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Nuclear Security Plan 2018-2021

Report by the Director General

Summary

- On 13 September 2017, the Board of Governors approved the Nuclear Security Plan 2018-2021.
- As requested by the Board, the Director General is transmitting the Nuclear Security Plan to the General Conference, with the Board's recommendation that the Conference takes note of the Nuclear Security Plan 2018-2021 and calls upon Member States to contribute on a voluntary basis to the Nuclear Security Fund.

Nuclear Security Plan 2018-2021

Report by the Director General

A. Introduction

1. Through General Conference resolutions, Member States have asserted that the responsibility for nuclear security within a State rests entirely with that State and that they are mindful of the responsibilities of every Member State, in accordance with its respective national and international obligations, to maintain at all times effective and comprehensive nuclear security of all nuclear and other radioactive material.
2. The Agency has provided, upon request, assistance to States and supported their national efforts to establish and improve nuclear security regimes since the early 1970s, when it began providing ad hoc training in physical protection. The Agency's first comprehensive plan of action to protect against nuclear terrorism¹ was approved in March 2002 by the Board of Governors, together with the creation of a voluntary funding mechanism, the Nuclear Security Fund, in order to help implement the Plan. Further Nuclear Security Plans were approved by the Board of Governors in 2005², 2009³, and 2013⁴.
3. Member States have consistently recognised the central role of the IAEA in strengthening the nuclear security framework globally and in coordinating international cooperation in nuclear security.

B. Background

4. The Nuclear Security Plan 2018-2021 is based on Programme 3.5 of the Agency's Programme and Budget 2018-2019,⁵ and provides further details regarding the Agency's nuclear security activities for the period 2018-2021 that are proposed to be undertaken using voluntary contributions to the Nuclear Security Fund. Activities under this Plan are in accordance with the Agency's Statute.
5. The Plan corresponds to the priorities of Member States expressed through the decisions and resolutions of the Agency Policy Making Organs as well as priority setting for Nuclear Security Series

¹ GOV/2002/10.

² GOV/2005/50.

³ GOV/2009/54-GC(53)/18.

⁴ GOV/2013/42-GC(57)/19.

⁵ GOV/2017/1

Guidance as recommended by the Nuclear Security Guidance Committee (NSGC). The International Conference on Nuclear Security: Commitments and Actions, chaired by the Foreign Minister of the Republic of Korea, was convened at Agency headquarters in Vienna on 5-9 December 2016. On 5 December, Ministers adopted a Declaration which was also taken into account, as appropriate, in finalizing this Plan.⁶

6. The Agency will continue to build upon experience in implementing the Nuclear Security Plan for 2014-2017 as well as the activities set out in previous Nuclear Security Plans such as advisory services, education and training and the development of Integrated Nuclear Security Support Plans (INSSP), taking into account new and changed priorities of Member States. This includes taking account of developments from 2014-2017, most significantly, the increased responsibilities for the Agency following the entry into force of the Amendment to the Convention on the Physical Protection of Nuclear Material on 8 May 2016 and the accompanying increased obligations on States' Parties to the Amendment.

7. Activities under this Plan may, where appropriate, assist States' efforts to establish effective and sustainable national nuclear security regimes and, where appropriate, to fulfil their obligations including under the CPPNM and its 2005 Amendment as well as the UNSCRs 1540 and 2325.

8. Support and assistance is provided by the Agency to States, upon request, to assist in meeting their obligations under international instruments relevant to them and in order to support the encouragement expressed by Member States that they take into account, as appropriate, the relevant recommendations in the Nuclear Security Series, and make use of them at their national discretion in their efforts to strengthen nuclear security. This may include supporting State's efforts to establish effective and sustainable national nuclear security regimes through assisting with the development of appropriate national legal and regulatory frameworks, provided that the requests are within the scope of the Agency's statutory responsibilities. Nuclear Security Series guidance publications are developed according to the priorities set by Member States and those decisions and resolutions of the Agency Policy Making Organs and recommendations of the NSGC.

