

THE YEAR IN REVIEW

In 2013, the International Atomic Energy Agency continued its wide range of technical and scientific activities, with the goal of making a sustained contribution to the needs of Member States. This report provides a review of developments in 2013 related to nuclear issues as seen from the perspective of the Agency and in the light of the Agency's own programme. The Agency's diverse programmatic work focused, in a balanced manner, on nuclear technology and its applications, nuclear safety and security, nuclear verification, and technical cooperation. The Agency continued its efforts to increase the synergy between the scientific and technical parts of its programme and its technical cooperation activities.

This review is not intended to be comprehensive, but instead follows a number of selected themes: the current situation regarding nuclear power; the application of nuclear related techniques in food and agriculture, human health, water resources management and environmental monitoring; the Agency's efforts to strengthen global nuclear safety culture and enhance nuclear security; the implementation of Agency safeguards; and outreach to stakeholders and partners in Member States to gain a better understanding of the needs of Member States and to ensure a more efficient and effective response to these needs.

NUCLEAR TECHNOLOGY

Nuclear Power

Status and trends

With 434 nuclear power reactors in operation worldwide, the total generating capacity of nuclear energy was 371.7 gigawatts-electric (GW(e)) at the end of 2013. During the year, four nuclear power reactors were connected to the grid, construction started on ten new reactors and Belarus became the second country in the past three decades to start building its first nuclear power plant.

In total, 72 reactors were under construction at the end of 2013, the highest number since 1989. Of these, 48 were in Asia, which remains the centre of near and long term growth prospects. Of the 30 countries currently using nuclear power, 25 are either expanding or planning to expand their fleet.

According to the 2013 Agency projections for 2030, the world's nuclear power generation capacity is expected to grow by 17% in the low case and by 94% in the high case. These figures are slightly lower than the projections made in 2012, reflecting the continuing impact of the accident at the Fukushima Daiichi nuclear power plant (the Fukushima Daiichi accident), the low price of natural gas and the increasing use of renewable energy.

Major conferences in 2013

Two major international conferences on nuclear energy were held in 2013. The International Ministerial Conference on Nuclear Power in the 21st Century, held in St. Petersburg, concluded that for many countries nuclear power remains an important option to improve energy security, provide energy for sustainable development and fight climate change. The conference was attended by over 500 delegates from 87 countries and 7 international organizations. Participants included many heads of organizations and other high level experts, with over 50 at the ministerial or similar level.

The International Conference on Fast Reactors and Related Fuel Cycles: Safe Technologies and Sustainable Scenarios (FR13), held in Paris, focused on strategic and technical options for deploying fast reactors operating with a closed fuel cycle in a safe, proliferation resistant and economical way.

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Climate change and sustainable development

The 19th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP19) and the 9th session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP9) were held in Warsaw in November. Participants worked toward an agreement on long term commitments to reduce greenhouse gas emissions; however, progress on reaching a universal climate agreement in 2015 was limited. The potential role of nuclear power in mitigating the effects of climate change is highlighted in the 2013 edition of *Climate Change and Nuclear Power*, which was made available to COP19 participants. The publication looks in particular at the importance of nuclear energy in reducing carbon dioxide emissions from the electricity sector.

Support to existing nuclear power programmes

Many countries have given high priority to licensing plants to operate beyond the 30–40 years originally anticipated. Identifying materials and components that may degrade over time in the demanding operating environment is an important aspect of the safe and secure operation of reactors. In this and other technical areas, the Agency continued to provide guidance to,

and to facilitate knowledge sharing among, countries with existing nuclear power programmes. Over 80 participants from 29 countries discussed current issues and future challenges of material degradation at a Technical Meeting in Vienna, organized jointly with the European Commission Joint Research Centre (JRC).

“The Agency continued to help interested Member States strengthen their capabilities in analysing and planning appropriate national energy systems to meet national development needs and provide sustainable modern energy services.”

Launching nuclear power programmes

Over 30 countries are considering a nuclear power programme or are introducing nuclear power into their energy mix. In 2013, two countries were constructing their first nuclear power plants: the United Arab Emirates (UAE) poured the first concrete for the second unit at the Barakah site, and Belarus began construction of the first unit at the Ostrovets site. In addition, Bangladesh, Jordan, Turkey and Viet Nam made significant progress on their first nuclear power plant projects. The Agency supported these and other countries in preparing the infrastructure necessary for introducing nuclear power through services such as Integrated Nuclear Infrastructure Review (INIR) missions. In 2013, INIR missions were conducted to Poland, South Africa and Turkey. The INIR mission to South Africa was the first to a country that already generates nuclear power and is preparing new build projects.

Energy assessment services

The Agency continued to help interested Member States strengthen their capabilities in analysing and planning appropriate national energy systems to meet national development needs and provide sustainable modern energy services. About 600 energy analysts and planners from 72 countries were trained in using the Agency’s analytical tools in 2013.

Capacity building

The preservation and management of nuclear knowledge continues to be a high priority for many Member States. In 2013, the Agency conducted knowledge management assist visits and workshops in the Islamic Republic of Iran (Iran), Malaysia and Thailand. Nuclear Energy Management and Nuclear Knowledge Management Schools were held in Italy, Japan and the United States of America (USA).

The development of human resources and the impact of human behaviour on nuclear power programmes continue to be important areas of focus for the Agency.

Participants in the International Experts Meeting on Human and Organizational Factors in Nuclear Safety in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant, held in May in Vienna, strongly encouraged the promotion of further activities supporting a systemic approach to nuclear safety and the relationship between individuals, technology and organizations.

Assurance of supply

The Secretariat, in cooperation with the Government of Kazakhstan, continued to make progress in the establishment of the IAEA low enriched uranium (LEU) bank, the proposed site of which is the Ulba Metallurgical Plant in Ust-Kamenogorsk. During 2013, work focused on the financial, legal and technical arrangements, and on assessing the proposed site of the LEU bank. Pledges have been fully paid by Kuwait (\$10 million), Norway (\$5 million), the Nuclear Threat Initiative (\$50 million), the UAE (\$10 million) and the USA (approximately \$50 million); the EU has paid €20 million of its pledged €25 million. In addition to hosting the LEU bank, Kazakhstan also made a contribution of \$150 000 to the Agency for the project.

A LEU reserve in Angarsk, Russian Federation, established following the February 2011 agreement between the Government of the Russian Federation and the Agency, remained operational.

Uranium resources

The global total of identified, conventional uranium resources recoverable at a cost of less than \$260 per kilogram of uranium (kg U) is estimated at about 7.1 million tonnes of uranium (Mt U). Uranium production is estimated to have reached 54 039 tonnes of uranium (t U) in 2013. Final figures are available in the joint IAEA–OECD/NEA publication *Uranium 2014: Resources, Production and Demand*, also referred to as the ‘Red Book’.

Through services such as Uranium Production Site Appraisal Team (UPSAT) reviews, the Agency helped Member States to strengthen the operational performance and safety of uranium mining across all phases of the uranium production cycle. In 2013, an UPSAT mission was undertaken to the United Republic of Tanzania.

