

# Medium Term Strategy

## 2012–2017

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The Agency's statutory objective is to: "...seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world" and "...ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose." In fulfilling this statutory objective, the Agency has emerged as a unique multidisciplinary organization in the United Nations system to address global challenges related to nuclear technology, including global energy security, human health, food security and safety, and water resource management, and to nuclear safety and security and non-proliferation. The Agency must remain ready to assist, in accordance with its Statute, with verification tasks under nuclear disarmament or arms control agreements that it may be requested to carry out by the States parties to such agreements. The Agency will also continue to improve efficiency, effectiveness, accountability and transparency in all major programmes for the benefit of the Member States.

The Agency will ensure sustainable in-house capacity in all relevant areas to fulfil its statutory responsibilities.

The Medium Term Strategy 2012–2017 provides overarching guidance and serves as a roadmap to the Agency's activities during this period by identifying priorities among and within programmes based on such considerations as recent technological trends, emerging needs and the political, economic and social background.

The Strategy serves also as a general framework and guide for the preparation of three programme and budget cycles using the results based management approach. The programme and budget for each biennium will be developed on the basis of the Medium Term Strategy 2012–2017 objectives. If considered necessary, Member States may update the Medium Term Strategy 2012–2017 before the start of the programme and budget preparation process.

In order to achieve its strategic objectives, some of them also acknowledged in the final document of the 2010 NPT Review Conference, the Agency will effectively and efficiently share experience, lessons learned and good practices with Member States. It will promote technology transfer consistent with the IAEA Statute, and distil and disseminate good practices from accumulating experience and research so that successes are replicated as quickly as possible and failures are avoided. It will facilitate international cooperation that reaps mutual benefit and provide assurances that States are complying with their obligations under relevant safeguards agreements. All of these actions will be pursued in a one-house approach manner by the Secretariat, which will avoid duplication and take advantage of synergies in the pursuit of the Agency's thematic strategic objectives.

Technological breakthroughs and other unanticipated events will require adjustments between 2012 and 2017. The Agency will position itself to take prompt actions to seize the advantages of positive opportunities and minimize the adverse consequences of unexpected negative developments.

The Medium Term Strategy 2012–2017 sets out the following six strategic objectives to be pursued in a coordinated and mutually reinforcing manner:

- A.** Facilitating access to nuclear power;
- B.** Strengthening promotion of nuclear science, technology, and applications;
- C.** Improving nuclear safety and security;
- D.** Providing effective technical cooperation;
- E.** Strengthening the effectiveness and improving the efficiency of the Agency's safeguards and other verification activities;
- F.** Providing efficient, innovative management and strategic planning.

## **A. Facilitating access to nuclear power**

Nuclear power is enjoying growing interest throughout the world, as a large number of countries consider it a stable and a low carbon source of energy. The Agency's projections for nuclear power suggest more than 300 new reactors coming on line in the next 20 years and some 100 older reactors shutting down. A large number of countries are expected to make the sovereign choice to start up their first nuclear power reactors.

Against this background and upon request, the Agency will assist Member States planning to start nuclear power programmes as well as Member States establishing their first research reactor or fuel cycle facility, to strengthen infrastructure development, including appropriate capacity building and technology use, and to consider safeguards measures from the beginning. It will provide peer review services on all aspects of infrastructure development.

It will continue to assist Member States with existing nuclear power programmes to plan expansion and to improve performance at all stages of the fuel cycle through, for example, management of ageing and life extension issues, high level radioactive waste management and disposal, and decommissioning and remediation of contaminated sites, including uranium legacy sites, and ensuring that risks of proliferation are minimized. The Agency will further help Member States, upon their request, to build capacities in nuclear science, energy systems analysis, engineering evaluations, project management and long term planning for the sustainability of nuclear power, and will support innovations in all areas of nuclear power for near term and long term deployment. It will also assist throughout all stages of research reactor applications.

Nuclear safety standards and security guidance, peer reviews and advisory services will be further enhanced and used to facilitate access to nuclear power and to continuously improve nuclear safety and security worldwide.

To further support nuclear power's contributions to socio-economic development, the Agency will act as an objective and reliable source of information for policy makers, the public and experts on: (a) human resource and general infrastructure development for nuclear power and nuclear science; (b) nuclear fuel resources; (c) the performance, safety and security of nuclear power plants, research reactors and fuel cycle facilities; (d) the comparative benefits and risks of nuclear power, including its climatic and other environmental effects; (e) technological options, experience and good practices in managing and disposing of spent fuel and radioactive waste; and (f) advanced technologies for nuclear power, and their fuel cycles.

