

# Management of Technical Cooperation for Development

## Objective

*To enhance the relevance, socioeconomic impact and efficiency of technical cooperation support to Member States by planning and implementing a needs based, responsive and sustainable technical cooperation programme (TCP) and by seeking continuously increasing effectiveness.*

## The Technical Cooperation Programme

The technical cooperation programme is the Agency's primary mechanism for transferring nuclear technology to Member States, helping them to address key development priorities in areas such as health and nutrition, food and agriculture, water and the environment, industrial applications, and nuclear knowledge development and management. The programme also helps Member States to identify and meet future energy needs, and assists in improving radiation safety and nuclear security worldwide, including through the provision of legislative assistance. The technical cooperation programme aims at achieving tangible socioeconomic impact by contributing directly in a cost effective manner to the achievement of the major sustainable development priorities of each country, including relevant nationally identified targets under the Sustainable Development Goals (SDGs). It also facilitates regional and interregional cooperation among Member States and partners.

## Country Programme Frameworks and Revised Supplementary Agreements

Country Programme Frameworks (CPFs) provide a frame of reference for technical cooperation between a Member State and the Agency. They define national development needs and priorities that can be supported through the technical cooperation programme.

In 2017, 20 Member States signed CPFs: Albania, Algeria, Benin, Cambodia, Central African Republic, Cuba, Honduras, Hungary, Iraq, Israel, Jordan, Kenya, Mexico, Philippines, Rwanda, Saudi Arabia, Thailand, Uruguay, Vanuatu and Zimbabwe. In total there were 95 valid CPFs by the end of the year.

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, Congo and Swaziland, signed an RSA in 2017. As of 31 December 2017, 134 Member States had signed an RSA.

## United Nations Development Assistance Frameworks

The United Nations Development Assistance Framework (UNDAF) is a structure for coordinating United Nations system actions in support of national development goals. In 2017, the Agency continued to focus on greater involvement in the development and implementation of UNDAFs in relevant countries. UNDAF participation enables the Agency to raise awareness about its work and facilitates access to the main national development coordination and planning bodies. In addition, it assists coordination and collaboration with the United Nations and other partners.

In 2017, the Agency co-signed a total of 12 UNDAFs, for Bahrain, the Plurinational State of Bolivia, Botswana, Costa Rica, the Dominican Republic, Gabon, Kyrgyzstan, Morocco, Nepal, the Republic of Moldova, Serbia and Viet Nam. At the end of 2017, the Agency was a co-signatory of 54 valid UNDAFs.

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

The Agency held the first International Conference on the IAEA Technical Cooperation Programme: Sixty Years and Beyond — Contributing to Development, at its Headquarters in Vienna from 30 May to 1 June (Fig. 1). One of the objectives was to provide a forum for Member States, United Nations agencies and other partners to explore ways of working together to make the benefits of nuclear science and technology more accessible. The conference highlighted how the programme helps Member States to establish effective strategic partnerships with countries and development organizations, and examined how collaborative procedures might evolve in the new development context of Agenda 2030. High level speakers and panellists discussed appropriate approaches and measures to help countries maximize their use of nuclear science and technology in pursuit of the SDGs and associated targets.



FIG. 1. Director General Amano opening the first International Conference on the IAEA Technical Cooperation Programme on 30 May 2017.

In July, the Agency highlighted the benefits and the importance of nuclear science and technology and their contribution to the attainment of the SDGs at the United Nations High-level Political Forum on Sustainable Development. With the Permanent Missions of Botswana and Malaysia to the United Nations, it co-hosted a side event entitled 'Science with Impact: Sustainable Development through Nuclear Technology' to introduce the Agency's technical cooperation programme and to showcase how nuclear science and technology can contribute to the achievement of the SDGs and key development objectives in areas such as human health, agriculture and food safety and security, animal health, and industry.

In its activities at the national and regional levels, the Agency promotes close cooperation with other United Nations agencies, multilateral agencies and international organizations. In 2017, the Agency participated in the meetings of regional directors of United Nations agencies in Europe, strengthening collaboration with the United Nations Development Programme, the Food and Agriculture Organization of the United Nations, the United Nations Economic Commission for Europe, the World Health Organization and others.