INPRO

The Agency’s International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) provides a methodology for, and training and assistance in, conducting Nuclear Energy System Assessments (NESAs). This past year, the results of the NESA for Belarus were published, and the assessments in Indonesia, Romania and Ukraine continued.

INPRO's membership grew to 39 in 2013 with the addition of Kenya as a new member. Two INPRO Dialogue Forums brought together technology holders and users to address licensing and safety issues for small and medium sized reactors and the safety performance of evolutionary power reactors.

International remediation and decommissioning missions to Japan

The report on the Follow-up IAEA International Mission on Remediation of Large Contaminated Areas Off-Site the Fukushima Daiichi Nuclear Power Plant highlighted important progress made since the first mission, in 2011. It provided guidance in a number of areas to further improve current practices, taking into account both international standards and the experience of remediation programmes in other countries.

Two Agency decommissioning missions reviewed the *Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station Units 1–4*. The second mission also examined Japan's efforts to monitor radiation conditions in the marine environment. The missions concluded that Japan has made good progress in improving its decommissioning strategy and plans, initiated promptly after the accident, as well as in allocating the necessary resources towards the plant's safe decommissioning. However, the situation and challenges of ensuring the plant's long term stability remain complex.

Research reactors

Agency activities to improve research reactor utilization, foster international cooperation, and enable access by experts and students from countries without research reactors or such facilities continued. Significant improvements in analytical capability based on neutron activation were achieved through collaborative proficiency exercises and expert assistance involving more than 30 research reactors.

The Agency provided technical expertise in the conversion of research reactors from high enriched uranium (HEU) to LEU and in the repatriation of spent HEU research reactor fuel to the country of its origin. In this respect, HEU to LEU conversion of research

reactors in the Czech Republic, Hungary and Viet Nam and repatriation of spent HEU fuel to the Russian Federation were successfully concluded.

Nuclear data

The Agency continued to update, gather and supply accurate nuclear and atomic data, which are crucial for all nuclear research and innovation. In 2013, an Android app, 'Isotope Browser', was released to help disseminate data to users with limited Internet connectivity.

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Accelerator applications

Accelerator based technologies serve social and economic development, and have a wide variety of applications in the energy, health, agriculture, environment, materials, natural resources and education sectors. The Agency is engaged in various activities to introduce the benefits of accelerators to its Member States. In 2013, it helped establish a beam line in the synchrotron facility at Elettra, in Trieste, Italy, to assist Member States in carrying out experiments.

Applications of Nuclear Technology

Appropriate technology is vital to sustainable development. In 2013, the Agency continued to assist Member States in reaching their development objectives, based on their national priority development needs. In this regard, the Agency also contributes to the achievement of the Millennium Development Goals by helping Member States to build, strengthen and maintain capacities in the safe, peaceful and secure use of nuclear technology in areas where nuclear techniques offer advantages over other approaches.

SCIENTIFIC FORUM 2013: THE BLUE PLANET

Nuclear techniques have an important role to play in the management of the marine, terrestrial and atmospheric environments. This was demonstrated by the Scientific Forum 2013 on 'The Blue Planet — Nuclear Applications for a Sustainable Marine Environment', held during the 57th General Conference in September. The Agency's Director General, HSH Prince Albert II of Monaco, and other dignitaries and experts highlighted how nuclear and isotopic applications are unique tools to better understand and develop adaptation strategies in the fields of environmental and climate change, management of pollution, and integrated ecosystem management of the terrestrial and marine environments.

The Agency's scientific and technical activities and its objectives in the field of nuclear sciences and applications were supported by 19 IAEA Collaborating Centres in 2013. At the end of the year, there were 104 active coordinated research projects (CRPs) in various fields, comprising more than 1550 research, technical or doctoral contracts, and research agreements with institutions in more than 100 Member States.

“The geographical coverage of monitoring stations in the Agency's global isotope monitoring networks for precipitation... was expanded with the addition of 32 newly active stations in Africa, South East Asia and Latin America.”

The Board of Governors approved a regular budget provision for the Renovation of the Nuclear Applications Laboratories (the ReNuAL project) for the 2014–2015 biennium. The ReNuAL project addresses the evolving range and complexity of demands from Member States for the use of nuclear sciences to support socioeconomic development. Specific elements of the project include upgrading the infrastructure and improving the efficiency and effectiveness of laboratory operations and services, as well as acquiring new equipment to replace ageing or obsolete hardware and to enable the Agency to respond to emerging issues and changes in technology. A number of preparatory activities and assessments were carried out during 2013 to prepare a solid strategy for bringing the ReNuAL project to the implementation phase by mid-2014.

With the help of information and communication technologies (ICTs), the Agency's distance learning for professionals working with nuclear technologies has evolved and now takes a number of forms, from on-line and mobile learning to real time webinars in various languages. Owing to its cost effectiveness and ease of access, distance learning has become a major part of human resource capacity building in most Member States. In 2013, a syllabus for training radiopharmacists and technologists was developed as the foundation for a collaborative e-learning programme that will enable participating universities in Member States to issue diploma or master level training certificates.

Environment

Several major international events held in 2013, including the Scientific Forum 2013, highlighted the work of the Ocean Acidification International Coordination Centre (OA-ICC), a Peaceful Uses Initiative (PUI) project that has been operated at the IAEA Environment Laboratories in Monaco since January 2013. The OA-ICC project promotes and supports international efforts aimed at developing response strategies to the growing threat of

ocean acidification. The project serves all stakeholders concerned with ocean acidification, including scientists and researchers, policy makers and academics, the media and the general public. In the framework of its technical cooperation programme, the Agency, through the IAEA Environment Laboratories in Monaco, is also actively involved in supporting the transfer of technology and expertise related to climate change and ocean acidification.

Water resources

As water remains one of the key issues on the development agenda of Member States, in 2013 the Agency continued to advance the use of nuclear and isotope techniques to better assess and manage water resources and to develop strategies for adapting to climate change impacts. The geographical coverage of monitoring stations in the Agency's global isotope monitoring networks for precipitation — a key resource for understanding past climate changes and improving predictive models — was expanded with the addition of 32 newly active stations in Africa, South East Asia and Latin America.

A compact, safe and easy to operate system for measuring low level, environmental tritium in groundwater samples was developed. This system will help overcome a major limitation in Member States — lack of laboratory capacity — and facilitate the wider use of isotope hydrology.

Food and agriculture

The Niayes area of Senegal in the Sahel Zone has a coastal microclimate favourable to farming and cattle breeding. These activities are, however, hampered by the presence of the tsetse fly *Glossina palpalis gambiensis*. A comprehensive feasibility study carried out with the support of the Agency and the International Cooperation Centre of Agricultural Research for Development (CIRAD) concluded that tsetse eradication would bring significant socioeconomic benefits to the farmers of the Niayes area. Significant funding received through the PUI made it possible to move, in 2012, from the feasibility to the operational eradication phase of the study, consisting of suppression of the tsetse fly population followed by systematic area-wide aerial releases of sterile male flies produced in Burkina Faso. One year after the start of the sterile male releases, the northern-most zone of the project area is considered free of tsetse.