The Agency will facilitate and assist international research and development collaboration and partnership for beneficial uses of nuclear energy. It will: facilitate collaboration among interested Member States in the joint development of evolutionary and innovative nuclear energy systems; assist in identifying promising R&D areas to expand and improve existing applications of current nuclear technologies; facilitate development of innovative new applications, assisting in developing options for the management of spent fuel; and support the collection of data information and experience on nuclear power, nuclear fuel cycle, nuclear sciences and nuclear applications.

Member States will discuss the development of multilateral approaches to the nuclear fuel cycle, including the possibility of creating voluntary mechanisms for assurance of nuclear fuel supply, as well as possible schemes dealing with the back-end of the fuel cycle.

Achievements will be measured by the contributions of the Agency towards assisting interested Member States to: improve infrastructure development; improve the safety and security, efficiency and performance of existing nuclear power, fuel cycle facilities and waste disposal; build capacities in nuclear science, energy systems analysis, and nuclear energy planning, assessment and management; and facilitate innovations related to nuclear energy.

## **B. Strengthening promotion of nuclear science, technology and applications**

Major challenges facing humanity today include food security, health, elimination of poverty and management of water resources, together with the need for a cleaner and safer environment. In this regard, there have been an increasing number of requests from Member States which do not have access to nuclear technologies to help meet these challenges.

The Agency will enhance its role in promoting the advantages of nuclear technology and applications where they have an added value for addressing basic human and socio-economic development needs and in promoting capacity building in Member States. Activities in human health, cancer treatment, food security, water resource management, industrial applications and environmental monitoring will contribute towards the achievement of the Millennium Development Goals and any follow-up initiative.

In human health, cancer and cardiovascular disease will be areas of particular focus as chronic and non-communicable diseases are increasing as a global health threat, including in developing countries. Nuclear techniques can play a significant role in assessment and treatment. The Agency will seek to support the safe and effective use of radiation medicine for the diagnosis and treatment of patients. Through partnerships, especially the Joint World Health Organization (WHO)/IAEA Programme on Cancer Control, the Agency will support integrated, comprehensive national programmes. Moreover, in the years ahead, the Agency also will contribute in cooperation with the World Health Organization (WHO) and other relevant organizations and professional associations, in the education and training of practitioners and in informing an even greater number of patients undergoing radiation procedures.

The challenge in food and agriculture is that over 900 million people currently suffer from malnutrition and even more lack the balanced diet needed to be healthy — a problem that will increase with a continuously growing world population. The Agency will, in partnership with the Food and Agriculture Organization of the United Nations (FAO), facilitate the use of nuclear technologies in Member States to support improved livestock production, insect pest control, crop production and food safety, and thereby contribute to global food security.

In water resource management, the Agency will focus on assisting Member States in the use of isotopic techniques to better map their water resources, leading to greater availability and sustainability of water for drinking supplies, as well as for industrial, energy and agricultural demands.

In environmental protection, the degradation of ecosystems and natural resources is expected to increase unless appropriate actions are taken to reverse the trend. The Agency will focus on facilitating the utilization of nuclear techniques to gain a better understanding of the environment and to act efficiently in addressing negative impacts.

The Agency will support the building of nuclear science competencies in Member States. In addition to fostering advanced nuclear/radiation techniques for practical applications, the Agency will remain an objective and reliable source of information on atomic, molecular and nuclear data and serve as an advisor for establishing/utilizing nuclear science facilities. The Agency will also continue to provide an essential forum for disseminating information on technological developments and for promoting synergies.

In the area of utilization of research reactors and accelerators for radioisotope production and radiation technology, the Agency will support Member States in building capacity for sustainable production and related quality assurance systems, and ensure accessibility to products and techniques that have a unique added value.

The Agency will strive to balance its services, including those provided from its laboratories in Monaco and Seibersdorf, between responding to the varying demands of Member States and the need to clearly prioritize the technologies/services offered based on comparative advantages. In this regard, upgrading and modernization of the Agency's laboratories will be pursued wherever necessary. Synergies between thematic areas will be tapped to improve coordination and prevent overlap, inter alia through a comprehensive thematic approach. Partnerships with United Nations system bodies (e.g. FAO, WHO) and other organizations will be improved where relevant and the mutual sharing of

Member State capabilities (e.g. networks, IAEA Collaborating Centres) will be increasingly promoted and facilitated.

Achievements will be indicated by the degree to which Member State capacities have been enhanced in the use of nuclear sciences and applications to address key development needs related to human health, food security, water resource management, environmental protection, nuclear science and industrial applications.

