
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 the technical capacities of Member States in the peaceful application and safe use of nuclear technologies for sustainable development.

The Technical Cooperation Programme

The technical cooperation programme is the Agency's major vehicle for transferring nuclear technology and building capacity in nuclear applications in Member States. The programme supports Member States in achieving their development priorities, including relevant nationally identified targets under the Sustainable Development Goals (SDGs). It also facilitates regional and interregional cooperation among Member States and partners.

The technical cooperation activities of the Agency were highlighted at the IAEA Ministerial Conference on Nuclear Science and Technology: Addressing Current and Emerging Development Challenges, held in Vienna in November. Many technical cooperation counterparts and experts participated as speakers and panellists, and an African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (AFRA) side event examined the challenges facing low and middle income countries wishing to provide sustainable radiotherapy services. Panellists from the field of radiotherapy and cancer control planning led the discussion, providing guidance and lessons learned on topics ranging from establishing a radiotherapy centre to the steps needed to expand radiotherapy in a sustainable manner. The technical cooperation programme was also presented at an exhibition on the margins of the conference.

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Country Programme Frameworks and Revised Supplementary Agreements

The Country Programme Framework (CPF) provides a frame of reference for technical cooperation between a Member State and the Agency, helping Member States to define mutually agreed development needs and priorities that can be supported through the programme. In 2018, the Agency co-signed 24 CPFs, for Antigua and Barbuda, Armenia, Bahrain, Bangladesh, the Plurinational State of Bolivia, Botswana, Brunei Darussalam, Bulgaria, Cyprus, the Democratic Republic of the Congo, Ethiopia, Jamaica, Kyrgyzstan, Lesotho, Malta, Morocco, Nicaragua, Nigeria, Peru, Slovenia, Tajikistan, Turkey, the United Republic of Tanzania and the Bolivarian Republic of Venezuela. In total, there were 100 valid CPFs by the end of 2018.

Revised Supplementary Agreements Concerning the Provision of Technical Assistance by the International Atomic Energy Agency (RSAs) govern the provision of technical assistance by the Agency. Two Member States, Liberia and Turkmenistan, signed RSAs in 2018, increasing the total number of valid RSAs at the end of 2018 to 136.

United Nations Development Assistance Frameworks

The Agency co-signed seven new United Nations Development Assistance Framework (UNDAFs) in 2018 – for Burkina Faso, Ghana, Lesotho, Malawi, Mauritania, Rwanda and Seychelles – bringing the total of valid UNDAFs co-signed by the Agency to 56. UNDAFs offer an avenue for the Agency to raise awareness about its technical cooperation work among national development coordination and planning bodies, as well as the United Nations and other partners.

Partnerships and Cooperation with the United Nations System and Other International Organizations

In 2018, the Agency attended the Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs and the 2018 United Nations High-level Political Forum on Sustainable Development in New York. The Agency highlighted the contributions of nuclear science and technology to a variety of SDGs under review, such as water resource management, air pollution monitoring, and sustainable land and water management practices.

During the thematic review on advancing science, technology and innovation to achieve the SDGs, the Agency drew attention to the benefits of nuclear science and technology in fields as diverse as agriculture, health, industry, energy, water management and environmental monitoring.

The Agency continued to support the World Nuclear University Summer Institute, which took place in Busan and Gyeongju, Republic of Korea, from 26 June to 3 August 2018, through selecting 13 fellows to attend the programme and to learn from the world's foremost leaders and experts in nuclear science, engineering and business.

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Partnership Agreements and Practical Arrangements

The long-standing partnership between the Agency and the European Commission continued through the implementation of the 2016 Delegation Agreement, under the Instrument for Nuclear Safety Cooperation, throughout 2018. A number of activities were carried out, including a regional training course on conditioning of spent low activity gamma-emitting and neutron sources in Dakar in July. Fourteen participants from five countries were trained. The objective of the course was to operationalize the first radioactive waste facility for Senegal.

Strengthening South–South and triangular cooperation

In February, the Agency and the Ministry of Research, Technology and Higher Education of Indonesia signed Practical Arrangements to strengthen and enhance South–South cooperation. The Practical Arrangements facilitate training and capacity building assistance, the provision of experts and lecturers, and the use of laboratory and analytical facilities to support other developing countries, including least developed countries and small island developing States.