In February, several provinces in China were affected by an outbreak of a novel form of avian influenza. The disease did not cause any symptoms in poultry, but when transmitted to humans it caused severe respiratory problems. According to genetic analysis and experimental infection studies, this new H7N9 strain can infect mammalian hosts more easily than the H5N1 highly pathogenic avian influenza (HPAI) virus. This suggests that the H7N9 virus has the potential to become pandemic. Initially, the new H7N9 strain could not be detected by conventional nuclear and nuclear related molecular diagnostic technologies. The entire animal

health network of the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture and the avian influenza research community responded immediately by working on the identification, characterization and tracing of this new avian influenza variant, and were involved in the development and validation of diagnostic procedures, the transfer of technologies and the provision of expert support to Member States.

Human health

Malnutrition is a major issue on the global health agenda. To address the problem, the Scaling Up Nutrition (SUN) Movement was launched at the United Nations General Assembly in September 2010. The movement is founded on the principle that all people have a right to food and good nutrition, and aims at significantly reducing malnutrition in participating countries. It unites people — from governments, civil society, the United Nations and businesses, and donors and researchers — in a collective effort to improve nutrition, with a core focus on empowering women. Since its launch, 43 countries have joined the SUN Movement. The Agency joined the Movement's United Nations System Network in 2013, participating in its first meeting, held in August in Nairobi.

New approaches to empowering nuclear and diagnostic imaging professionals through the use of ICTs have been adopted. They include capacity building through the use of webinars, interactive on-line modules, and on-line distance assisted training in the use and applications of new technologies. To build capacity in Member States in the areas of nuclear medicine and diagnostic imaging, the Agency, in cooperation with such major international organizations as the Society of Nuclear Medicine and Molecular Imaging and the American Society of Nuclear Cardiology, started a webinar initiative in 2013 that allows the simultaneous dissemination of content to many listeners and viewers, and facilitates access in remote locations. The monthly webinars, with an average participation of 300 people per webinar worldwide, have been made available in English and Spanish.

New interactive learning materials in the form of comprehensive e-learning modules on hybrid imaging for cancer management were made available on the Agency's Human Health Campus¹. Such developments can enhance self-directed learning, with the potential to improve efficiency in education and expand educational opportunities.

Programme of Action for Cancer Therapy (PACT)

In 2013, the Agency continued its efforts in cancer control, mainly through integrated missions of

¹ See: <http://humanhealth.iaea.org>.

PACT (imPACT) to address Member State requirements for comprehensive cancer control capacity and needs assessment. Twelve Member States received imPACT missions in 2013. Since PACT's inception, a total of 59 imPACT missions have been carried out and a total of 73 requests for imPACT missions have been received.

The Advisory Group on Increasing Access to Radiotherapy Technology (AGaRT) brings together radiotherapy equipment suppliers and radiotherapy users in developing countries. At the annual AGaRT meeting in 2013, the group endorsed affordable, appropriate and suitable radiotherapy equipment packages for low and middle income (LMI) settings for the first time. These packages aim to assist LMI Member States in implementing sustainable radiotherapy services.

Preparations were completed during the year to integrate PACT into the Agency's technical cooperation programme as of January 2014. This is intended to strengthen the implementation of activities to support cancer control in

“Twelve Member States received imPACT missions in 2013.”

Member States by placing management of the programme under the Agency's main implementation mechanism.

Radioisotopes and radiation technology

The Agency continued its research on alternative technologies to produce the medical isotope molybdenum-99. As part of a CRP, the use of charged particle accelerators (cyclotrons) for producing medical isotopes, especially technetium-99m (usually obtained from molybdenum-99), is being explored.

Radiation technology can be used to treat natural products that might otherwise be thrown away as waste, producing novel materials that can be used in many different areas. For example, crab shells which are usually thrown away can be processed using radiation to obtain a polymeric material that can be used in the food packaging industry. A Technical Meeting was held in Vienna in 2013 to showcase such applications. As described at the meeting, the results of field tests of plant growth promoters and super water absorbents, as well as the new packaging materials developed, indicate a tremendous potential for these products. Nonetheless, great efforts have to be made to position them in the market by stressing their advantages over other products, their features and expected benefits, and their cost-benefit ratio.

NUCLEAR SAFETY AND SECURITY

Nuclear Safety

Status and trends

The Agency works to provide a strong and sustainable global nuclear safety framework to protect workers, society and the environment from harmful effects of radiation. It has implemented a number of mechanisms to assist Member States in strengthening their national nuclear safety programmes. Establishing a competent, well functioning regulatory framework as well as an independent, well resourced regulatory body continues to be a challenging focus for newcomers, requiring an increasing level of Agency assistance.

Long term operation of nuclear power plants is an important issue for many countries. Many of the world's nuclear power reactors have been in operation for 30–40 years or longer. Managing these reactors safely in the long term poses challenges that need to be carefully assessed and managed.

“Progress in the implementation of the IAEA Action Plan on Nuclear Safety continued during 2013...”

IAEA Action Plan on Nuclear Safety

Progress in the implementation of the IAEA Action Plan on Nuclear Safety continued during 2013 and was reported to the Board of Governors on a regular basis. In October, the Agency and the OECD/NEA jointly organized and conducted the International Conference on Topical Issues in Nuclear Installation Safety: Defence in Depth — Advances and Challenges for Nuclear Installation Safety, held in Vienna. The Agency organized International Experts Meetings on Decommissioning and Remediation after a Nuclear Accident, and on Human and Organizational Factors in Nuclear Safety in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant.

The Agency published reports on *Preparedness and Response for a Nuclear or Radiological Emergency in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant*², *Strengthening Nuclear Regulatory Effectiveness in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant*³, and *Decommissioning and Remediation after a Nuclear Accident*⁴. In September,

² Available at: <http://www.iaea.org/newscenter/focus/actionplan/reports/preparedness0913.pdf>.

³ Available at: <http://www.iaea.org/newscenter/focus/actionplan/reports/reffectiveness0913.pdf>.

⁴ Available at: <http://www.iaea.org/newscenter/focus/actionplan/reports/decommissioning0913.pdf>.

the Secretariat published a comprehensive catalogue of services to support Member States in the introduction of a new nuclear power programme.

The review of the IAEA safety standards progressed during 2013, and no significant areas of weakness were identified. However, some revisions have been proposed to strengthen the Safety Requirements and facilitate their implementation. In addition, the results of the Second Extraordinary Meeting of the Contracting Parties to the Convention on Nuclear Safety and the three International Experts Meetings held in 2013 were analysed to identify other potential aspects for further review and revision.

The Agency continued to focus on preparing a report on the Fukushima Daiichi accident, to be finalized in 2014. The report is a major undertaking, with the participation of approximately 180 internationally recognized experts from around 40 Member States and several international organizations.

In September, a joint workshop with the World Association of Nuclear Operators (WANO) on nuclear power plant operating experience was held in Moscow. Other activities included the Follow-up IAEA International Mission on Remediation of Large Contaminated Areas Off-Site the Fukushima Daiichi Nuclear Power Plant in October, and the international expert review of the planning and implementation of the decommissioning of the Fukushima Daiichi nuclear power plant in November.