## Partnership Agreements and Practical Arrangements

In 2017, the Agency continued its engagement with the European Commission on projects addressing the development needs of Member States in the field of nuclear safety. The work has been conducted through several agreements under the auspices of the European Union's Instrument for Nuclear Safety Cooperation.

In April, a cooperation arrangement was signed between the AFRA Network for Education in Science and Technology (AFRA-NEST), the Asian Network for Education in Nuclear Technology (ANENT), the European Nuclear Education Network (ENEN) and the Latin American Network for Education in Nuclear Technology (LANENT). The arrangement aims at enhancing collaboration between regional educational networks through the exchange of experiences, best practices and training materials.

### *Africa*

In September, the Agency signed Practical Arrangements with the National Centre for Nuclear Energy, Sciences and Technology (CNESTEN) of Morocco, establishing a framework to enhance technical cooperation among developing countries. Under the arrangement, CNESTEN will provide training in human health (including radiation medicine, nuclear medicine and nutrition), radiation safety, isotope hydrology and nondestructive testing, through fellowships, the hosting of meetings, scientific visitors and training course participants, and the provision of local experts and lecturers. It will also provide laboratory analytical services, especially for water samples.

In November, the Agency began collaborating with the World Academy of Sciences and the African Academy of Sciences on a first of its kind sandwich fellowship programme. The programme is intended to train graduates and postgraduates in relevant fields of nuclear science and technology, to contribute to the scientific and technological development of the African region.

### *Asia and the Pacific*

The Agency further strengthened its partnership with the OPEC Fund for International Development, leading to a funding commitment of US \$600 000. This funding will be used to implement activities under two regional technical cooperation projects for Asia and the Pacific: one on the diagnosis and control of transboundary animal diseases, and one on the promotion of sustainable climate proofing of rice production systems with an emphasis on strengthening soil and water management using isotopic techniques.

Practical Arrangements between the Agency and the RCA Regional Office on cooperation in the performance of Secretariat duties under the 2017 Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA) for the Asia and the Pacific region were signed in September. Practical Arrangements between the Agency and the China Atomic Energy Authority on cooperation for education and training in the area of nuclear energy, nuclear safety and security, and nuclear science and applications were signed to enhance cooperation between the two organizations.

The Practical Arrangements with the United States National Oceanic and Atmospheric Administration on early detection of harmful algal blooms were extended for five years.

In June, the Agency signed an agreement with the Secretariat of the Pacific Community – the principal scientific and technical organization in the Pacific region – to work together for the attainment of the SDGs in the region. The agreement is aimed at promoting science, technical expertise, research and innovation; addressing development challenges; and supporting economic and social progress in the future.

### *Europe*

The Agency is helping countries in Europe and Central Asia to apply the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (UNFC-2009) for the uranium production cycle. In November, the Agency and the United Nations Economic Commission for Europe conducted an interregional training course on the theme 'Unconventional Uranium Resource Assessment, UNFC Classification and Reporting with Particular Emphasis on Uranium as Co- or By-Product' in Salta, Argentina. Around 100 participants from over 30 countries discussed how the UNFC-2009 could be used to discover 'new economic resources' associated with uranium mining, and opportunities for the uranium industry to produce co- and by-products, including rare earth elements, niobium and tantalum and other key elements, together with uranium in an integrated manner.

### *Latin America and the Caribbean*

In June, the Agency signed Practical Arrangements with the Caribbean Disaster Emergency Management Agency for the provision of technical cooperation in the area of nuclear and radiological emergency preparedness and response, and with the Caribbean Public Health Agency, focusing on the use of nuclear science and technology for disease prevention. It also participated in the Ninth Caribbean Community–United Nations General Meeting, held in New York in July, and hosted the first meeting between the Agency and the Caribbean Community Climate Change Centre at the Agency's Headquarters in November.

The Practical Arrangements with the Pan American Health Organization and the World Health Organization were extended for four years in 2017, enabling continued cooperation between the three organizations to assist countries in the region through training and capacity building, stronger research efforts, and the exchange and dissemination of information. The Agency also participated in the IAEA–PAHO follow-up meeting on 'Emergency Preparedness and Response for Radiological Emergencies in the Caribbean Sub-region', held in June in Miami, United States of America.