In April, the Agency signed a Memorandum of Understanding with the Ministry of Science, Technology and Higher Education and the Ministry of Health of Portugal to promote South–South and triangular cooperation among Portuguese-speaking countries, aiming to enhance collaboration in health, nuclear medicine and radiation oncology. Portugal agreed to support 50 fellowships and scientific visits implemented through the technical cooperation programme on a cost-free basis during the period 2019–2023, particularly, but not exclusively, for Portuguese-speaking Member States.

Practical Arrangements were signed between the Agency and Enresa (the Spanish National Company for Radioactive Waste) in May. The Practical Arrangements govern cooperation between the two organizations in the field of radioactive waste management and decommissioning. Enresa will make qualified experts available for Agency activities and will host capacity building activities.

The Agency signed Practical Arrangements with a consortium of 11 Japanese universities and institutions in November, to support human resource development in nuclear medicine around the world. The Practical Arrangements will boost training opportunities for medical professionals in Agency Member States in the use of imaging techniques to diagnose and manage non-communicable diseases, with a special emphasis on degenerative brain disorders such as dementia, Alzheimer’s disease and Parkinson’s disease.

The Agency facilitated the signature of three Memoranda of Understanding between Mexico and Costa Rica, Mexico and Peru, and Costa Rica and Peru as part of its efforts to strengthen the networking and sustainability of national nuclear institutes in the region.

Africa

African Member States face a shortage of qualified workers in nuclear science and technology, and often rely on training provided abroad. With the support of the Agency, a first of its kind meeting in June gathered Vice-Chancellors of African universities and representatives of regional bodies involved in education and training. The meeting focused on the means to address human resource development needs in Africa. It was hosted by Kenya’s National Commission for Science, Technology and Innovation.

Asia and the Pacific

The Agency strengthened its partnership with the Asian Development Bank with the signature of a Cooperation Framework Agreement in October to formalize closer cooperation on country and regional programming as well as analytical work, training and capacity building activities. The agreement will contribute to sustainable socioeconomic development in Asia in the fields of agriculture and food safety, climate change and disaster risk management, the environment, health and water.

As a first step in this cooperation, the Agency attended the Asian Development Bank’s 2018 Asia Water Forum, raising awareness among key stakeholders in the region of the role of nuclear technology in addressing the challenges of the water–agriculture–energy nexus.

Under the Practical Arrangements signed between the Agency and the China Atomic Energy Authority, China hosted the master’s and doctoral degree studies of 16 students in the area of nuclear science and technology at Harbin Engineering University.

Europe

In Europe and Central Asia, the Agency prioritized efforts to build sustainable partnerships with diverse stakeholders in 2018. Partners such as the Czech Republic’s State Office for Nuclear Safety provided expertise and training to enhance nuclear safety in the Europe region.

In November, the Agency participated in the Global Environment Facility Biennial International Waters Conference to establish partnerships with relevant stakeholders and water projects in Europe to help ensure that future Agency support for the evaluation of groundwater resources and groundwater–surface water interactions, in the context of adapting to climate change, complements existing water management activities in the region and enhances evidence based decision making in support of SDG 6.

The Russian Federation hosted four training courses on infrastructure for nuclear power programmes and related safety assessments, two Nuclear Energy Management Schools and eight scientific visits in 2018.

Latin America and the Caribbean

Practical Arrangements between the University of the West Indies at Mona and the Agency were signed in May. The new Practical Arrangements underpin collaboration between the two organizations in the training of professionals in radiology, nuclear medicine, radiotherapy, medical radiation physics, the use of stable isotopes in nutrition and radiation safety.

In August, the Agency and the Caribbean Community Climate Change Centre signed Practical Arrangements to cooperate in the use of nuclear science and technology to combat climate change. The Practical Arrangements contribute to the promotion of the Agency's technical cooperation activities in Caribbean countries that are new Agency Member States and they provide for cooperation among the Caribbean Ministries of Environment, Health and Agriculture; regional organizations; the Caribbean Regional Fisheries Mechanism and the Caribbean Public Health Agency (CARPHA). Under the framework of the arrangements, the Agency and the Caribbean Community Climate Change Centre organized a workshop on the 'Contribution of Nuclear Science and Technology to Building Climate Resilience in the Caribbean' in Vienna in August.