### **C. Improving nuclear safety and security**

The global nuclear community is experiencing a period of dynamic change. This includes the introduction of new nuclear power plants (NPPs), rapid expansion of existing nuclear power programmes, life extension of existing NPPs and related ageing management issues, and decommissioning and cleanup of the global civil nuclear legacy. Wider use of radioactive sources and ionizing radiation requires better protection of people, the environment and society. Nuclear terrorism, the malicious misuse of radioactive sources or nuclear material, also continues to be a threat. The Agency will provide assistance and support to Member States in order to address these challenges.

The Agency has statutory functions to establish and continuously improve standards and guidance and provide for their application to its own operations and, upon request, to activities in Member States. While acknowledging the differences between nuclear safety and nuclear security, the Agency will enhance the global nuclear safety and security framework and assist national efforts to ensure appropriate levels of safety and security for all type of facilities and activities by continuing to: (a) establish standards and guidance; (b) service and respond to requirements of relevant international instruments; (c) conduct peer reviews and advisory services in Member States upon their request; and (d) encourage adherence to international safety and security conventions. The Agency will help to build national, regional and international capacity to respond to nuclear and radiological incidents and emergencies, including large scale emergencies, which is essential to minimize the impact of these incidents and emergencies and build public trust in the safety and security of nuclear and radiation technologies.

On request, the Agency will assist Member States embarking on nuclear power or expanding their existing nuclear power programmes, as well as Member States establishing their first research reactor or fuel cycle facility, to develop and strengthen appropriate capacity building and infrastructure development. It will further help them establish adequate legal and regulatory infrastructure and develop rigorous safety assessment capabilities, including risk informed decision making for nuclear installation design, construction, testing, operation and maintenance, ageing, surveillance, inspection, pre-decommissioning and regulatory activities.

The Agency will continue to fulfil its essential role in assisting Member States to strengthen the control of radioactive sources, and to mitigate the effects of unauthorized disposal. In so doing, the Agency will continue to assist Member States in improving their national radiation, transport and waste safety infrastructure and capacity building. It will help them to: improve control over radioactive sources throughout their entire life-cycle; improve their practices in radioactive waste and spent fuel management, decommissioning of installations, and remediation of contaminated sites, including uranium legacy sites; resolve denial and delays of shipments of radioactive materials; and improve medical and occupational exposure control.

The Agency will assist national nuclear security efforts by: improving and maintaining an effective information platform; providing nuclear security guidance and modular assessment services; and offering a comprehensive human resource development programme. The Agency will: promote wide adherence to and implementation of nuclear security related international legal instruments; strengthen international cooperation; enhance, upon request, States' nuclear security infrastructure and capacity

building; and contribute to increasing nuclear security worldwide through effective operation of the international nuclear security framework.

Achievements will be gauged from: enhanced use and application in Member States of the safety standards and security guidelines; enhanced safety of facilities and activities, including, in particular, improved control over radioactive sources; improved infrastructure for the safe use of radiation in medicine and the implementation of waste management options; and improvement in national nuclear security and continued development through Agency assistance, in particular the application of guidance and evaluation services.

#### **D. Providing effective technical cooperation**

Member States can benefit from the application of nuclear science and technology to pursue socio-economic development, but to do so they require adequate capacity and infrastructure. The increasing demand in technical cooperation (TC) assistance requires adequate capacity for the Agency to meet these demands.

The overall objective of the Agency's TC programme is to enhance the contribution of nuclear technologies for sustainable development of the Member States, taking into account the specific needs of developing countries, including those of the least developed countries (LDC's).

The programme will continue to serve as an essential vehicle for cooperation by facilitating free access to the peaceful uses of atomic energy, the transfer of nuclear technology, the development of research, the application and utilization of atomic energy for peaceful purposes and the sharing of knowledge on nuclear technologies among Member States. It will be tailored to respond to the evolving needs, priorities and capacities of Member States, and promote tangible socio-economic impact by contributing directly in a cost-effective manner to the achievement of the major sustainable development priorities of each country. The Agency will follow the principle of joint responsibility and be guided by the relevance of the programme to national, regional and global needs, ownership and accountability, and will ensure that all Member States receiving technical assistance from the Agency have signed a Revised Supplementary Agreement. In the process it will ensure support particularly in areas of increasing demand and interest, such as nuclear power for newcomer States, safety and security infrastructures, health, water, food and agriculture as well as relevant industrial applications.

The Agency will facilitate cooperation where appropriate among Member States bilaterally and regionally to meet the various needs in an effective, efficient and timely manner. The TC programme will also advance partnerships with the United Nations and other multilateral organizations, regional development bodies and other relevant intergovernmental and non-governmental bodies in order to ensure complementarity in areas where nuclear technologies offer a unique and comparative advantage.