9. Agency assistance in capacity building and in facilitating information exchange is provided solely at the request of States, and nothing in the Plan is intended to impose obligations upon States.

10. The General Conference, through its resolutions, has called upon all States to ensure that measures to strengthen nuclear security do not hamper international cooperation in the field of peaceful nuclear activities, the production, transfer and use of nuclear and other radioactive material, the exchange of nuclear material for peaceful purposes and the promotion of peaceful uses of nuclear energy, and do not undermine the established priorities of the Agency's Technical Cooperation Programme.

11. The Director General will continue to produce annual reports on the implementation of the Nuclear Security Plan in accordance with GC resolutions, to include important developments in nuclear security as well as lessons learned from the implementation of the Plan.

⁶ Available online at: https://www.iaea.org/sites/default/files/16/12/english_ministerial_declaration.pdf

C. Programme Elements and Expected Outcomes

12. The objective of the Agency's Nuclear Security Programme is:

- To contribute to global efforts to achieve effective nuclear security, by establishing comprehensive nuclear security guidance and, upon request, promoting its use through peer reviews and advisory services and capacity building, including education and training;
- To assist in adherence to, and implementation of, relevant international legal instruments, and in strengthening the international cooperation and coordination of assistance; and
- To play the central role and enhance international cooperation in nuclear security, in response to the priorities of Member States expressed through the decisions and resolutions of the Agency's Policy Making Organs.

13. Proposed projects to be undertaken from 2018-2021 are summarized in the following sub-sections, including tasks under each project and the main planned outputs of the projects in this time period, with a focus on tasks to be undertaken using voluntary funding.

14. The structure of these sub-sections reflects the structure of Programme 3.5 of the Agency's Programme and Budget for 2018-2019. Sub-sections reflect the sub-programmes and projects described in the Programme and Budget, and the tasks described under each project are those set out in the Agency's Programme and Budget for 2018-2019. However, the Secretariat anticipates that some tasks set out under this Plan will be implemented during the period 2020-2021, and will thus be further considered by Member States in the Programme and Budget for 2020-2021.

15. Each project includes a task focusing on overall management, typically funded through the regular budget, covering coordination, oversight and management of the implementation of the project, including supplies, resource allocation and general expenditures. Where necessary, projects include several sub-tasks specific to the implementation of the Nuclear Security Plan 2018-2021, which are expressed as sub-bullets, and will be carried out in accordance with the priorities of Member States expressed through the decisions and resolutions of the Agency Policy Making Organs. Text provided as sub-bullets under the tasks explains the activities intended to be implemented in greater detail than is available in the Programme and Budget document GOV/2017/1.

16. Objectives, outcomes and performance indicators for the Nuclear Security Plan 2018-2021 as well as for each of the sub-programmes described in this section are those set out in Programme 3.5 of the Programme and Budget for the relevant biennium (2018-2019 or 2020-2021). The objectives, outcomes and performance indicators for the period 2020-2021 will continue to be further elaborated in consultation with Member States.

C.1. Priority and cross-cutting issues

17. As reaffirmed by Member States, the Agency plays a central role in international nuclear security through:

- Developing comprehensive nuclear security guidance publications and, on request, providing assistance to Member States in order to facilitate their implementation;
- Facilitating international cooperation in supporting the efforts of States to fulfil their responsibilities to ensure the security of civilian nuclear and other radioactive material; and

- Strengthening and improving cooperation in, and coordination of, international efforts in the field of nuclear security in order to avoid duplication and overlap.

18. Member States, through the Ministerial Declaration adopted in December 2016, have identified a number of topical areas as priorities for the Agency's work. Member States have recognised physical protection as a key element in nuclear security, and support the further development of the Agency's assistance in areas of importance to States such as nuclear forensics, nuclear security detection architecture and response, information security, transport security and insider threat mitigation, recognizing the need for appropriate measures to protect sensitive information in achieving this objective. In particular, Member States support the Agency's efforts to assist States to strengthen computer security, recognizing the threat of cyber-attacks against nuclear installations.

