

# Management of Technical Cooperation for Development

**147**  
countries and territories  
receiving support through the  
Agency's technical cooperation programme  
including **35** least developed countries

**220**  
regional and  
interregional  
training courses

## Technical Cooperation Fund

**€86.2 million**  
target for voluntary contributions



**€81 million** received  
94% rate of attainment

**5** imPACT  
review missions

**2081**  
fellows and  
scientific visitors



**3440**  
training course  
participants



**837**

active projects



**689**

projects closed or in  
closure at the end of 2019

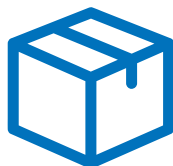


**110**

Country Programme  
Frameworks valid

**2132**

purchase  
orders issued



value of purchase orders issued

**€51.1 million**



# Management of Technical Cooperation for Development

## Objective

To develop and implement a needs based, responsive technical cooperation programme in an effective and efficient manner to strengthen technical capacities of Member States in the peaceful application and safe use of nuclear technologies for sustainable development.

## The Technical Cooperation Programme

### Programme delivery

The technical cooperation programme is the Agency's major vehicle for transferring nuclear technology and building capacity in nuclear applications in Member States. It supports national efforts to achieve development priorities, including Sustainable Development Goal (SDG) targets, and encourages cooperation between Member States and with partners.

The main areas of IAEA technical cooperation in 2019 were health and nutrition, safety and security, and food and agriculture (Fig. 1).

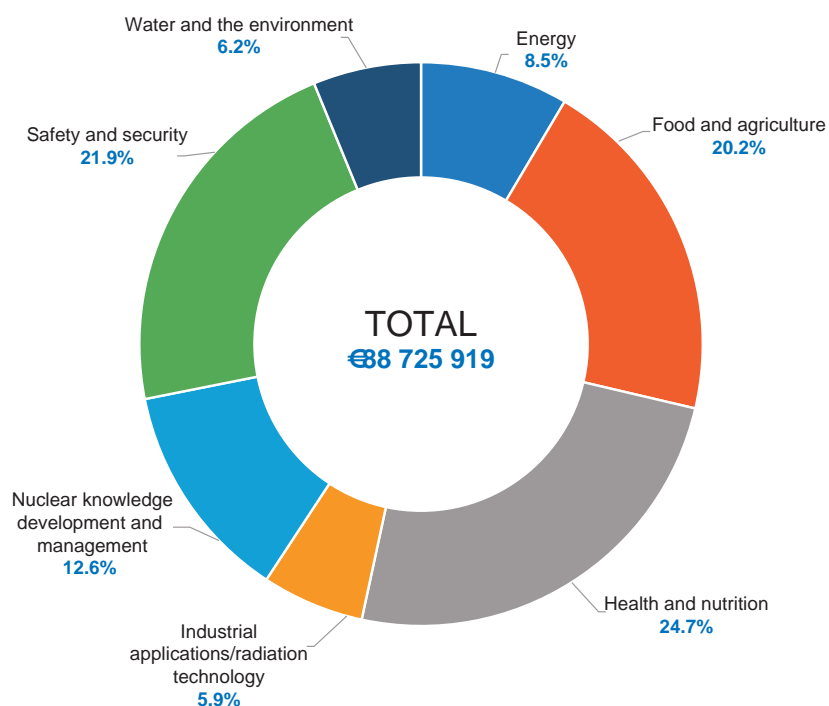


FIG. 1. Technical cooperation programme disbursements (actuals) by technical field for 2019. (Percentages do not add up to 100% owing to rounding.)

## Financial highlights

Payments to the 2019 Technical Cooperation Fund totalled €82 million (including National Participation Costs, assessed programme cost arrears and miscellaneous income), against the target of €86.2 million. The rate of attainment on payments at the end of 2019 reached 94% (Fig. 2). The Technical Cooperation Fund implementation rate was 89.1%.