The Agency and the Caribbean Agricultural Health and Food Safety Agency signed Practical Arrangements in November. The Practical Arrangements provide a framework for cooperation in the areas of sustainable agriculture and food safety.

Programme of Action for Cancer Therapy (PACT)

The Agency signed Practical Arrangements with Childhood Cancer International for collaboration in paediatric radiation oncology activities in low and middle income countries.

A series of events were co-organized with the Islamic Development Bank and the Organisation of Islamic Cooperation, including a meeting with Austria based financial institutions in Vienna, to discuss how Member States can access funds and ways to finance large scale cancer control infrastructure projects. In July, the Islamic Development Bank, the Asian Development Bank and the Agency discussed 'Cooperation in Support of Asian Countries' Efforts to Tackle Cancer' at a high level seminar during the forum on Innovations and Actions against Non-Communicable Diseases (NCDs) held in Manila.

In July, the Agency participated in a high level regional seminar on cancer awareness and advocacy in Burkina Faso, hosted and attended by the African First Ladies and organized by the Organisation of Islamic Cooperation. The Agency also worked with the Commonwealth Secretariat to organize a high level panel on 'Partnering to Tackle Cervical Cancer' at the 67th East, Central and Southern Africa Health Community Health Ministers Conference.

The Russian Federation supported the implementation of five regional training courses. Ninety-eight health professionals from 15 Member States (Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Montenegro, Republic of Moldova, Serbia, Turkmenistan and Uzbekistan) were trained in high accuracy

radiotherapy, including brachytherapy, quality assurance for radiotherapy and treatment planning systems, as well as in protection, safety and accident prevention in radiotherapy.

The Agency facilitated on the job training of two radiation oncologists and two radiotherapy technicians from the United Republic of Tanzania at leading cancer care facilities in Israel. The training was delivered as part of an ongoing technical cooperation project to strengthen and expand the national cancer control programme.

In 2018, outreach to potential donors and partners began for a large initiative to expand nuclear medicine and radiotherapy services for cancers specific to women, for cancer related training in Africa and for childhood cancers. Collaboration on resource mobilization and awareness raising activities, supporting national strategies and programmes, and building health workforce capacities for comprehensive cancer control in low and middle income countries was explored with potential partners.

Regional Cooperative Agreements and Regional Programming

Africa

The third AFRA Regional Strategic Cooperative Framework (RCF), for the period 2019–2023, was finalized at an AFRA task force meeting in Mauritius in 2018. The framework supports identification and prioritization of opportunities for regional cooperation in the sustainable promotion of peaceful applications of nuclear science and technology in Africa, and facilitates partnership building. Priority areas for the new RCF include human health, food and agriculture, and radiation safety. The AFRA RCF emphasized the need for further improving the delivery and quality of the technical cooperation programme in the region. The quality of individual and group training was a major consideration in order to better address the significant need for qualified human resources in Africa through, for example, pre-training e-learning courses, systematic examination at the end of the training courses and longer training activities. The task force also established mechanisms for South–South collaboration and triangular cooperation in other areas, including energy development, industrial applications and water resources.

The 29th AFRA Technical Working Group Meeting was held in Ghana in July. Participants adopted recommendations to further enhance regional cooperation in Africa, including through the establishment of new AFRA regional designated centres.

In September, the Agency hosted the 29th Meeting of AFRA Representatives on the margins of the 62nd regular session of the Agency’s General Conference. The meeting participants endorsed the 2017 AFRA Annual Report, the third AFRA RCF for 2019–2023 and the proposed AFRA Regional Project Note for 2020–2021.

Asia and the Pacific

The preparation of the regional programme for the Asia and the Pacific region focused on established priorities, including enhancing radiation safety infrastructure, and considered mechanisms to enhance cooperation through mentor–mentee relationships, enhancing partnerships and advancing expertise already existing in the region.

The Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA) established a plan of action for the development of the 2020–2021 RCA programme. Eight project proposals were submitted for the 2020–2021 technical cooperation cycle. The RCA continued to explore opportunities to strengthen partnerships, to secure extrabudgetary funding in support of the RCA programme and to promote technical cooperation among developing countries through South–North and South–South cooperation. The RCA Guidance and Operating Rules were revised to enhance the effectiveness and efficiency of RCA activities.