19. Member States have also encouraged the Agency to: continue its efforts to promote universalization of the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material (CPPNM); promote and facilitate technical exchanges of knowledge, experiences and good practices on the use and security of high activity radioactive sources throughout their life-cycle; and to strengthen nuclear security culture and provide education and training opportunities in nuclear security, including by using national Centres of Excellence and Nuclear Security Training and Support Centres, also those with regional roles, so that the current and future generations of nuclear security professionals are well equipped to meet the challenge of creating and maintaining effective and responsive national nuclear security regimes. Moreover, Member States have underlined the importance of keeping pace with evolving challenges and threats to nuclear security using scientific and technological innovations and have affirmed the important role of science, technology and engineering in understanding and addressing such challenges and threats.

20. A number of Agency activities in nuclear security addressed in this plan cut across projects and sub-programmes. Some of these elements are repeated in this section under multiple sub-programmes or projects to reflect their cross-cutting nature, and in other cases, they are addressed only under one sub-programme or project.

21. The importance of physical protection as key element of nuclear security has been recognised through the implementation of activities on a cross cutting basis such as the development of e-learning modules on physical protection related topics and the promotion of the universalisation of the Amendment to the CPPNM.

22. Another example of a cross-cutting activity is computer security. While the Agency's activities in computer security are included under Section B.2 (Information Management) due to the structure currently in place for the nuclear security programme, computer security is also an important element of nuclear security for nuclear and other radioactive materials and associated facilities (Section B.3) and is important to detecting criminal or intentional unauthorized acts involving nuclear and other radioactive material out of regulatory control and responding to nuclear security events (Section B.4).

23. A third example of a cross-cutting activity emphasized by Member States is support provided by the Agency to States upon request in developing and strengthening their legal and regulatory frameworks related to nuclear security. This support is described under multiple sub-programmes and is repeated under each project in which training and assistance in this area is provided. In addition, section B.5 highlights work done by the Agency to promote and facilitate the exchange of information on the implementation of the CPPNM and its 2005 Amendment as well as of the nuclear security provisions of other binding and non-binding international instruments.

24. Agency advisory services such as International Physical Protection Advisory Service (IPPAS) and International Nuclear Security Advisory Service (INSServ) missions are by nature cross-cutting, as they advise on many linked aspects of nuclear security in a State and contain modules addressing

various topic areas. While cross-cutting, they are addressed in this Plan under the most relevant sub-programmes and projects.

C.2. Information Management

C.2.1. Background

25. The Agency's nuclear security programme includes projects focused on the management and sharing of information, as appropriate, of nuclear security information voluntarily provided by States. In addition, the proper protection of nuclear security information in States is enhanced through the provision of guidance and training in information security and computer security to States, upon request. This includes the Agency's work to raise awareness of the threat of cyber-attacks, to help enhance States' technical capabilities, to develop guidance and to provide training in computer security.

C.2.2. Projects and main planned outputs

26. Agency work in this sub-programme is carried out under three projects: assessing nuclear security needs and priorities; information sharing; and information and computer security and information technology services. Tasks to be implemented during the period 2018-2021 in response to the priorities of Member States as expressed through those decisions and resolutions of the Agency Policy Making Organs are listed in the following sub-sections. The execution of these tasks will be subject to the availability of resources and will be modified to respond to changes in Member State priorities as expressed through those decisions and resolutions of the Agency's Policy Making Organs.