Improving regulatory effectiveness

In 2013, the Agency held the International Conference on Nuclear Regulatory Effectiveness: Transforming Experience into Regulatory Improvements, in Ottawa, Canada, where nuclear regulators from over 50 countries discussed nuclear regulatory challenges and lessons learned in the light of the Fukushima Daiichi accident. Participants called for action to strengthen nuclear regulatory effectiveness and to increase information sharing.

The Agency conducted four Integrated Regulatory Review Service (IRRS) missions, to Belgium, Bulgaria, the Czech Republic and Poland, and two IRRS follow-up missions, to the Russian Federation and the United Kingdom. Further improvements to the IRRS programme included the development of a training curriculum for future IRRS reviewers and the publication of a manual to assist IRRS experts in conducting these missions.

Operation of nuclear power plants and research reactors

Seven follow-up Operational Safety Review Team (OSART) missions were conducted to review the improvements made since the initial missions, and one full scope mission was conducted to France. The first ‘corporate’ OSART mission was carried out at the request of the Czech Republic, focusing on the centralized functions of the corporate organization that affect the operational safety aspects of a nuclear power plant.

Radioactive waste challenges

In relation to post-accident situations, remediation and decontamination activities in affected areas may, in a short period of time, produce a large amount of waste with relatively low activity concentrations. The management of these large quantities of radioactive waste and materials remains a challenge. The Agency set up working groups to prepare guidance documents on analysing these important aspects of remediation and decontamination activities following emergency situations. To provide advice on topics related to remediation and the management of waste generated during remediation activities, two missions to Fukushima Prefecture were carried out in 2013. The missions are part of a three year cooperation project with Fukushima Prefecture that was established in the margins of the Fukushima Ministerial Conference on Nuclear Safety, held in December 2012.

Incident and emergency preparedness and response

The Agency helps strengthen Member State capacity in emergency preparedness and response (EPR) through the development of safety standards and technical tools, delivery of training, and provision of expert support and appraisal services. In 2013, *Actions to Protect the Public in an Emergency due to Severe Conditions at a Light Water Reactor* (EPR-NPP Public Protective Actions) was published.

The Agency has specific functions under the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. It regularly conducts Convention Exercises (ConvEx) in which the Agency, Member States and relevant international organizations practise different arrangements within the international EPR framework for nuclear or radiological emergencies. This year, the Agency conducted a total of seven ConvEx exercises, testing communication, response times and information exchange worldwide. In November, Morocco hosted the first ever large scale ConvEx-3 exercise to test Member State preparedness for, and response to, a severe radiological emergency triggered by a ‘dirty bomb’ attack. Fifty-nine Member States, including Morocco, and ten international organizations, including the Agency, participated in the exercise, which offered the opportunity to evaluate the response to a severe radiological emergency triggered by a nuclear security event and revealed areas of EPR systems that need further improvements, including response coordination among Member States.

Capacity building in nuclear safety

The Agency continued to provide assistance to regulatory bodies in Member States, focusing on areas such as capacity building and human resource development as well as the development of safety regulations and establishment of management systems.

The Agency developed training materials that were used in many workshops at the national and regional levels, with a particular focus on strengthening core regulatory functions for new nuclear power reactor projects.

In March, the Secretariat informed the Board of Governors of the Agency’s Strategic Approach to Education and Training in Nuclear Safety for the period 2013–2020. This approach identifies roles, responsibilities, processes and mechanisms to build effective capacity through education and training in Member States. In support of this approach and the integrated capacity building self-assessment, new guidelines for an Education and Training Review Service (ETRES) were developed and implemented in Indonesia and Pakistan.

“This year, the Agency conducted a total of seven ConvEx exercises, testing communication, response times and information exchange worldwide.”

Conventions

In 2013, the Working Group on Effectiveness and Transparency, established by the Contracting Parties to the Convention on Nuclear Safety (CNS) at their Second Extraordinary Meeting in August 2012, held four meetings. At its final meeting, the Working Group adopted a report to be considered at the 6th Review Meeting of the Contracting Parties to the CNS, held in Vienna from 24 March to 4 April 2014. In December 2013, Switzerland submitted a proposal to amend the CNS, also to be considered at the 6th Review Meeting.

As agreed during the 4th Review Meeting of the Contracting Parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the Contracting Parties to the Joint Convention held an Inter-sessional Meeting in April 2013, and a Topical Meeting on Comprehensive Approaches to the Back End of the Nuclear Fuel Cycle was organized at the Agency’s Headquarters in Vienna in October 2013.

Civil liability for nuclear damage

The International Expert Group on Nuclear Liability (INLEX) developed *The 1988 Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention — Explanatory Text*, which was published in April as IAEA International Law Series No. 5.

At its 13th regular meeting, INLEX discussed, inter alia, liability issues in the case of the transport of nuclear material, transportable nuclear power plants, and the impact of the 2012 revision of the Agency’s Transport Regulations to exclude small quantities of nuclear material from the scope of the nuclear liability conventions. A Workshop on Civil Liability for Nuclear Damage, attended

by 49 diplomats and experts from 34 Member States and one international organization, was held in Vienna in May.

A joint IAEA–INLEX mission visited Malaysia in August, met with policy makers and senior officials, and organized a Workshop on Civil Liability for Nuclear Damage for other interested stakeholders to raise awareness of the various international nuclear liability regimes. Outreach activities were conducted through a briefing for diplomats at the United Nations in New York in May, and a presentation on nuclear liability by the INLEX chairman at an IAEA Regional Workshop for the Pacific Islands in Nadji, Fiji, in April.

Nuclear Security

In the course of 2013, incidents reported to the Agency's Incident and Trafficking Database (ITDB) demonstrated the need for continued efforts to improve nuclear security worldwide. The importance of addressing nuclear security as a fundamental component of new nuclear power plants continued to be recognized. Nuclear and other radioactive material is being transported to meet demand, and there is increased interest in nuclear power. The Agency supports States, upon request, to fulfil their responsibility to ensure that material and associated facilities do not fall into the wrong hands.

As part of this effort, the Agency organized the International Conference on Nuclear Security: Enhancing Global Efforts, held in Vienna in July, aimed at promoting a global approach to nuclear security. This was the first Agency conference of its type, drawing more than 1300 participants from 125 Member States, including 34 representatives at the ministerial level and representatives from 21 organizations. The resulting Ministerial Declaration⁵ on nuclear security affirmed the Agency's central role in strengthening the nuclear security framework globally and in leading the coordination of international activities in this field. As called for by the Conference, the Agency will organize periodic high level international conferences on nuclear security to provide continuity to international nuclear security processes.