The Co-operative Agreement for Arab States in Asia for Research, Development and Training related to Nuclear Science and Technology (ARASIA) continued to promote technical cooperation and South–South cooperation among its States Parties. The first two ARASIA regional resource centres – the Kuwait Cancer Control Center and the American University of Beirut Medical Center – were designated in November to facilitate cooperation among ARASIA States Parties. Seven new project proposals were submitted to the Agency under the ARASIA technical cooperation programme for the 2020–2021 cycle, building on previous achievements, exploring new areas that address transboundary and common problems within ARASIA States Parties, and focusing on building self-reliance and establishing networks.

Europe

The Agency focused on maintaining its strong interactions with Member States and relevant regional and international partners in 2018. Strategic meetings were convened to consider topics such as the new CPF template, activities in priority thematic areas where the Agency can make a valuable contribution, and the finalization of the Europe Regional Profile. In January, 23 new regional projects were launched in the new 2018–2019 technical cooperation cycle.

While Europe does not have a formal regional cooperative agreement, Member States adopted a revised Europe Regional Profile for 2018–2021 in April, which provided direction for the planning of the regional programme for 2020–2021. Consultations were held with Member States to enhance project designs to support Member State development objectives. In 2018, Member States also agreed to update the Strategic Framework for the Technical Cooperation Programme in the Europe region.

Within Europe and Central Asia, several Member States are embarking or considering embarking on a nuclear power programme. Throughout 2018, the Agency supported Member States at all stages of their decision making process and throughout the subsequent steps to design, construct and commission a nuclear power plant, in accordance with established Agency guidelines and standards. For Member States operating nuclear power plants or expanding their nuclear power capacity, the Agency supported effective long term safe operation as well as assurance of uranium production and supply. For example, 32 participants from 12 Member States attended a regional workshop on the application and licensing of digital instrumentation and control systems for nuclear power plants in November in Yerevan, Armenia. The workshop was organized under the framework of a regional technical cooperation project that aims to strengthen nuclear power plant lifetime management for long term operation.

In 2018, the Agency provided support to strengthen radiation and nuclear safety in Europe and Central Asia, including remediation of former uranium sites, infrastructure development, safety and long term operation of nuclear power plants. In addition, the Agency's activities focused on strengthening regulatory frameworks in the region. A workshop in July brought together representatives from 25 countries to discuss regulatory frameworks for the decommissioning of small medical, industrial and research facilities that use radioactive materials and radioactive sources, and identified the status of decommissioning regulations.

Several Member States in Europe are highly interested in the preservation of cultural heritage. Two representatives of Heritage Malta's Diagnostic Science Laboratories and the national regulatory body undertook a group scientific visit to the University of Ferrara in Italy to learn about K-edge radiography for cultural heritage (Fig. 1). As a result, they are able to better characterize cultural artefacts in Malta using the K-edge technique. Improvements were made to shielding for radiography at the Diagnostic Science Laboratories of Heritage Malta.