The Agency will also continue to strive to make resources to the Technical Cooperation Fund sufficient, assured and predictable, and mobilize extrabudgetary contributions to respond to the growing needs and demands of Member States, including for footnote-a projects.

Priorities for the strengthening of the TC programme will include development of institutional and human resources in Member States and supporting stakeholders in the safe applications of nuclear technologies to address development challenges. Assistance will be given to Member States in establishing and strengthening their safety and regulatory infrastructures, in line with the Agency's Basic Safety Standards.

The Agency will actively promote South-South and North-South partnerships, information and technical exchanges and capacity strengthening initiatives by increasingly building upon the expertise

available in Member States and existing Regional Resource Centres and by the promotion of networking. It will also promote regional cooperation among Member States in response to transboundary development challenges, taking into account the disparities and diversity existing within and between regions.

The Agency will promote best practices in project formulation, management, monitoring and evaluation.

Achievements will be assessed in terms of: the benefits of nuclear technology and applications in national and regional development strategies; the sustainability of nuclear applications in Member State development programmes; effective and relevant partnerships with other regional and global development agencies, where relevant; the alignment of the Agency's regular and TC programmes; and continued support for improved TC programme delivery.

#### **E. Strengthening the effectiveness and improving the efficiency of the Agency's safeguards and other verification activities**

The Agency will continue to provide the international community with objective and independent verification of States' safeguards obligations. There is a need for effective safeguards in order to deter and detect the use of nuclear material for proscribed purposes.

The Agency will seek to increase the ability of the safeguards system to provide credible assurances that States are fully honouring their safeguards obligations. To this end, it will continue to improve the safeguards system to draw independent and soundly based safeguards conclusions and further strengthen its capability of early detection of the possible misuse of nuclear material or technology for proscribed purposes.

Also, the Agency, as directed by its governing bodies and in conformity with the Statute, will conduct its activities in accordance with the purposes and principles of the United Nations to promote peace and international cooperation, and in conformity with policies of the United Nations furthering the establishment of safeguarded worldwide disarmament and in conformity with any international agreements entered into pursuant to such policies.

Further efforts to improve the efficiency of the safeguards system must also be based on the recognition that full potential of the safeguards system can be best realized when comprehensive safeguards agreements and additional protocols are being implemented. The Agency will continue to encourage Member States to conclude comprehensive safeguards agreements which are in accordance with relevant obligations, and additional protocols, and will provide associated assistance where requested. It will also encourage relevant States to accept the revised standardized text for small quantities protocols. It will provide States, particularly those introducing nuclear power, with guidance and training on the implementation of their respective agreements. The Agency will fully exercise its mandate and authority in accordance with the Statute and States' respective safeguards agreements.

To strengthen the effectiveness and improve the efficiency of safeguards, the Agency will further develop the State-level concept for the planning, implementation and evaluation of safeguards activities for all States in accordance with their safeguards agreements. It will develop and implement State-level approaches for all States with comprehensive safeguards agreements in force taking into account knowledge available to the Agency about a State which is relevant for the implementation of the safeguards agreement in that State. By taking into account a broader range of State-specific factors, safeguards activities in the field and at Headquarters will become increasingly information driven, focused and more efficient. In States with the broader conclusion, further efficiencies will be realized with the implementation of State-level integrated safeguards approaches.

Because an on-going analysis of all safeguards relevant information is at the heart of the State-level concept, the Agency will continue to diversify its sources of information, while also assessing the veracity of the information, including by reaching out to States to increase the voluntary sharing of

safeguards relevant and reliable information. The Agency will seek to make maximum use of all information available to it, analyse it thoroughly, and support its effective use. At the same time, the Agency will improve physical and information security to protect the confidentiality and integrity of safeguards information.

The Agency will strengthen its technical capabilities, applying technology foresight to identify scientific and technological innovations that hold promising potential for verification purposes. To pursue them, the Agency will strengthen its R&D planning and will build effective partnerships with Member States. The Agency will make use of better equipment and advanced information and communication technologies. The Agency will invest in vital infrastructure, strengthening the analytical capabilities of the Safeguards Analytical Laboratories (SAL), expanding the Network of Analytical Laboratories (NWAL) and employing modern and secure safeguards information systems. It will also use information and communication technologies to increase the efficiency of its daily operations, both in the field and at Headquarters.

Staff and knowledge are critical to the Agency's verification mission. To protect and grow these assets, the Agency will deploy and implement strategies to ensure a safeguards workforce capable of meeting current and future needs and to ensure that knowledge is appropriately managed and preserved, in accordance with the staff regulations and decisions of the governing bodies.