Assessing nuclear security needs, and priorities

27. The Agency assists individual States that so request to identify and address national nuclear security needs through the development and implementation of Integrated Nuclear Security Support Plans (INSSPs) and the development of self-assessment tools. Tasks under this project for the 2018-2021 time period include the following:

- Overall management and operations to support the identification of nuclear security needs in States concerned (INSSPs), including:
 - Continuing to develop and promote self-assessment methodologies and approaches that are based on IAEA Nuclear Security Series documents and can be used by States on a voluntary basis to ensure effective and sustainable national nuclear security infrastructure; and
 - Assisting States, upon request, in the development of INSSPs and in the development of implementation strategies of their INSSPs in close consultation with the concerned States.

In the course of implementing the NSP, in response to requests from Member States, the project will expand to encompass:

- Further development, in close consultation with Member States, and implementation of a voluntary mechanism to match States' requests for assistance with other States' offers of assistance, highlighting, in cooperation with the recipient State, the most urgent needs for assistance, with due regard to the confidentiality of information relevant to nuclear security.

28. Main planned outputs in this area for the period 2018-2021 include:

- Development and implementation of INSSPs, where appropriate; and
- Further development, improvement and maintenance of voluntary self-assessment mechanism or tool for States' use.

For the period 2020-2021, outputs will also include:

- Completion and implementation of a voluntary mechanism to match State' requests for assistance with other States' offers of assistance.

Information sharing

29. Information sharing mechanisms managed by the Agency could provide valuable services to States. While the use of these services is voluntary in nature, they may facilitate information exchange and the building of confidence. Tasks under this project for the 2018-2021 time period include the following:

- Overall management and support of activities relevant to nuclear security information exchange, including:
 - Promoting the use of information sharing mechanisms managed by the Agency with the consent of States, such as:
 - Information provided in accordance with States Parties' obligations under the CPPNM and its 2005 Amendment;
 - Information provided through voluntary commitments such as the ITDB; and
 - Information provided voluntarily as part of the IPPAS good practices database;
 - Further facilitating, including through Designated Points of Contact, the exchange of information including through secured electronic access to information contained in the Incident and Trafficking Database (ITDB); and
 - Outreach to Member States who do not participate in the ITDB to encourage further participation.

30. Main planned outputs in this area for the period 2018-2021 include:

- Information sharing, as appropriate: Promoting the use of mechanisms managed by the Agency for the:
 - Dissemination of information provided by States Parties in accordance with the CPPNM and its 2005 Amendment, ; and
 - Sharing of nuclear security related information, with the consent of reporting States;
- Technical meetings: Convening of technical meetings of the ITDB points of contact; and
- Outreach activities to support Member States encouragement to all States to join the ITDB in support of their national efforts to prevent, detect and respond to radioactive and nuclear materials that may have fallen out of regulatory control.

Information and computer security, and information technology services

31. Information and computer security continues to be important for States in improving their nuclear security capabilities. The Agency's work in this area includes providing States, upon request, with guidance and training, the initiation and management of coordinated research projects on information and computer security and support for needed information technology services to facilitate Agency projects. Tasks under this project for the 2018-2021 time period include the following:

- Overall management and operations to support States to implement security for information and computer systems for nuclear security;
- Development of guidance publications within the IAEA Nuclear Security Series in the area of computer security;
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including:
 - Maintenance of a comprehensive and secure information management system to provide the Secretariat with accurate, relevant information to support its activities for assisting States;
 - Assisting States, upon request, in the area of computer security by providing training courses, exercises and hosting further expert meetings specific to the computer security of nuclear facilities; and
 - Improving international cooperation by bringing together experts and policy-makers to promote the exchange of information and experiences in computer security;
- Coordinated research projects, as requested by Member States; and
- Support for the development, maintenance and deployment of nuclear security information technology tools used for implementing and tracking assistance to States, producing financial reports to donors and providing web-based portals for nuclear security information exchange.