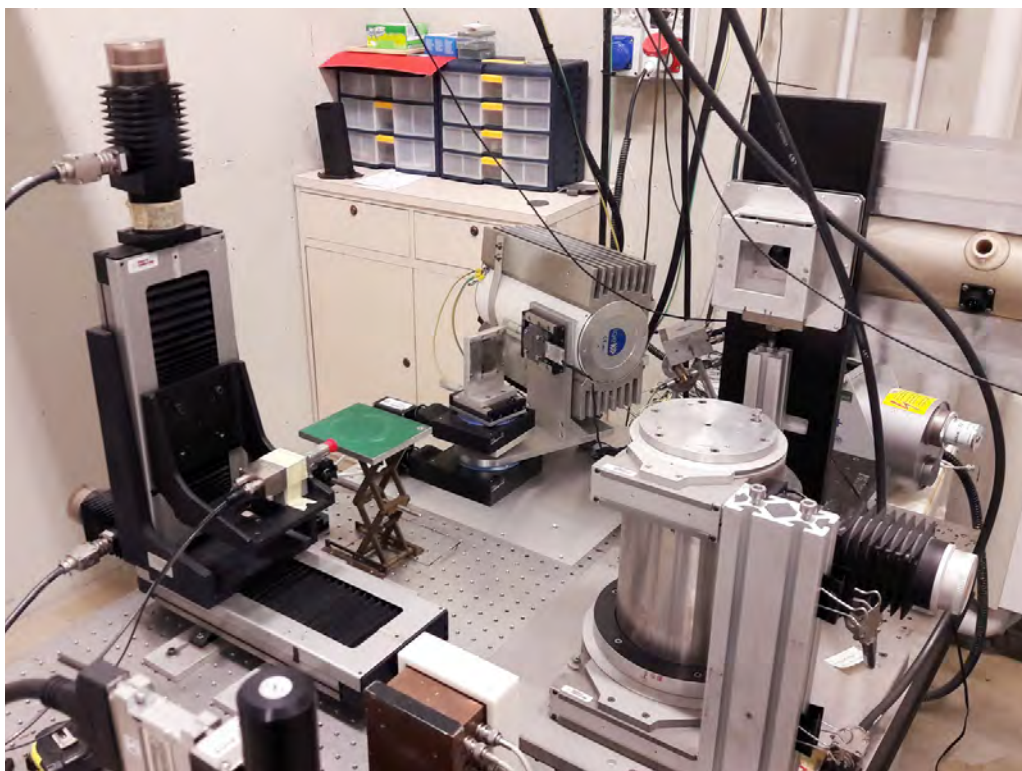


FIG. 1. Scientific visitors from Malta were trained on the application of a K-edge goniometer for cultural heritage. (Photograph reproduced courtesy of M. Grima/Heritage Malta.)

Latin America and the Caribbean

The 19th coordination meeting of the Regional Co-operation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean (ARCAL) Technical Coordination Board took place in Vienna in May to identify regional priorities, to select project proposals for the 2020–2021 technical cooperation cycle and to analyse the progress made by the ARCAL regional programme. The participants also agreed on new communication and partnership strategies, as well as a new monitoring and evaluation plan.

In September, the 19th Meeting of the ARCAL Board of Representatives took place in Vienna during the Agency's 62nd regular session of the General Conference. Representatives of ARCAL States Parties considered the achievements of the previous year and reviewed the ten regional projects proposed for the next technical cooperation cycle (2020–2021). The representatives also approved an action plan for a communication strategy regarding ARCAL's 35th anniversary, due to be celebrated in 2019.

The Agency is facilitating the preparation of the 2020–2026 Regional Strategic Profile for technical cooperation in Member States in the Caribbean. A meeting of experts from the Caribbean in November advanced the preparation process, ensuring alignment of the document with regional priorities. The document will guide Agency activities in the region, providing a framework for collaboration with regional organizations and among Member States.

Programme of Action for Cancer Therapy

The Agency participated in the World Health Assembly; the World Health Summit; the Stop Cervical, Breast and Prostate Cancers in Africa Conference; the Commonwealth East, Central and Southern Africa (ECSA) Health Ministers Conference; the World Cancer

Leaders' Summit; and the World Cancer Congress, highlighting the Agency's efforts to support Member States in addressing cancer control priorities and needs. The Agency also attended meetings of the United Nations Interagency Task Force on the Prevention and Control of Non-communicable Diseases, which coordinates the activities of relevant United Nations and other intergovernmental organizations that support countries in meeting commitments in response to global epidemics of non-communicable diseases.

Seven Member States conducted imPACT Review missions — Afghanistan, Guyana, Indonesia, Mauritius, Mexico, North Macedonia¹ and Ukraine. Recommendations from imPACT Reviews provide support to evidence based decision making to strengthen national cancer control capacities and facilitate the identification of priority interventions and investments. imPACT Reviews form the basis for dedicated follow-up assistance, such as the development of national cancer control plans, in cooperation with partners.

With the World Health Organization, the Agency provided Lesotho, Malawi, Mozambique, Namibia, Nicaragua and Viet Nam with expert advisory support for the development of national cancer control plans. Albania also received an expert assessment of its advances in cancer control.

Managing the Agency's Technical Cooperation Programme

Member State priorities in 2018, as reflected in programme disbursements, were health and nutrition, safety and security, and food and agriculture (Fig. 2), with some variations in emphasis across regions. By the end of the year, 1016 projects were active. During the year, 182 projects were closed, of which one was cancelled in consultation with the relevant Member State, and an additional 508 projects were in the process of being closed. No Programme Reserve projects were requested.