The Agency contributed to implementation of the first United Nations Multi-Country Sustainable Development Framework in the Caribbean, covering the years 2017–2021, through national technical cooperation projects. The framework supports the realization of the SDGs, the Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway and other international development aspirations, as well as the national development plans of the individual countries in the Caribbean.

As part of a visit to Austria in February, the Vice President of Panama and Agency officials held meetings involving discussions on strengthening the country's national regulatory body for radiation safety (Fig. 2).

### *Programme of Action for Cancer Therapy*

In March, the Agency, in collaboration with the Organisation of Islamic Cooperation and the Islamic Development Bank, organized a meeting in Khartoum, Sudan, to review



FIG. 2. The Vice President of Panama and Agency officials during meetings held in February.

funding gaps and mobilize resources to support the national cancer control programmes of their Member States in common. The Agency worked with the 16 countries attending the meeting to develop funding proposals to present to potential donors. Following the meeting, consultations were continued to support Member State efforts to secure concessional loans and grants from the Islamic Development Bank and other donors. Country-specific donor mapping exercises helped identify additional potential funding partners, including non-traditional partners.

The Agency signed Practical Arrangements with the International Federation of Pharmaceutical Manufacturers and Associations to strengthen cancer control education and training capacity in low and middle income countries. The Federation will assist in improving engagement with the private sector to mobilize resources to address funding gaps for cancer diagnosis and treatment services.

## Regional Agreements and Programming

The African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (AFRA) continues to be the principal framework for promoting technical cooperation among developing countries in Africa and for enhancing regional cooperation among its State Parties. The 28th AFRA Technical Working Group Meeting took place in July in Kampala, Uganda. The meeting was opened by the Prime Minister of Uganda and was attended by the country's Minister for Energy and Mineral Development and national coordinators from 32 AFRA State Parties. The meeting participants deliberated on several AFRA policy and programme issues, and adopted concrete recommendations to further enhance regional cooperation in Africa. The recommendations were endorsed by the 28th Meeting of AFRA Representatives, held in September on the margins of the 61st regular session of the Agency's General Conference.

In September, following the signature of the instrument of acceptance of AFRA by the Minister for Foreign Affairs and its subsequent deposit with the Agency, the Congo became a State Party to AFRA.

The AFRA State Parties submitted nine regional projects for the 2018–2019 technical cooperation cycle aligned with the major themes of the AFRA Regional Strategic Cooperative Framework (RCF) for 2014–2018. The newly approved AFRA programme prioritizes enhanced human resource development and the strengthening of existing infrastructure in



the region. The AFRA Chair led a Review and Critical Assessment Brainstorming Meeting in October in preparation of a new RCF. The meeting brought together members of the AFRA Programme Management Committee to assess achievements, success stories and best practices relating to the implementation of the RCF. Participants reviewed the AFRA mid-term strategy for 2016–2018 and developed an executive document and terms of reference for use in formulating the new RCF for 2019–2023.

AFRA regional designated centres provided useful services in different nuclear related areas in the region throughout 2017, including hosting fellowship training and meetings and training courses. Expert services were also provided by qualified staff from these centres, and the centres contributed to strengthened relationships and improved the exchange of information between nuclear institutions in the region through technical cooperation among developing countries. AFRA launched a triangular cooperation modality to promote self-reliance and the effective use of the region's human resources and infrastructure. It also launched a process to recognize regional designated centres in the fields of academic and clinical training in nuclear medicine and medical physics; Member State applications have been received and were reviewed during the year.

In April, with Agency support, the AFRA Chair held a series of meetings with Resident Representatives of the Vienna-based African Group and donor countries in Vienna to share information on AFRA project related achievements and success stories, and to seek further support for the implementation of the unfunded portion of the programme. The meetings resulted in pledges for extrabudgetary contributions to upgrade unfunded AFRA project activities. During the year, 17 countries contributed approximately €300 000, demonstrating their continued commitment to the AFRA Fund and their willingness to further enhance regional ownership of the programme. These contributions have been allotted to AFRA projects to support the implementation of unfunded activities.

