective manner to the achievement of the major sustainable development priorities of each country.

Technical Cooperation Strategy, 1997



First meeting in Vienna of the Board of Governors of the IAEA

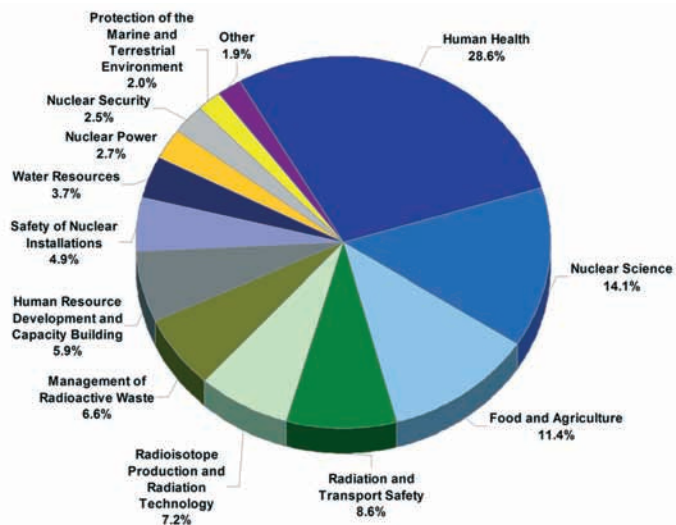
The Technical Cooperation Strategy

The IAEA's technical cooperation activities are guided by the Technical Cooperation Strategy, drawn up in 1997. It was timely. The IAEA had played an important role in transferring isotope and nuclear technologies with applications in industry, human health, agriculture, water management and other sectors. The objectives of these efforts were largely technical, and they played a significant role in establishing and developing technical capacities. The Strategy was drawn up to concentrate more on providing significant socioeconomic benefits. A shift in emphasis was occurring: away from project activities directed at building capacity in nuclear authorities and institutions, and towards collaboration with counterpart organizations to use this capacity for productive and sustainable human development. The Technical Cooperation Strategy introduced three new tools: Model Projects, Country Programme Frameworks and Thematic Plans. Model Projects were designed to set and maintain standards of quality in project design; Country Programme Frameworks focused on agreed priority national development needs; and Thematic Plans concentrated on identifying and promoting nuclear and isotopic techniques that offered clear cost-benefit advantages in achieving sustainable development.

In 2002, the Strategy was reviewed, and six main fields for technical cooperation intervention were identified: human health, agricultural productivity and food security, the management of water resources, environmental protection, the physical and chemical applications of radiation and radioisotopes and sustainable energy development. Model Projects had evolved into a 'central criterion', widely used in the prioritization and selection of projects.

A project meets the central criterion if it addresses an area of real need in which there is a national programme enjoying strong government commitment and support. Over the years, the Country Programme Framework (CPF) also became well established as a programme design and planning tool – in fact today, 82 Member States have signed CPFs, with another 20 at the draft stage.

The six thematic areas identified in the 2002 Review are central to IAEA’s technical cooperation activities, and respond to the development priorities of Member States. Other thematic areas are included in the programme to address evolving global challenges.



Disbursements by Agency Programme for 2006

Human health

IAEA technical cooperation activities in human health include developing and evaluating nutritional interventions to combat malnutrition, assessing the immune responses of individuals infected by various diseases, and monitoring the emergence of drug resistance. Other areas of focus include nuclear medicine and cardiology. The IAEA also provides low and middle-income countries with radiation technology and training to improve cancer management. The IAEA’s Programme of Action for Cancer Therapy (PACT) helps developing countries build sustainable programmes for comprehensive cancer control.



Zambia Radiotherapy Centre

Ms. Mulape Kanduzza

Agricultural productivity and food security

Food security is one of the most challenging development problems. Boosting agricultural production requires enhanced crop varieties, effective pest and disease control, increased soil fertility, better soil and water management and improved food quality and safety. IAEA technical cooperation works with the Food and Agriculture Organization of the United Nations to help farmers to increase and sustain food production, while preserving the environment.



Petr Pavlicek/IAEA

Tsetse fly eradication in Zanzibar has allowed the introduction of cross-breed cattle with a higher milk yield

Management of water resources

Isotope hydrology allows us to identify the characteristics of water, and thereby to determine its source, pathway and rate of recharge. Isotope hydrology helps Member States to understand the water cycle and thus to manage their scarce water resources. Currently, over eighty water projects deal with transboundary aquifers, groundwater and surface water resources in Africa, Asia and the Pacific, Europe and Latin America



Collecting water samples for isotope measurements, Morocco

Radiation technology

Nuclear technology can save lives, protect the environment and advance economic development. The IAEA contributes to supporting national analytical laboratories, and developing capacities to certify and regulate applications in industry, medicine and agriculture that use nuclear science and technology. This is particularly important to developing countries entering the global market. Projects include radiopharmaceutical production, radioanalytical services, industrial methodologies such as non-destructive testing, and environmental applications including flue gas scrubbing and effluent cleanup in industrial installations.