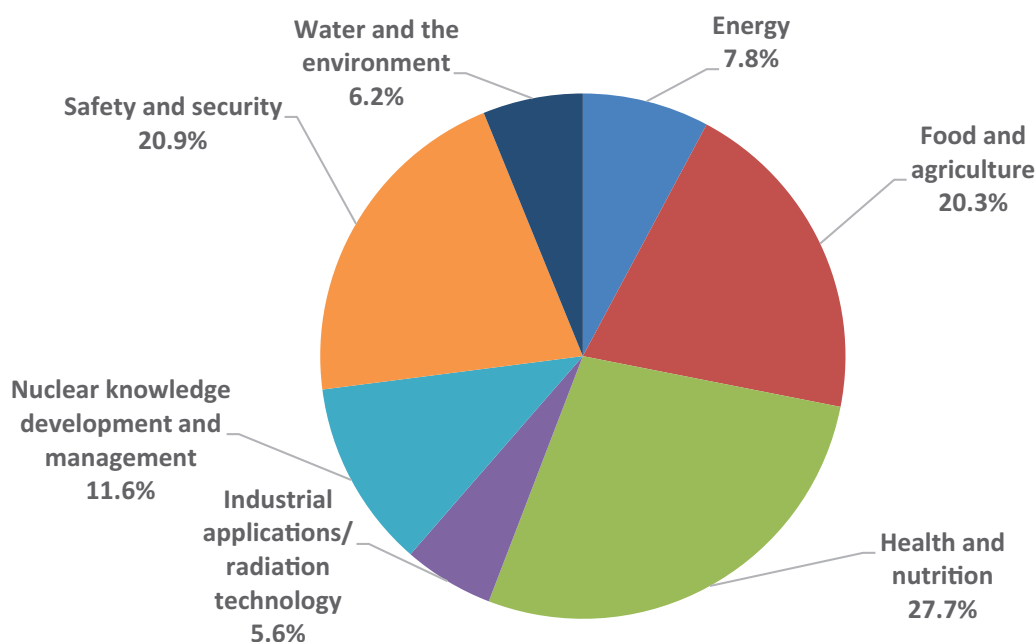


FIG. 2. Actuals by technical field for 2018. (Percentages do not add up to 100% owing to rounding.)

¹ The name 'North Macedonia' replaces the former name 'The former Yugoslav Republic of Macedonia' as of 15 February 2019.

Financial Highlights

Payments to the 2018 Technical Cooperation Fund (TCF) totalled €78.3 million (not including National Participation Costs (NPCs), assessed programme cost (APC) arrears and miscellaneous income), against the target of €85.7 million, with the rate of attainment on payments at the end of 2018 standing at 91.4% (Fig. 3). The use of these resources resulted in a TCF implementation rate of 85.7%.

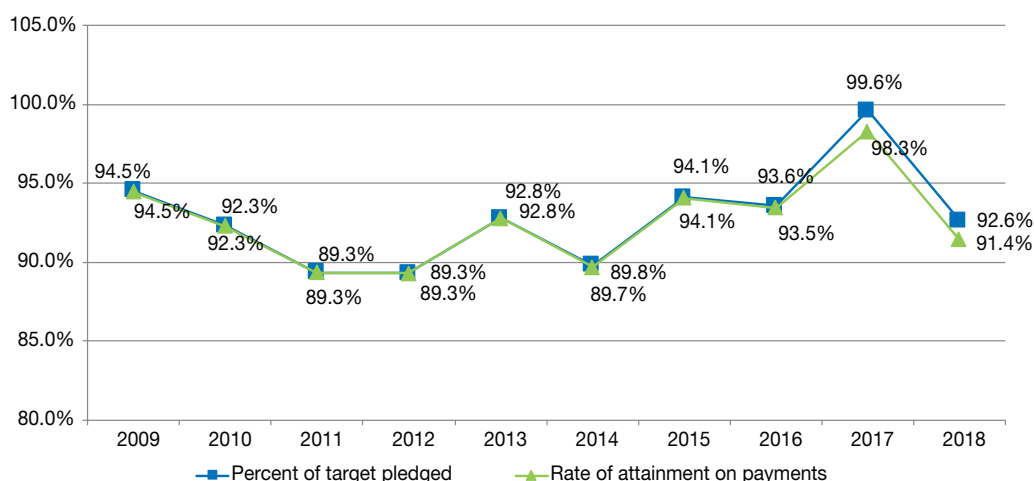


FIG. 3. Trends in the rate of attainment, 2009–2018.