Under the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA) for Asia and the Pacific, a comprehensive, detailed roadmap was established, ensuring the quality of RCA project designs for the 2018–2019 technical cooperation cycle. During the year, the RCA State Parties explored possibilities to mobilize more financial resources and promoted technical cooperation among developing countries and south–south cooperation under the RCA framework. The RCA Regional Office launched a research programme to promote research and development on air pollution in the region.

The Co-operative Agreement for Arab States in Asia for Research, Development and Training related to Nuclear Science and Technology (ARASIA) continues to promote technical cooperation among its States Parties. The 2017 designation of ARASIA regional resource centres in several thematic areas (in particular nuclear medicine) within ARASIA States Parties is expected to strengthen the programme's sustainability and build self-reliance and areas of common interest.

Member States in Europe and Central Asia identified, designed and assessed new national and regional projects based on priorities established in the CPFs and the Europe Regional Profile. The Regional Profile, the main reference document and planning tool for regional technical cooperation projects, was updated to reflect the main priority thematic areas of human health, radioactive waste management and environment restoration, nuclear power, and nuclear and radiation safety, and to provide links to relevant SDGs.

The Regional Co-operation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean (ARCAL) programme takes into account the needs and priorities identified in the Regional Strategic Profile for 2016–2021 adopted by ARCAL States Parties, and country priorities regarding the attainment of the SDGs.

ARCAL States Parties presented 12 projects in several thematic fields for the 2018–2019 technical cooperation cycle, in line with the Regional Strategic Profile. Belize joined ARCAL in 2017.

The 18th Meeting of the ARCAL Technical Co-ordination Board took place in Mexico in May. National ARCAL Representatives approved the ARCAL programme for the 2018–2019 technical cooperation cycle, established a working group to enhance the ARCAL communication strategy and evaluated ongoing projects in several fields of activity.

Latin America's second IAEA-supported School of Emergency Management took place in Mexico City in May. The School, designed by the Agency's Incident and Emergency Centre, was conducted in close cooperation with the Government of Mexico through the National Commission of Nuclear Safety and Safeguards. During the three week course, more than 30 participants from 15 Latin American countries received training in effective implementation and coordination of emergency preparedness and response.

The Quadripartite Forum meeting of the four regional/cooperative agreements (AFRA, ARASIA, ARCAL, RCA) was held in September. Participants shared their experiences under relevant agreements and explored opportunities for future collaboration among regions.

## Programme of Action for Cancer Therapy (PACT)

Throughout 2017, the Agency continued to support low and middle income countries in improving their cancer control capacities, and promoted the integration of radiation medicine in sustainable, comprehensive national cancer control strategies. The Agency highlighted its role in the global fight against cancer in the World Health Assembly and the World Health Summit. It also contributed to the activities of the United Nations Interagency Task Force on the Prevention and Control of Non-communicable Diseases, an initiative tailored to scale up joint efforts by United Nations agencies and partners to address the growing burden of non-communicable diseases.

The Agency conducted imPACT ('integrated missions of PACT') Review missions to four Member States (Burundi, the Congo, Swaziland and Togo), providing recommendations on strengthening national cancer control services to support evidence based decision making and facilitate the identification of priority interventions and investments in cancer control. imPACT review missions also form the basis for dedicated follow-up support by the Agency, in cooperation with partners. In 2017, Costa Rica, Lesotho, Mozambique, Nicaragua and Rwanda received expert advisory support in the development of their national cancer control plans. Fiji received expert assistance in developing a roadmap to implement its national plan and in conducting a detailed costing exercise to establish a radiotherapy facility.

The Agency and partners continued to support Member States in building human capacity for cancer control. For example, the Korea Institute of Radiological and Medical Sciences (KIRAMS) provided intensive, hands-on training in advanced radiotherapy techniques to cancer specialists from Mongolia, Sri Lanka and Viet Nam through a series of multidisciplinary courses aligned to their respective national priorities in radiotherapy. This brings the total number of fellows trained by KIRAMS since 2013 to 35.