During the year, the Agency continued to implement its *Nuclear Security Plan 2010–2013* and to increase Member State involvement in Agency nuclear security activities. These activities included work undertaken within the Nuclear Security Guidance Committee and other working groups on, for example, radioactive sources, and work as mission experts. Significant work was undertaken in the areas of capacity building, assessment tools such as the Integrated Nuclear Security Support Plans (INSSPs) and the Nuclear Security Information Management System (NUSIMS), and peer reviews and advisory services such as the International Physical Protection

⁵ After the adoption of the Ministerial Declaration, one Member State made a statement to express reservations but did not object to reaching consensus on the document. See: <http://www-pub.iaea.org/iaeameetings/cn203p/RussianFederation-PDF.pdf>.

Advisory Service (IPPAS) and the International Nuclear Security Advisory Service (INSServ).

The new *Nuclear Security Plan 2014–2017*, which was drawn up in close consultation with Member States, was approved by the Board of Governors in September.

Capacity building in nuclear security

The Agency continues to facilitate collaboration and capacity building through the International Network for Nuclear Security Training and Support Centres, which currently has 98 members from 39 States and seven international organizations.

In 2013, the Agency conducted 88 training events covering all aspects of nuclear security, involving more than 2000 people.

NUCLEAR VERIFICATION

Implementation of Safeguards in 2013

At the end of every year, the Agency draws a safeguards conclusion for each State for which safeguards are applied. This conclusion is based on an evaluation of all safeguards relevant information available to the Agency in exercising its rights and mandate, and fulfilling its safeguards obligations for that year.

In 2013, safeguards were applied for 180 States^{6,7} with safeguards agreements in force with the Agency⁸. Of the 117 States that had both a comprehensive safeguards agreement (CSA) and an additional protocol (AP) in force, the Agency concluded that *all* nuclear material remained in peaceful activities in 63 States⁹; for the remaining 54 States, as all the necessary evaluations remained ongoing, the Agency was unable to draw the same conclusion. For these 54 States, and for the 55 States with a CSA but with no AP in force, the Agency concluded only that *declared* nuclear material remained in peaceful activities. For those States for which the broader conclusion that *all* nuclear material has remained in peaceful activities has been drawn, the Agency implements integrated safeguards: an optimized combination of measures available under CSAs and APs to maximize effectiveness and efficiency in fulfilling the Agency's safeguards obligations. Integrated safeguards were implemented during 2013 for 53 States.

Safeguards were also implemented with regard to declared nuclear material in selected facilities in the five

⁶ These States do not include the Democratic People's Republic of Korea, where the Agency did not implement safeguards and, therefore, could not draw any conclusion.

⁷ And Taiwan, China.

⁸ The status with regard to the conclusion of safeguards agreements, additional protocols and small quantities protocols is given in the Annex to this report.

⁹ And Taiwan, China.

nuclear-weapon States under their respective voluntary offer agreements and APs. For these five States, the Agency concluded that nuclear material to which safeguards were applied in selected facilities remained in peaceful activities or had been withdrawn from safeguards as provided for in the agreements.

For the three States in which the Agency implemented safeguards pursuant to safeguards agreements based on INFCIRC/66/Rev.2, the Agency concluded that the nuclear material, facilities or other items to which safeguards were applied remained in peaceful activities.

As of 31 December 2013, 12 non-nuclear-weapon States party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) had yet to bring into force CSAs as required by Article III of the Treaty. For these States, the Agency could not draw any safeguards conclusions.

Conclusion of Safeguards Agreements and Additional Protocols

In 2013, two CSAs and four APs entered into force. In addition, four operational small quantities protocols (SQPs) were amended. By the end of the year, safeguards agreements were in force with 180 States, and APs were in force with 122 States. Moreover, SQPs were in force and operational with 95 States.

Islamic Republic of Iran

During 2013, the Director General submitted four reports to the Board of Governors entitled *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran* (GOV/2013/6, GOV/2013/27, GOV/2013/40 and GOV/2013/56).

In 2013, contrary to the relevant binding resolutions of the Board of Governors and the United Nations Security Council, the Islamic Republic of Iran (Iran) did not: implement the provisions of its Additional Protocol; implement the modified Code 3.1 of the Subsidiary Arrangements General Part to its Safeguards Agreement; suspend all enrichment related activities; or suspend all heavy water related activities. Neither did Iran resolve the Agency's serious concerns about possible military dimensions to Iran's nuclear programme that is necessary to establish international confidence in the exclusively peaceful nature of that programme.

In October 2013, following further rounds of talks aimed at reaching agreement on a structured approach document for resolving outstanding issues related to Iran's nuclear programme, the Agency and Iran concluded that the negotiations had become deadlocked. As there was no prospect for agreement on the document, the Agency and Iran agreed that a new approach aimed at ensuring the exclusively peaceful nature of Iran's nuclear programme should be developed.

On 11 November 2013, the Director General, on behalf of the Agency, and the Vice President of Iran and President of the Atomic Energy Organization of Iran, on

behalf of Iran, signed a 'Joint Statement on a Framework for Cooperation'. In the Framework for Cooperation, the Agency and Iran agreed to cooperate further with respect to verification activities to be undertaken by the Agency to resolve all present and past issues, and to proceed with such activities in a step by step manner. Iran agreed to take six initial practical measures within three months.

On 24 November 2013, a Joint Plan of Action¹⁰ was agreed between Iran and China, France, Germany, the Russian Federation, the United Kingdom and the United States of America, the aim of which is to reach a "mutually-agreed long-term comprehensive solution" that would ensure Iran's nuclear programme "will be exclusively peaceful". Under this Joint Plan of Action, the Agency was to be "responsible for verification of nuclear-related measures" contained therein.

"By the end of the year, safeguards agreements were in force with 180 States, and APs were in force with 122 States. Moreover, SQPs were in force and operational with 95 States."

The Director General welcomed the Joint Plan of Action, noting that it was an important step forward but that much more needs to be done. The Director General also indicated that, with the agreement of the Board of Governors, the Agency would be ready to fulfil its role in verifying the implementation of nuclear related measures¹¹.

While the Agency continued throughout 2013 to verify the non-diversion of declared nuclear material at the nuclear facilities and locations outside facilities declared by Iran under its Safeguards Agreement, the Agency was not in a position to provide credible assurance about the absence of undeclared nuclear material and activities in Iran and, therefore, was unable to conclude that all nuclear material in Iran was in peaceful activities¹².

Syrian Arab Republic

In August 2013, the Director General submitted a report to the Board of Governors entitled *Implementation of the NPT Safeguards Agreement in the Syrian Arab Republic*. No new information came to the knowledge of the Agency that would have an impact on the Agency's assessment

¹⁰ INFCIRC/856.

¹¹ On 24 January 2014, the Board endorsed the Agency undertaking monitoring and verification in relation to the nuclear related measures set out in the Joint Plan of Action.

¹² As, for example, Iran did not implement its Additional Protocol, as required in the binding resolutions of the Board of Governors and the United Nations Security Council.

that it was very likely that a building destroyed at the Dair Alzour site was a nuclear reactor which should have been declared to the Agency by the Syrian Arab Republic (Syria).¹³ In 2013, the Director General renewed his call on Syria to cooperate fully with the Agency in connection with unresolved issues related to the Dair Alzour site and other locations. Syria has yet to respond to these calls.