Non-destructive testing, Chad-Cameroon oil pipeline

HYDRAC

Environmental protection

IAEA environmental activities focus on the sustainable use and management of natural resources, and on using nuclear technologies to understand and protect marine and terrestrial environments. By training scientists and sharing expertise, the IAEA helps to monitor pollutants, measure changes and mitigate damage, and assists Member States in managing sensitive areas such as their coastal zones.



Improved wheat variety, Kenya

Peter Njau/KARI

Sustainable energy development

Almost every aspect of development — from poverty reduction to the improvement of health care — requires reliable access to modern energy services. IAEA helps developing countries by providing support to national institutions in comprehensive energy planning. This may also include consideration of the nuclear option. The IAEA offers a broad range of programmes to countries that are interested in making nuclear power part of their sustainable development strategies.



Northern Negros Geothermal Power Plants

Josefino C. Adajar, Philippines
Department of Energy

Safety and security

One of the IAEA's key objectives is to help countries to upgrade their nuclear safety infrastructure and to prepare for and respond to emergencies. Work is keyed to international conventions, standards and guidance, and aims to protect people and the environment from harmful exposure to radiation. Technical cooperation activities focus on building capacities in legislative frameworks, regulatory infrastructure, operational safety, safety assessment, management for safety, safety culture, radiation protection for nuclear and non-nuclear applications, waste management and emergency preparedness and response. Support is delivered through national and regional technical cooperation projects, extrabudgetary nuclear safety programmes and training and fellowships.

Activities in the security area cover nuclear and radioactive materials, as well as nuclear installations. The goal is to help States prevent, detect and respond to terrorist or other malicious acts – such as illegal possession, use, transfer and trafficking – and to protect nuclear installations and transport against sabotage.

Project implementation

The IAEA supports project implementation in several ways, including through the deployment of experts to assist Member States and procurement of equipment. In addition, a range of courses are offered, focusing on the safe and effective use of peaceful applications of nuclear energy and nuclear technology. Training is also delivered through fellowships and scientific visits. In addition, the IAEA organizes regional and inter-regional workshops, and supports national workshops.

Since the start of training courses in 1980, 2220.6 person years of training have been provided to non-local participants. Between 1958 and 2006, an astonishing total of 12 571.4 years of training have been provided to fellows.



Funding and programme management

In the early days of the IAEA, the technical assistance programme financed from the IAEA's own funds was a collection of relatively small, short-term projects; larger multi-year projects were funded by UNDP. Today, voluntary contributions constitute the basis of the IAEA Technical Cooperation Fund (TCF), which is the main financing mechanism for technical cooperation activities. 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. Several mechanisms are used to encourage Member States to pay their dues. These include Due Account, which gives preferential TCF allocations and procurement to Member States with a good record of financial support to the TC programme, and the Rate of Attainment, which measures the percentage of contributions received by the TCF. Countries can also 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 of interest.

In 2006, the target for voluntary contributions to the IAEA's Technical Cooperation Fund was \$77.5 million. The TC programme supported projects involving 3041 expert and lecturer assignments, 3229 meeting and workshop participants, 2477 participants in training courses and 1697 fellows and visiting scientists.

http://www.iaea.org/About/by_the_numbers.html

The development and management of technical cooperation activities are supported by the Programme Cycle Management Framework, or PCMF, operated through a sophisticated web-based application. By streamlining the selection, appraisal and approval of projects, this framework increases a Member State's ability to take ownership and responsibility for the formulation and execution of its programme. Moreover, it allows the Secretariat to support this process interactively and to collaborate in an efficient and transparent manner.

The IAEA today

Today, the IAEA's technical cooperation programme consists of over 1000 projects in 115 Member States. Projects areas range widely, covering nuclear science, radiation and isotope technologies, and nuclear energy. They include the management of groundwater resources, crop improvement, combating the tsetse fly and other pests, treatment of cancer and control of communicable diseases, nutritional intervention, industrial productivity, environmental protection and the use of nuclear power.

Technical cooperation and partnership

The United Nations reform process calls for new approaches to multilateral development cooperation, and in particular a more streamlined international response to current global development issues. Recognising that collaboration with other international organizations forms an increasingly important element in technical cooperation activities, the IAEA is working to develop additional partnerships — international, interregional and regional, nongovernmental and private sector — partnerships that will promote a more strategic and holistic approach to coming development challenges. Science and technology play an important role in promoting sustainable development and in achieving the Millennium Development Goals. The Technical Cooperation programme addresses most of the Goals: combating poverty and hunger; promoting gender equality and empowering women; reducing child mortality; improving maternal health; combating disease; ensuring environmental sustainability; and promoting partnerships between science and development authorities.





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Department of Technical Cooperation
International Atomic Energy Agency
P.O. Box 100, Wagramer Strasse 5
1400 Vienna, Austria
Telephone: (+43-1) 2600-0
Fax: (+43-1) 2600-7
E-mail: Official.Mail@iaea.org