In January, the Agency convened a meeting of international cancer experts to identify key challenges and propose solutions to improve access to affordable, quality and sustainable radiotherapy technology and services for low and middle income Member States. Priority activities identified included addressing key challenges in workforce development, financing, appropriate technology and knowledge management.

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## Managing the Agency's Technical Cooperation Programme

Member State priorities in 2017, as reflected in programme disbursements, were safety and security, health and nutrition, and food and agriculture (Fig. 3), with some variations in emphasis across regions. By the end of the year, 807 projects were active. During the course of the year, 240 projects were closed, of which one was cancelled in consultation with the relevant Member State, and an additional 337 projects were in the process of being closed. No Programme Reserve projects were requested.

## Financial Highlights

Payments to the 2017 Technical Cooperation Fund (TCF) totalled €83 million (not including National Participation Costs (NPCs) and assessed programme cost (APC) arrears), against the target of €84.9 million, with the rate of attainment on payments at the end of 2017 standing at 97.7% (Fig. 4). The use of these resources resulted in a TCF implementation rate of 86.3%.

## Improving the Quality of the Technical Cooperation Programme

In 2017, quality assurance activities were undertaken at every phase of the technical cooperation programme cycle, aimed at increasing the efficiency, effectiveness and results orientation of programmes and projects during planning, implementation and review. The Agency provided support to Member States throughout the year to further improve the quality of project designs developed for the 2018–2019 technical cooperation cycle.

Twenty-four workshops, training events and programme briefings were organized for some 554 technical cooperation stakeholders, both within the Secretariat and in Member States. These events included Technical Cooperation Orientation Workshops, training in the use of the logical framework approach (LFA) for the design of new projects, country and regional project design workshops, specific discussion groups on relevant issues, and targeted training in monitoring and evaluation. The on-line LFA training module (e-LFA) was updated and made available to all stakeholders.

The quality assurance process for the design phase of the 2018–2019 technical cooperation programme included a two step mechanism that applied the guidelines for quality assessment of project designs and built on experience and lessons learned from past quality reviews. During the design process, the Agency gave feedback to project teams to improve adherence of project documents to programme quality criteria. A review of the quality of the final project designs then enabled comparison with previous cycles, and highlighted areas for improvement and lessons learned. Overall, project designs improved significantly compared with the previous cycle.

The technical cooperation programme for 2018–2019 was approved by the Board of Governors in November, with €79.2 million for new and ongoing projects in 2018. The programme reflects the evolving priorities of Member States. Based on the budget for 2018 and future years, health and nutrition represented 26.8% of the core budget, followed by safety and security at 21.9% and food and agriculture at 19.7%. A total of 68% of 2018 core resources for new projects was planned for delivery under the various human resource components, reflecting an emphasis on support to human capacity building.

When developing their CPF and projects for the 2018–2019 technical cooperation programme cycle, Member States were encouraged to align priority development areas to be addressed through the technical cooperation programme with the SDGs, where appropriate. Such linkages between national technical cooperation programmes and the SDGs can help the Agency better deliver its mandate — deploying specialized competencies