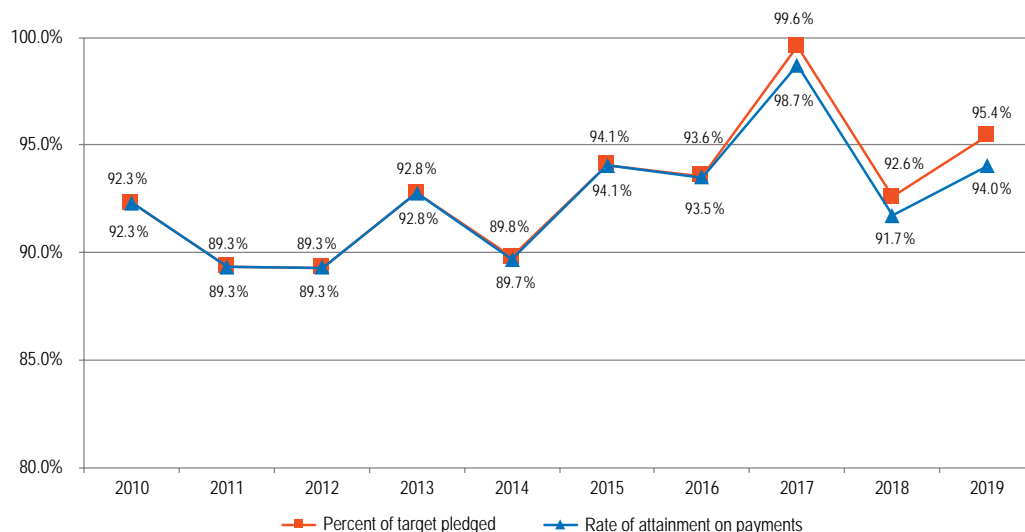


FIG. 2. Trends in the rate of attainment, 2010–2019.

## Country Programme Frameworks and Revised Supplementary Agreements

The number of valid Country Programme Frameworks (CPFs) reached 110 by the end of 2019, an increase of 10%.

Revised Supplementary Agreements Concerning the Provision of Technical Assistance by the International Atomic Energy Agency (RSAs) entered into force for Eritrea, Guyana, Saint Lucia, Saint Vincent and the Grenadines, and Trinidad and Tobago in 2019. The total number of RSAs is now 141.

### 25 CPFs were signed in 2019

Afghanistan	Eritrea	Lithuania	South Africa
Angola	Eswatini	Mozambique	Sri Lanka
Belize	Guyana	Namibia	Syrian Arab
Brazil	Kuwait	North Macedonia	Republic
Cameroon	Latvia	Pakistan	Uganda
Dominica	Liberia	Romania	
El Salvador	Libya	Sierra Leone	

## Regional Cooperative Agreements and Regional Programming

### Africa

The African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (AFRA) celebrated its 30th anniversary in 2019. The agreement has intensified collaboration and South–South cooperation among African Member States supported by the Agency, and advanced the peaceful application of nuclear science and technology on the continent.