While Syria invited the Agency to conduct an inspection at the Miniature Neutron Source Reactor in Damascus in 2013, the Agency decided not to conduct any in-field verification activities in Syria. In this regard, in June 2013, the Agency informed Syria that, after considering the United Nations Department of Safety and Security's assessment of the prevailing security conditions in Syria and the small amount of nuclear material declared by Syria at the reactor, the 2013 physical inventory verification at the reactor would be postponed until the security conditions had sufficiently improved. By the end of 2013 the assessment of the security situation in Syria had not changed.

Based on the evaluation of information provided by Syria and other safeguards relevant information available to it, the Agency found no indication of the diversion of declared nuclear material from peaceful activities. For 2013, the Agency concluded for Syria that declared nuclear material remained in peaceful activities.

Democratic People's Republic of Korea

In August 2013, the Director General submitted a report to the Board of Governors and General Conference entitled *Application of Safeguards in the Democratic People's Republic of Korea (GOV/2013/39-GC(57)/22)*, which provided an update of developments since the Director General's report of August 2012.

Since 1994, the Agency has not been able to conduct all necessary safeguards activities provided for in the NPT Safeguards Agreement for the Democratic People's Republic of Korea (DPRK). From the end of 2002 until July 2007, the Agency was not able, and since April 2009 has not been able, to implement any verification measures in the DPRK and, therefore, could not draw any safeguards conclusion regarding the DPRK.

Since April 2009, the Agency has not implemented any measures under the ad hoc monitoring and verification arrangement agreed between the Agency and the DPRK and foreseen in the Initial Actions agreed at the

Six-Party Talks. Statements by the DPRK about it having conducted a third nuclear test and its intention to readjust and restart its nuclear facilities at Yongbyon, together with its previous statements about uranium enrichment activities and the construction of a light water reactor, are deeply regrettable.

Although not implementing any verification activities in the field, the Agency continued to monitor the DPRK's nuclear activities in 2013 by using open source information (including satellite imagery) and trade information. The Agency has continued to observe building renovation and new construction activities at various locations within the Yongbyon site, although, without access to the site, the Agency cannot confirm the purpose of these activities. The Agency also continued to further consolidate its knowledge of the DPRK's nuclear programme with the objective of maintaining operational readiness to resume safeguards implementation in the DPRK.

Enhancing Safeguards Implementation

In 2013, progress continued in strengthening the effectiveness and improving the efficiency of Agency safeguards through strategic planning, evolving safeguards implementation, introducing integrated safeguards in additional States, developing safeguards approaches, strengthening the Agency's technical and analytical capabilities, and increasing cooperation with State and regional authorities.

To continue ensuring consistency and non-discrimination in the implementation of safeguards, the Agency has improved internal work practices, including through: better integration of the results of safeguards activities conducted in the field with those carried out at Headquarters, in order to determine where to focus such activities for maximum effectiveness and efficiency; advances in the handling of safeguards relevant information to facilitate evaluation, and their documentation; and adjustments to the safeguards training programme. Of particular importance is the improvement of the key processes supporting safeguards implementation and the departmental oversight mechanisms relevant to the implementation of these processes.

In August, the Director General submitted a report to the Board of Governors entitled *The Conceptualization and Development of Safeguards Implementation at the State Level*, which was, inter alia, taken note of by the Board of Governors. The Board of Governors was informed that the Secretariat would prepare a supplementary document to the report to provide the Board with more information before the 2014 General Conference, and would consult with Member States to ensure that the Secretariat had captured all of the points that Member States asked to be addressed in that document. The General Conference resolution on Strengthening the Effectiveness and Improving the Efficiency of Agency Safeguards (GC(57)/RES/13)

¹³ The Board of Governors, in its resolution GOV/2011/41 of June 2011 (adopted by a vote), had, inter alia, called on Syria to remedy urgently its non-compliance with its NPT Safeguards Agreement and, in particular, to provide the Agency with updated reporting under its Safeguards Agreement and access to all information, sites, material and persons necessary for the Agency to verify such reporting and resolve all outstanding questions so that the Agency could provide the necessary assurances as to the exclusively peaceful nature of Syria's nuclear programme.

noted, inter alia, that the Director General will produce, after consulting with Member States, a supplementary document for consideration and action by the Board of Governors before the fifty-eighth (2014) session of the General Conference.

Information Analysis

Throughout 2013, the Agency enhanced and diversified its capabilities to acquire and process data, analyse and evaluate information, and securely distribute information internally to relevant parties, as an essential contribution to the State evaluation process and the drawing of safeguards conclusions. It also continued to investigate new tools and methodologies to streamline and prioritize workflows and processes.

Cooperation with State and Regional Authorities

To assist SQP States in building capacity for complying with their safeguards obligations, in April 2013, the Agency published the *Safeguards Implementation Guide for States with Small Quantities Protocols*. In addition, the Agency, with the assistance of experts from Member States, prepared drafts of two Safeguards Implementation Practices Guides.

The IAEA State System of Accounting for and Control of Nuclear Material Advisory Service (ISSAS) provides States, at their request, with advice and recommendations on the establishment and strengthening of such State systems. In 2013, ISSAS missions were conducted in the Republic of Moldova and Tajikistan to facilitate the improvements of their State systems of accounting for and control of nuclear material. In addition, preparatory meetings for ISSAS missions to be conducted in 2014 were carried out in Kyrgyzstan and the United Arab Emirates.

ECAS

Construction of the Nuclear Material Laboratory (NML) building at Seibersdorf, near Vienna, was completed in July 2013 on schedule and within the approved budget. The building was inaugurated on 23 September 2013. The phased transition of scientific functions from the leased Safeguards Analytical Laboratory building to the new NML building commenced in September 2013. The building is expected to be operational in 2014. Overall, activities within the Enhancing Capabilities of the Safeguards Analytical Services (ECAS) project were 70% complete by the end of 2013.

Information Technology

In 2013, the Agency continued to improve its safeguards information system in order to better support the implementation of safeguards. By the end the year, nearly half the re-engineering work necessary to replace outdated mainframe computer based software applications

had been completed. In support of information analysis, further enhancements were made to the analytical tools released in 2012. To help secure sensitive information, improvements were made to security monitoring, digital forensics and the highly secure internal network. To address the Agency's continued safeguards IT modernization needs and to bring these efforts under a comprehensive management approach, the Modernization of Safeguards Information Technology project was established.

“Construction of the Nuclear Material Laboratory (NML) building at Seibersdorf, near Vienna, was completed in July 2013 on schedule and within the approved budget.”

Preparing for the Future

Research and development are essential to meet the safeguards needs of the future. To address near term development objectives and to support the implementation of its verification activities, the Agency continued to rely on Member State Support Programmes (MSSPs) in implementing its Development and Implementation Support Programme for Nuclear Verification 2012–2013. Member State Support Programmes continued to make substantial contributions (in cash and in kind) to Agency safeguards. As of 31 December 2013, 20 States¹⁴ and the European Commission had formal support programmes.