The Agency and States will seek to enhance cooperation and mutual trust. The Agency will work to ensure that States have competent State safeguards authorities and support States in establishing State or regional systems of accounting for and control of nuclear material (SSACs/RSACs) and in making them more effective. Where possible, further efficiencies will be pursued through greater cooperation between the Agency and more mature SSACs/RSACs. The Agency will also provide opportunities for States to consult it at an early stage on the incorporation of safeguards relevant features into new facilities, with a view to ensuring that future facilities are designed and constructed with safeguards implementation in mind.

The Agency will report safeguards conclusions and other information on safeguards and verification matters in a transparent and timely manner. It will also build States' knowledge of the processes for drawing safeguards conclusions, to enhance their understanding of, and confidence in, the Agency's assurances.

Achievements will be assessed in terms of: the Agency's ability to implement effectively and efficiently safeguards in all States with safeguards agreements in force; the Agency's ability to early detect the misuse of nuclear material and technology; and States' confidence in the Agency's safeguards conclusions.

## **F. Providing efficient, innovative management and strategic planning**

In order to ensure effective and efficient functioning of the Agency, it is important for the Agency to: constantly seek efficiency gains in management and focus on priority areas, and meet demands for its unique services in the use of nuclear technology without increasing the risk of proliferation. This will help maintain recognition of the Agency as an effective and efficient organization.

The objective of overall management is to provide overarching guidance, direction and support in relation to the planning, and efficient and effective implementation of the Agency's programme, and better coordination within the Secretariat with due regard to quality and risk management.

The most significant contribution to efficiency gains over the period of this Medium Term Strategy is expected to come from the introduction of the full range of functions provided by the Agency's enterprise resource planning system, 'AIPS' (Agency-wide Information System for Programme Support). By establishing a common information base and management system for support functions

(such as finance, procurement and human resources), this will help reduce administrative costs, facilitate the extension and strengthening of results based management, and lead — through, for example, the ensuing use of the International Public Sector Accounting Standards (IPSAS) — to more transparent reporting to Member States on the exact cost of operations and projects. Business practices will be re-engineered in compliance with the best United Nations system standards.

The Secretariat will continue to vigorously pursue opportunities to improve its efficiency, both in its programme activities, as well as in its management practices. The Secretariat will use best practice tools, including a comprehensive application of quality management, and benchmarking, and it will continue its commitment to a more systematic approach to identifying, quantifying and reporting on efficiency gains.

Advances in information technology in areas such as translation, printing and outreach to the media and the public will be adopted, wherever deemed to be cost effective and secure, in order to enhance communication, both within the Secretariat and between the Secretariat and Member States. Special attention will be given to ensuring the continued security of the information with which the Agency is entrusted, especially in connection with safeguards and nuclear security.

Strategic and policy planning and policy coordination will be strengthened with a view to enhancing the programme delivery capacity of the Agency. The Secretariat's management will ensure more targeted prioritization for maximum benefit from the Agency's programme, with activities closely focused on areas in which the Agency can make a unique impact. With the inevitable competition between resources to fund the growing requests of Member States for nuclear related services and other demands on national budgets, the Agency will become more innovative in finding and justifying additional sources of funds, introducing, in particular, a specialized resource mobilization function.

Modern human resources management will improve coordination between staffing and the programme, and provide greater flexibility in meeting emerging programmatic challenges through, for example, the application of more targeted recruitment procedures and the adoption, wherever possible, of more attractive non-monetary conditions of employment in accordance with standards set by the International Civil Service Commission (ICSC). Enhanced policies and guidelines will be put in place to sharpen lines of authority and accountability. The recruitment and retention of staff of the highest standards of efficiency, technical competence and integrity are essential for the success and impact of the Agency's programme. Subject to the above, the Secretariat will continue to promote to the extent possible gender equality and equitable geographical representation in the Agency, especially at managerial levels.

The Agency will encourage Member State ratification of the amendments to Articles VI and XIV.A of the Statute. The Secretariat will continue its outreach activities to fulfil these objectives.

Achievements — in continuing to streamline and modernize the Agency's operations — will be judged by the Agency's performance as an efficient professional, innovative and impartial organization as evidenced by, for example: robust prioritization leading to clearer policy formulation; the extent of efficiency gains from the introduction of AIPS; the reduction in overhead costs; the enhanced transparency resulting from the implementation of IPSAS; enhanced communication within the Secretariat and with Member States; and improved human resources management (including accelerated and more targeted recruitment).