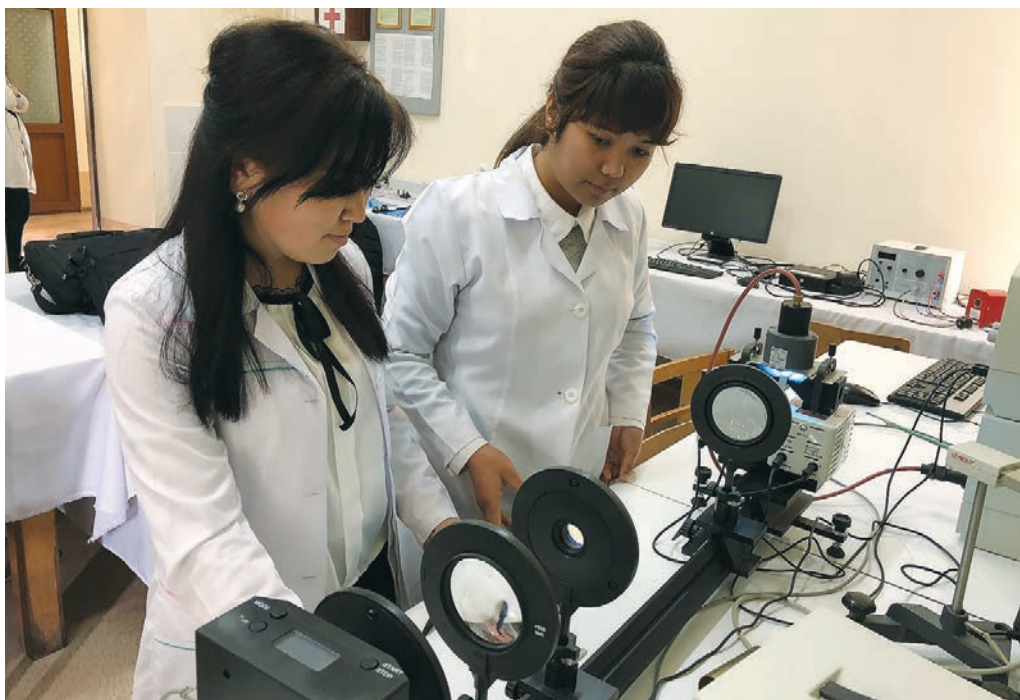


FIG. 3. The Agency strongly encourages the expansion of female participation in the technical cooperation programme, and Member States are encouraged to nominate female National Liaison Officers, counterparts, meeting and workshop participants, fellows and scientific visitors.

Fifty-five regional training courses, 19 regional workshops and 40 expert missions were implemented under AFRA. A two year master's degree programme in radiopharmacy for French-speaking countries was launched in Morocco, hosted by the Mohammed V University in Rabat in partnership with the National Centre for Nuclear Energy, Sciences and Technology.

### *Asia and the Pacific*

In 2019, the Co-operative Agreement for Arab States in Asia for Research, Development and Training related to Nuclear Science and Technology (ARASIA) Board of Representatives established the ARASIA Programme Committee to enhance the efficiency and effectiveness of the ARASIA technical cooperation programme, and developed a resource mobilization action plan for the agreement.

Thirty e-learning modules on nuclear medicine, covering neurology, oncology, endocrinology, cardiopulmonary medicine and physics, were developed for the State Parties of the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA) in 2019.

A methodology for assessing the economic impact of RCA projects was developed during the year and will be piloted in mutation breeding projects beginning in 2020.

Fourteen regional training courses, two regional workshops and seventeen expert missions were carried out under RCA.

### *Europe*

The Europe region has no formal regional cooperative agreement but has a mechanism for regional programming that enables countries in the region to work together. For example, six regional projects on radiation processing have promoted the safe, efficient use of nuclear techniques in Europe, including the disinfection of cultural heritage artefacts by irradiation. The number and types of cultural heritage artefacts analysed and treated in the region over the past ten years has increased significantly as a result.

A four year regional technical cooperation project that drew to a close in 2019 enhanced the knowledge of 226 nuclear power plant regulators, operators and technical support organization staff from 16 countries in the Europe region. The project focused on nuclear power infrastructure and on safety assessment of pressurized water reactors.

### *Latin America and the Caribbean*

The Regional Strategic Framework for technical cooperation with Agency Member States and Caribbean Community (CARICOM) member countries for 2020–2026, endorsed in 2019, outlines common challenges facing CARICOM member countries and presents a method and timeline for addressing them using nuclear science and technology.

The Regional Co-operation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean (ARCAL) celebrated its 35th anniversary. Achievements made under the Regional Strategic Profile for the period 2016–2021 were evaluated, and an action plan to develop a new Regional Strategic Profile, 'Agenda ARCAL 2030', was agreed.

ARCAL supported the preparation of 10 of the 25 new regional projects for the 2020–2021 technical cooperation cycle (Fig. 4). Training in the logical framework approach for project counterparts emphasized the design of new radiation safety projects.

A meeting of the Quadripartite Forum of the four cooperative agreements, AFRA, ARASIA, ARCAL and RCA, was held to share regional achievements and projects. Delegates discussed participation in the human resource development activities of the four agreements and the expansion of this mechanism to include meetings and workshops.