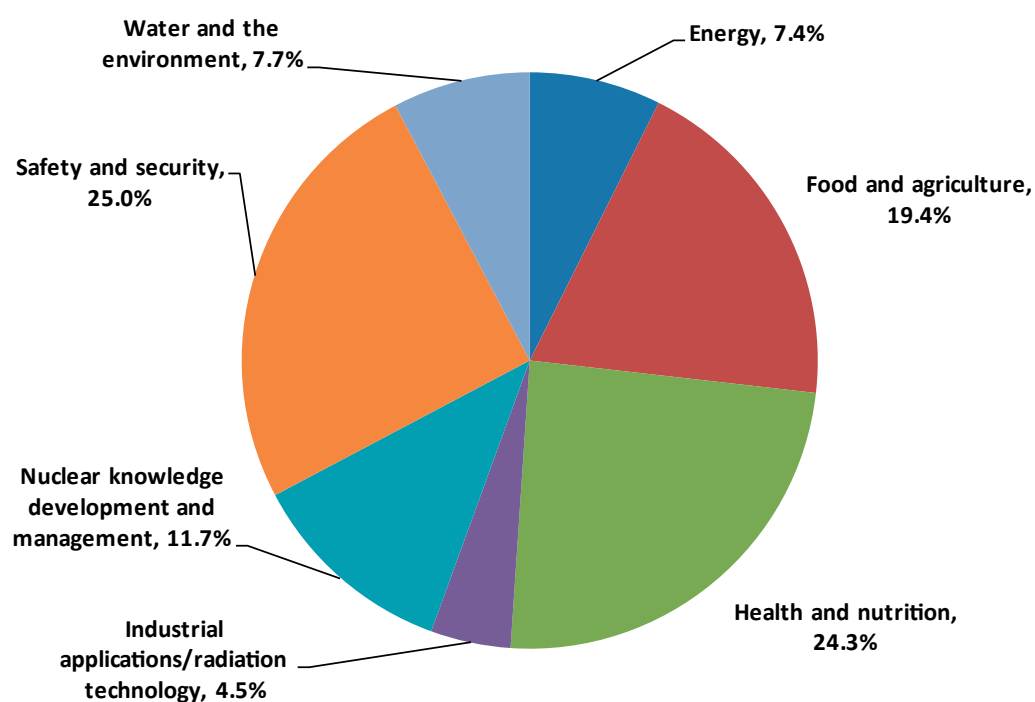


FIG. 3. Actuals by technical field for 2017. (Percentages do not add up to 100% owing to rounding.)

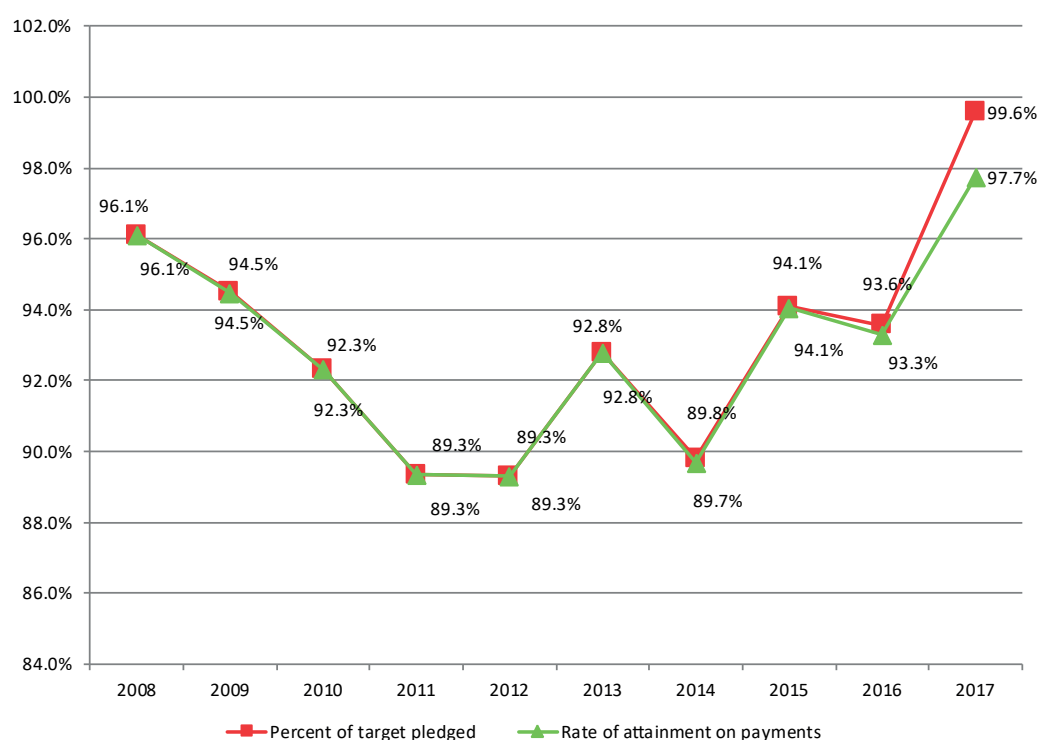


FIG. 4. Trends in the rate of attainment, 2008–2017.

and expertise in the field of nuclear science and technology for the benefit of its Member States — and support the strengthening of partnerships with relevant United Nations organizations and other institutions.