Improving the Quality of the Technical Cooperation Programme

The Agency conducted training events and briefings for some 475 technical cooperation stakeholders at the Agency's Headquarters and in Member States in 2018. Activities included training in the use of the logical framework approach, country and regional project design workshops, training in monitoring and evaluation with a focus on completion of Project Progress Assessment Reports, presentations on the technical cooperation quality criteria, and general information about the technical cooperation programme in the form of orientation workshops. The updated on-line logical framework approach training module has been used by close to 900 technical cooperation stakeholders since its launch.

The Guidelines for the Planning and Design of the IAEA 2020–2021 Technical Cooperation Programme were issued in January. Project design templates and guidance were also reviewed and updated, based on the experience of previous technical cooperation cycles and to address recommendations from internal and external audits and evaluations.

Monitoring and Evaluating Technical Cooperation Projects

A detailed analysis of electronic Project Progress Assessment Reports (e-PPARs) for 2017 submitted through the new electronic technical cooperation reports platform was conducted in 2018. Since its introduction in 2017, the electronic platform has led to significant improvements in the submission and completion rates, volume and quality of submissions.

Outreach and Communication

Outreach to Member States, current and potential partners, donors and the international development community is an essential activity for the Agency. The technical cooperation programme was presented at the IAEA Ministerial Conference on Nuclear Science and Technology: Addressing Current and Emerging Development Challenges, the International Symposium on Understanding the Double Burden of Malnutrition for Effective Interventions and the International Symposium on Communicating Nuclear and Radiological Emergencies to the Public.

An exhibition focusing on the Agency's activities in human health was organized at the 63rd CARPHA Annual Health Research Conference, held in Saint Kitts and Nevis in June. The Agency also participated at the World Health Summit and spoke at the 'Managing the Next Decade in Cancer' panel discussion, among other cancer related events. It was also present at the Global South-South Development Expo in New York and participated in 'The RoK-UNOSSC Facility: Innovation in Practice, Challenges and Solutions' side event.

At the 62nd regular session of the Agency's General Conference, three side events showcased Agency support to Member State efforts to address cancer, the Intercontinental Nuclear Institute and women from Africa working in the nuclear field.

More than 60 diplomats from 43 Permanent Missions attended the annual Seminar on Technical Cooperation for Diplomats in Vienna, and 19 diplomats from 18 Permanent Missions attended the first Seminar on Technical Cooperation for Diplomats in Geneva in October. The seminars provided participants with a comprehensive overview of the technical cooperation programme.

In 2018, 155 news items on technical cooperation were posted on-line, including 7 photo essays and 15 videos. During the year, more than 770 tweets were sent out from the @IAEATC Twitter account, which now has over 4500 followers. The LinkedIn TC Alumni Group now has over 1700 members.

Legislative Assistance

In 2018, the Agency continued to provide legislative assistance to its Member States through the 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 a number of newcomer countries as part of the Integrated Nuclear Infrastructure Review missions. Short term scientific visits to Agency Headquarters were organized for a number of individuals, allowing fellows to gain further practical experience in nuclear law.

The Agency organized the eighth session of the Nuclear Law Institute (NLI) in Baden, Austria, in October. The comprehensive two week course, which uses teaching methods based on interaction and practice, is designed to meet the increasing demand by Member States for legislative assistance and to enable participants to acquire a solid understanding of all aspects of nuclear law, as well as to draft, amend or review their national nuclear legislation. Sixty-one participants from 52 Member States attended the training.

One regional workshop on nuclear law was conducted for Member States of Latin America and the Caribbean in Santiago in June. The workshop addressed all aspects of nuclear law and created a forum for an exchange of views on topics relating to the international legal instruments. The event was attended by 33 participants from 18 Member States of the region. National workshops on different aspects of nuclear law were also organized in the Plurinational State of Bolivia, the Lao People's Democratic Republic, Lesotho, the Philippines and the Sudan.

Treaty Event

The Agency's eighth Treaty Event took place during the 62nd regular session of the General Conference, providing Member States with a further opportunity to deposit their instruments of ratification, acceptance or approval of, or accession to, the treaties deposited with the Director General, notably those related to nuclear safety, security and civil liability for nuclear damage. Representatives of several Member States were also briefed on the conventions adopted under Agency auspices. This year's Treaty Event focused in particular on the Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management