### **Programme of Action for Cancer Therapy (PACT)**

Armenia, Burkina Faso, Ecuador, Seychelles and Sri Lanka received imPACT (integrated missions of PACT) Review missions. imPACT Reviews cover comprehensive cancer control and draw on the experience of international experts nominated by the Agency, WHO and the International Agency for Research on Cancer (Fig. 5).



FIG. 4. Young professional women at an ARCAL workshop, which aimed to provide scientists in nuclear related areas with necessary leadership skills.





FIG. 5. imPACT experts review cancer treatment planning with medical staff at the Teaching Hospital Karapitiya, Sri Lanka.

In cooperation with WHO, expert advisory assistance was provided to Panama to support the development of its 2019–2029 national cancer control plan.

Chad, Eswatini, Kenya, Liberia and Sierra Leone received Agency support to develop bankable documents for establishing nuclear medicine and radiotherapy services.

Key partners in cancer control, including representatives of WHO, the International Agency for Research on Cancer, the United Nations Office on Drugs and Crime, and the Union for International Cancer Control, met to finalize revisions to the current imPACT Review methodology, strengthen the planning and delivery of joint activities, and improve coordination at the country level.

The Russian Federation extended support to PACT up to 2023 for a regional project in Europe designed to strengthen the knowledge of radiotherapy professionals.

## Strengthening the Quality of the Technical Cooperation Programme

Quality assurance activities for the 2020–2021 programme cycle followed a two step mechanism: feedback and guidance was provided on developing projects, and a final quality review of all projects was conducted. The process adopted a country portfolio approach, and assessed how projects addressed the technical cooperation central criterion and how their design complied with the logical framework approach.

The platform for electronic submission of Project Progress Achievement Reports has increased communication with Member States, contributing to more effective project implementation, sharing of good practices, assessment of results and the integration of project level reporting mechanisms with CPFs.

## Outreach and Communication

The Agency raised awareness of its development work at the Global Conference on Strengthening Synergies between the Paris Agreement and the 2030 Agenda for Sustainable Development in Denmark, and the annual Multi-stakeholder Forum on Science, Technology

and Innovation for the Sustainable Development Goals and the High-level Political Forum on Sustainable Development (SDG Summit) in New York.

Agency assistance in the fight against cancer was highlighted at key global health events, including the 44th Annual General Meeting of the Islamic Development Bank Group in Marrakech, Morocco, the World Health Summit in Berlin, the 2019 World Cancer Leaders' Summit in Nur-Sultan, the 12th International Conference on Cancer in Africa in Maputo, and the World Health Organization Global Meeting to Accelerate Progress on SDG Target 3.4 on Noncommunicable Diseases and Mental Health in Muscat.

## Cooperation with the United Nations System

The United Nations' common programming instrument, the United Nations Sustainable Development Cooperation Framework (Cooperation Framework), aims to ensure that the United Nations system is better positioned to deliver on the 2030 Agenda for Sustainable Development and to support partner governments to achieve their development goals. The Agency co-signed a Cooperation Framework with Sierra Leone in 2019, bringing the total number of valid United Nations Development Assistance Frameworks and Cooperation Frameworks co-signed by the Agency to 53.

The Agency attended the Second High-level United Nations Conference on South-South Cooperation (BAPA+40) in Buenos Aires, and, jointly with the United Nations Office for South-South Cooperation, launched a special edition of 'South-South in Action'.

The Agency's support to Member States in their efforts to achieve the SDGs was highlighted at a series of events in and around the SDG Summit, the United Nations' main mechanism for follow-up and review of the 2030 Agenda. Agency good practices and success stories were presented at a video exhibit during the week of high level meetings of the United Nations General Assembly.

For the third consecutive year, the Agency participated in the dialogue leading to the publication of the annual Financing for Sustainable Development Report, a joint product of the Inter-Agency Task Force on Financing for Development. The Report issued in 2019 noted that the Agency's work in science, technology and innovation helps countries to address key development priorities, and assists in the establishment of national legal frameworks for the safe, secure and peaceful use of nuclear science and technology.