MANAGEMENT OF TECHNICAL COOPERATION FOR DEVELOPMENT

The technical cooperation programme is the primary vehicle for the delivery of Agency capacity building services to Member States, and it is through this programme that the Agency carries out its mandate “to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world”.

Technical Cooperation and the Global Development Context

The Agency is a member of the UN System Task Team on the Post-2015 UN Development Agenda and is providing input to the process of preparing new sustainable development goals (SDGs) for the post-2015 period. The Agency's input in 2013 focused on the importance

¹⁴ Argentina, Australia, Belgium, Brazil, Canada, China, Czech Republic, Finland, France, Germany, Hungary, Japan, Republic of Korea, Netherlands, Russian Federation, South Africa, Spain, Sweden, United Kingdom and United States of America.

of strong and robust national science, technology and innovation (STI) institutions in the new SDG framework. This framework and national targets and plans will provide a strategic programming framework for after 2015, and will open doors for new partnerships and resources.

In late 2013, the Agency participated in the Sixth Session of the Open Working Group on Sustainable Development Goals, contributing to the discussion on STI goals and indicators. The UN Secretary General's proposal for technology facilitation mechanisms that promote the development, transfer and dissemination of clean and environmentally sound technologies has important implications for Agency activities and Member State country programmes. The Agency's technical cooperation programme can contribute to both the global technology transfer mechanism and the science foundation network that enables R&D cooperation.

A Practical Arrangement (PA) was completed with the United Nations Convention to Combat Desertification (UNCCD) in 2013, and preparations were made for a further PA with UNEP, which will focus on climate change adaptation. A PA was also initiated with UNICEF as a framework for nutrition activities.

The Technical Cooperation Programme in 2013

In 2013, health and nutrition accounted for the highest proportion of actuals — i.e. disbursements — through the technical cooperation programme, at 28.6%. This was followed by nuclear safety and security at 22.8%, and by food and agriculture at 16.3% (Fig. 1). By the end of the year, financial implementation of the Technical Cooperation Fund (TCF) stood at 83.7%. Regarding non-financial implementation, the technical cooperation programme supported, inter alia, 3509 expert and lecture assignments, 209 regional and

interregional training courses, and 2005 fellowships and scientific visits.

Throughout 2013, the Agency continued to assist Member States in strengthening human capacity for sustainable development. Attention was given to attaining optimum results in meeting basic human needs and achieving tangible socioeconomic impacts. In particular, efforts were made to improve quality, build partnerships, strengthen regional cooperation, and enhance radiation safety and security for the peaceful application of nuclear techniques. The programme was guided by the priorities expressed in individual Country Programme Frameworks, and in alignment with national development plans.

In Africa, the Agency provided assistance to more than 40 Member States, helping them to use nuclear and isotopic techniques to produce more food, to improve water management, and to develop capabilities for the diagnosis and treatment of diseases. The programme also focused on building safety infrastructure in the region. Nuclear techniques were applied in pest control, especially tsetse suppression and eradication, in combating desertification, and in supporting crop improvement and animal productivity in the region. In the area of human health, the Agency contributed to Member State efforts to strengthen existing cancer control facilities and to establish new ones. This included supporting feasibility studies for developing bankable project documents, providing expert services and equipment, and training radiotherapists, radiation oncologists, nuclear medicine specialists and other related personnel.

In 2013, the Agency participated in the fifth Tokyo International Conference on African Development (TICAD), which was organized jointly by the Government of Japan, UNDP, the World Bank and the African Union. A brochure entitled *IAEA Technical Cooperation in Africa* was distributed during the conference, and the Agency made an intervention during the thematic session on strengthening sectoral bases for growth.

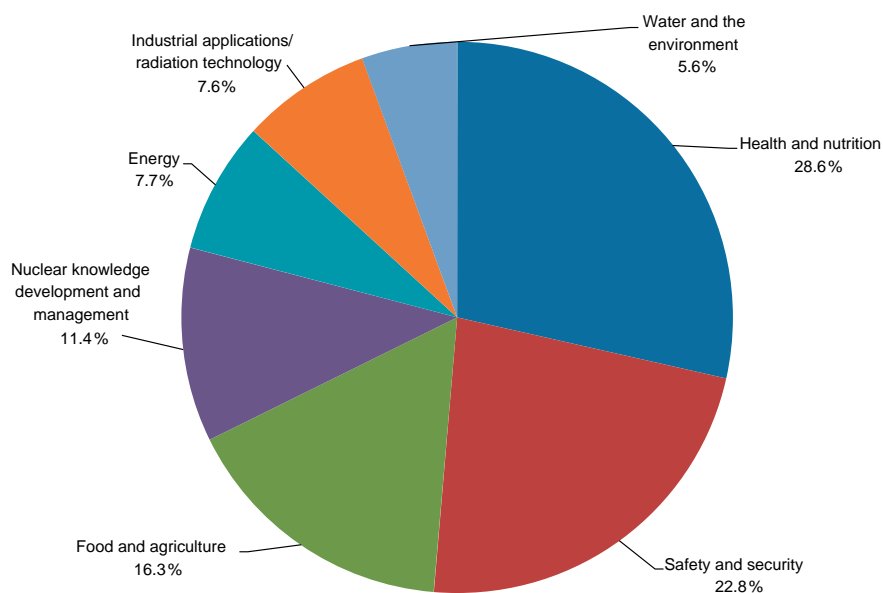


FIG. 1. Actuals by technical field for 2013. (Percentages may not add up to 100% due to rounding.)

Agency support in Africa has resulted in measurable progress in nuclear and radiation safety in the region, building national radiation safety and regulatory infrastructure. With the support of the Agency, African Member States made efforts to address gaps and to further strengthen their radiation safety infrastructure.

In the Asia and the Pacific region, the technical cooperation programme focused on the area of nuclear power. Of the countries planning the introduction of nuclear power, several are currently taking steps towards building their nuclear power infrastructure in preparation for launching a nuclear power programme in the future. A priority for the region in 2012–2013 was enabling the assessment of energy options in interested Member States (including those countries embarking on nuclear power).

Other areas of focus during 2013 included improving agricultural productivity and food safety, as well as strengthening national legal frameworks and regulatory infrastructure for radiation, transport and waste safety. Continued Agency scientific and technological expertise was required to access potable water, as well as to develop and manage natural resources and the environment in a sustainable manner.

Member States in the Asia and the Pacific region re-emphasized the importance of human health related applications, in particular those related to the diagnosis and treatment of diseases, as well as activities to ensure the safe use of ionizing sources and the adoption of quality assurance practices. Accordingly, the technical cooperation programme promoted strong regional cooperation and sought to further strengthen existing national and regional centres of excellence.

The technical cooperation programme in the Europe region continued to focus on four priority thematic areas — nuclear and radiation safety, nuclear energy, human health, and isotope and radiation technology applications — as well as on cross-cutting areas for regional or subregional cooperation. A major emphasis was on maintaining appropriate levels of safety and security in all aspects of the peaceful use of nuclear technology. The highest number of technical cooperation projects for 2012–2013 was in the safety field, including knowledge management and nuclear applications in various areas.