In preparation for the launch of the next planning cycle, the guidelines for the 2020–2021 technical cooperation cycle were reviewed and strengthened, taking into account experience gained during the 2017 quality assurance cycle, which consisted of training, quality reviews at design, project monitoring during implementation, and evaluation recommendation follow-up.

## Monitoring and Evaluating Technical Cooperation Projects

The Agency successfully piloted and rolled out an electronic platform for submission of mandatory annual Project Progress Assessment Reports (PPARs). The new system enables quicker and more relevant reporting by Member States and feedback by the Secretariat, and significantly facilitates the aggregation and interpretation of PPAR data. This will improve communication and early identification of any factors that may support or hinder effective implementation.

The improved PPARs are part of a range of complementary monitoring instruments, including Field Monitoring Methodology and Self-Assessments, which are being reviewed as part of the drive for more effective monitoring and reporting of results in the technical cooperation programme. The aim is to strengthen the capacity of national technical cooperation programme stakeholders to effectively apply results oriented monitoring and evaluation tools, and to monitor the progress of ongoing projects using participatory assessments, in order to ensure that expected results are achieved and lead to planned outcomes.

## Outreach and Communication

Outreach to Member States, current and potential partners, donors and the international development community remains an essential area of activity for the Agency. In 2017, the Agency promoted the first International Conference on the IAEA Technical Cooperation Programme through a series of web articles, a dedicated issue of the *IAEA Bulletin*, and multiple social media campaigns using the official hashtag #Atoms4Dev2017. The Agency also produced a video on the technical cooperation programme, and several exhibitions were installed for the duration of the conference.

An exhibition focusing on technical cooperation activities was organized at the Sixth Congress of the Ibero-Latin American Association for Radiation Oncology, held in the Dominican Republic in November. At the 61st regular session of the Agency's General Conference, a side event showcased a technical cooperation project on the climate proofing of rice production systems, and a second event provided information on the InTouch+ platform. The technical cooperation programme was also presented at a side event on the margins of the first session of the 2017 Preparatory Committee for the 2020 Nuclear Non-Proliferation Treaty Review Conference, held in Vienna in May.

More than 50 diplomats from 40 Permanent Missions attended the annual Seminar on Technical Cooperation for Diplomats in October. The seminar provided participants with a comprehensive overview of the technical cooperation programme.

Throughout the year, the Agency posted targeted outreach material of relevance to specific United Nations international days using social media and the Web to promote relevant technical cooperation activities.

In 2017, 228 news items on technical cooperation were posted online, including 14 photo essays and 24 videos.

During the year, more than 920 tweets were sent out from the @IAEATC Twitter account, which now has over 3750 followers. The LinkedIn TC Alumni Group now has over 1670 members.

## Legislative Assistance

In 2017, the Agency continued to provide legislative assistance to its Member States through the technical cooperation programme. Country specific bilateral legislative assistance was provided to 20 Member States through written comments and advice on

drafting national nuclear legislation. The Agency also reviewed the legislative framework of newcomer countries as part of 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 seventh session of the Nuclear Law Institute 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 participants from Member States attended the training.

Four subregional workshops on nuclear law were conducted for Member States of Africa in Arusha, United Republic of Tanzania (13–17 March 2017) and in Vienna, Austria (31 July–4 August), Latin America and the Caribbean in San Ignacio, Belize (25–28 April) and Europe in Vienna, Austria (6–10 November). The workshops were attended by 111 participants from 63 Member States. National workshops and training courses on nuclear law were also organized in Bangladesh, Egypt, the Lao People's Democratic Republic, Montenegro and Peru. The workshops and courses addressed all aspects of nuclear law and created a forum for an exchange of views on topics relating to the international legal instruments.

## Treaty Event

The Agency's seventh Treaty Event took place during the 61st 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 2005 Amendment to the Convention on the Physical Protection of Nuclear Material, the Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.