## Partnership Agreements and Practical Arrangements

The Agency concluded 12 new partnerships related to technical cooperation. A new monitoring framework was launched to assess the contribution of partnerships to the work of the technical cooperation programme.

The partnership with the Islamic Development Bank was further strengthened through the launch of the Women's Cancers Partnership Initiative at the 2019 Scientific Forum. The Bank announced a plan to mobilize an initial US \$10 million in grant funding in support of unfunded technical cooperation activities related to women's cancer. Plans to support activities to address women's cancer were also announced by France, Monaco, the Russian Federation, Sweden and the United States of America, as well as by the private sector.

Other Practical Arrangements signed in 2019 included those with the Italian Society for Non-Destructive Testing Monitoring Diagnostics on the application of non-destructive testing, the Kuwait Institute for Scientific Research to address marine environmental monitoring, and St. Jude Children's Research Hospital to combat childhood cancer in developing countries.



The Agency also signed two Practical Arrangements on enhancing technical cooperation among developing countries and strengthening South–South cooperation, one with Viet Nam and Cambodia and another with Viet Nam and Lao People’s Democratic Republic. The cooperation includes provision of education and training on radiation applications in several sectors, including food and agriculture, industry and non-destructive testing, radiation and nuclear safety, regulatory infrastructure, and radiation medicine.

At the close of the year, the Agency and the European Union reached a new €2.8 million Delegation Agreement under the framework of the Instrument for Nuclear Safety Cooperation, €1.2 million of which was assigned to the technical cooperation programme. Under the 2016 Agreement, which will run until the end of 2020, nine e-learning modules on predisposal, disposal and other aspects of radioactive waste management, accessible to all Agency Member States, were produced in 2019.

### *Activities and actions under existing Practical Arrangements*

A fact-finding mission to China, carried out within the framework of existing Practical Arrangements between China and the Agency, aimed to strengthen South–South cooperation with the Africa region. Potential partnerships were explored, as well as additional training opportunities at Tsinghua University and Harbin Engineering University, which are currently hosting fellows from Africa.

The Agency participated in the 10th General Meeting of CARICOM and the United Nations in Guyana. The text of the joint statement adopted at the meeting acknowledges the Agency’s key contributions to health system development in the Caribbean region. The Agency worked closely with the Pan American Health Organization to support improved quality of radiation medicine services.

Practical Arrangements with the International Center for Biosaline Agriculture were extended in 2019 to include capacity building for women in agriculture and nutrition.

## **Legislative Assistance**

The Agency continued to provide legislative assistance to Member States through its technical cooperation programme. Country specific bilateral legislative assistance was provided to 17 Member States through written comments and advice on drafting national nuclear legislation. The Agency also reviewed the legal framework of several newcomer countries as part of the Integrated Nuclear Infrastructure Review missions.

The ninth session of the Nuclear Law Institute in Vienna enabled participants to acquire a solid understanding of all aspects of nuclear law, and to draft, amend or review their national nuclear legislation (Fig. 6).

The first meeting of legal advisers of regulatory bodies, organized in Vienna, provided a forum to share experiences and information on the role of the legal adviser in supporting the exercise of regulatory functions.

Two regional workshops on nuclear law were conducted for Member States in Asia and the Pacific, in Jakarta and in Vienna. National workshops on different aspects of nuclear law were organized in Bolivia, Costa Rica, Egypt, Kuwait, the Philippines, Rwanda and Saudi Arabia.



FIG. 6. Participants in the ninth session of the Nuclear Law Institute.

### Treaty Event

The Agency's ninth Treaty Event took place during the 63rd regular session of the Agency's General Conference, providing Member States with an opportunity to deposit their instruments of ratification, acceptance or approval of, or accession to, the treaties deposited with the Director General. The event focused on the Convention on Nuclear Safety, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, and the Convention on the Physical Protection of Nuclear Material and its Amendment.