The regional priority thematic areas of the technical cooperation programme for Latin America are established in the 2007–2013 Regional Strategic Profile for Latin America and the Caribbean (RSP). These are food security, human health, environment, energy and industry, and radiation safety. In addition to the traditional support to capacity building in the various fields of activity, particular attention was paid to supporting developments in food irradiation technology, and to enhancing understanding of the processes that affect the region's marine environment.

In 2013, the programming of the 2014–2015 technical cooperation cycle for the region was concluded, building on meeting the goals of the *Medium Term Strategy 2012–2017*. Emphasis was placed on covering needs that were not sufficiently addressed in preceding technical cooperation cycles, particularly in the areas of human

health, environment, food security and radiation safety. In parallel, a comprehensive consultative process was carried out during 2012 and 2013, which culminated in the delivery of the final draft of the new RSP in November 2013. The draft was sent to Member States of the region for comments, and the final version will be forwarded to ARCAL policy bodies for endorsement.

“The Agency continued to focus on improving programme quality and transparency throughout 2013.”

Dominica, a new Member State, designated a National Liaison Officer (NLO) and a National Liaison Assistant (NLA), who attended an Agency training course in March 2014. A decision to designate an NLO in Trinidad and Tobago, another new Member State, is expected in the first half of 2014.

Technical Cooperation Programme Management

The Agency continued to focus on improving programme quality and transparency throughout 2013. Training in the logical framework approach and results based management, for programme management officers, NLOs, technical officers and counterparts, ensured that all project proposals submitted for consideration in the 2014–2015 technical cooperation programme would be clearly linked to the Medium Term Strategy and be of high quality, with measurable, attainable and timely objectives. Special efforts were made to ensure that Member States received systematic feedback and information in a timely manner. Further efforts to improve the monitoring of technical cooperation projects were put into practice through the analysis of Project Progress Assessment Reports and the initiation of field monitoring missions.

Financial resources

The technical cooperation programme is funded by contributions to the TCF, as well as through extrabudgetary contributions, government cost sharing and contributions in kind. Overall, new resources reached a total of some €78.2 million in 2013, with approximately €66.3 million for the TCF (including assessed programme costs (APCs), National Participation Costs¹⁵ (NPCs) and

¹⁵ *National Participation Costs*: Member States receiving technical assistance are assessed a charge of 5% of their national programme, including national projects and fellows and scientific visitors funded under regional or interregional activities. At least half the assessed amount for the programme must be paid before contractual arrangements for the projects may be made.

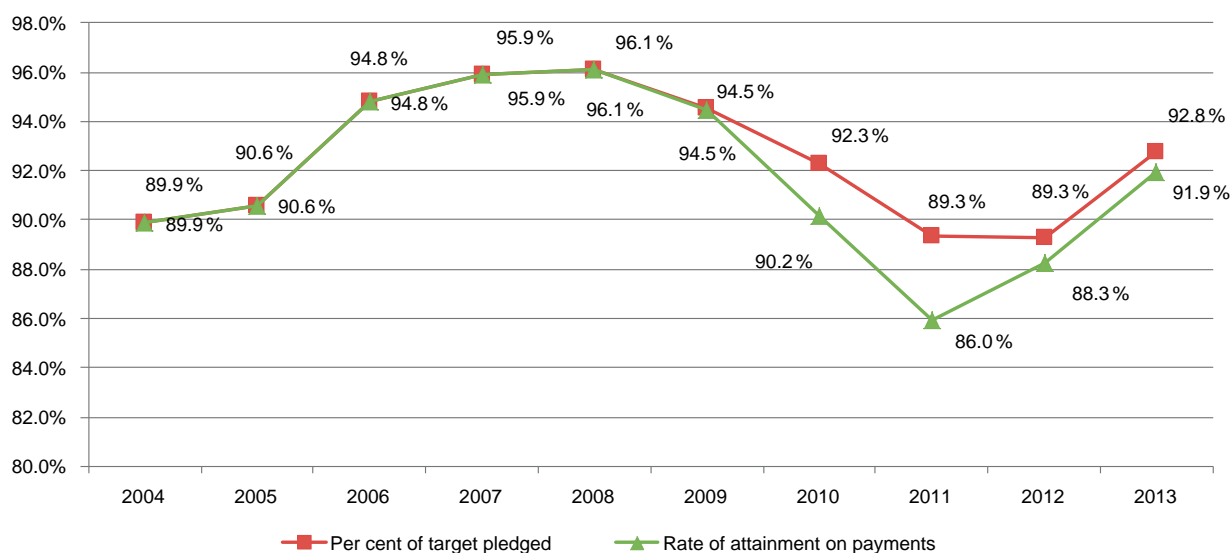


FIG. 2. Trends in the rate of attainment, 2004–2013.

miscellaneous income), €10.7 million in extrabudgetary resources, and about €1.2 million representing in kind contributions.

The rate of attainment¹⁶ for the TCF stood at 92.8% on pledges and at 91.9% on payments at the end of 2013 (Fig. 2), while payment of NPCs totalled €440 300.

Actuals

In 2013, approximately €78.3 million was disbursed to 124 countries or territories, of which 31 were least developed countries, reflecting the Agency's ongoing effort to address the development needs of those States.

MANAGEMENT ISSUES

The Agency's Programme and Budget 2014–2015

The formulation of the *Programme and Budget 2014–2015* was guided by the goals of maximizing efficiency, reflecting changing priorities and striking an appropriate balance among the Agency's activities. At the same time, the current financial challenges faced by most Member States and the constantly increasing demands for the Agency's services were taken into account. A two stage budget preparation process using a new methodology was initiated that also considered the guidance given to the Secretariat by Member States and the priorities identified in the *Medium Term Strategy 2012–2017*.

¹⁶ The rate of attainment is the percentage that results from dividing the total voluntary contributions pledged and paid to the TCF for a particular year by the TCF target for the same year. As payments can be made after the year in question, the rate of attainment can increase over time.

AIPS

Work continued on the implementation of the Agency-wide Information System for Programme Support (AIPS), an enterprise resource planning system that is enabling many of the Agency's business processes to be re-engineered for improved availability of information and enhanced programme management. With the completion of two of the project's four phases, AIPS is now being used for the planning, execution and assessment of the Agency's programmes and projects, fully incorporating the results based management approach. In 2013, a further component was added, allowing the central management of information relating to contacts such as suppliers, customers and meeting participants. Work also began on the project's third phase, covering human resources (HR) and the Agency's payroll. This phase will bring fully electronic HR processing, an enhanced performance review system, improved contracting procedures and automated payroll processes.

Partnership for Continuous Improvement

The Partnership for Continuous Improvement (PCI) initiative was launched in 2013 to improve the efficiency and effectiveness of Agency activities by eliminating unnecessary bureaucracy throughout the Secretariat. Working with managers throughout the Agency, over a hundred potential changes have so far been identified, and almost a third of these have been implemented. Examples include streamlining of administrative processes such as those for travel and meetings, and using desktop video conferencing to help staff implement programmes in a more cost effective manner.