32. Main planned outputs in this area for the period 2018-2021 include:

- Information and computer security guidance publications: Completed information and computer security guidance publications in the IAEA Nuclear Security Series;
- Expert meetings: Hosting of expert meetings specific to the computer security of nuclear facilities, such as consultancies and technical meetings as necessary to stay abreast of developments in computer security for nuclear security and to develop further guidance;
- Training courses and workshops: Completed training courses and workshops provided to states on an inter-regional, regional or national basis, upon request;
- Technical assistance for States: Technical assistance provided to States in computer security, such as training courses and expert meetings, upon request; and
- Coordinated research projects as requested by Member States.

C.3. Nuclear Security of Materials and Associated Facilities

C.3.1. Background

33. Where appropriate and upon request, the Agency provides assistance and advice to States to help them establish institutional infrastructure related to the nuclear security of materials and associated facilities.

C.3.2. Projects and main planned outputs

34. Agency work in this sub-programme is carried out under four projects, corresponding to four areas of expertise relevant to nuclear security of nuclear and other radioactive materials and associated facilities and activities: nuclear security approaches for the whole nuclear fuel cycle; enhancing nuclear material security using accounting and control; upgrading security of radioactive material and associated facilities; and nuclear security in transportation of nuclear and radioactive material. Tasks to be implemented during the period 2018-2021, in response to the priorities of Member States as expressed through those decisions and resolutions of the Agency Policy Making Organs are listed in the following sub-sections. The execution of these tasks will be subject to the availability of resources and will be modified to respond to changes in Member State priorities as expressed through those decisions and resolutions of the Agency Policy Making Organs.

Nuclear security approaches for the whole nuclear fuel cycle

35. The Agency develops guidance and provides, upon request, training and assistance to States regarding the security of nuclear material and facilities, including for waste storage and decommissioned reactors. The Agency also provides, upon request, advisory services in this area and initiates and manages coordinated research projects to address emerging nuclear security issues identified by the Member States and help enhance States' technical capabilities. Tasks under this project for the 2018-2021 time period include the following:

- Overall management and operations in support of nuclear security activities implemented for the whole nuclear fuel cycle;
- Development of guidance publications within the IAEA Nuclear Security Series in the area of the physical protection of nuclear facilities;
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including:
 - Continuing work to assist States' efforts to:
 - Ensure the security of nuclear material under their control and associated facilities, including through training, and
 - Establish effective and sustainable national nuclear security regimes for security of nuclear materials and associated facilities;
 - Promoting international exchanges of experience, knowledge and good practices as regards ways to develop, foster and maintain a robust nuclear security culture compatible with States' nuclear security regimes, including by organizing an international workshop on nuclear security culture;

- Providing increased assistance to States, upon request, on the development and consolidation of a nuclear security culture, including through publishing guidance, providing training and related self-assessment and training materials and tools;
- Carrying out IPPAS missions, upon request, focusing on nuclear material and associated facilities, using experts made available to the Agency by Member States;
- Analyzing data and feedback from States to increase effectiveness of IPPAS missions, including good practices and lessons learned; and
- Coordinated research projects, as requested by Member States.

36. Main planned outputs in this area for the period 2018-2021 include:

- Comprehensive support including guidance, procedures and methodologies, including:
 - Projects arising from INSSPs;
 - Projects to assist States on the development and consolidation of a nuclear security culture, including through providing guidance, training, and self-assessment and training materials and tools;
 - Production of Nuclear Security Series guidance publications on security of nuclear material and associated facilities;
 - Provision of advisory services: Carrying out of IPPAS missions, upon request; and
 - Coordinated research projects, as requested by Member States.

For the period 2020-2021, outputs will also include:

- Organizing international workshops on nuclear security culture, as appropriate.

Enhancing nuclear materials security using accounting and control

37. The Agency develops guidance and provides training and assistance to States, upon request, for enhancing nuclear materials security using accounting and control. The Agency also initiates and manages coordinated research projects to address emerging nuclear security issues identified by Member States and help enhance States' technical capabilities. Tasks under this project for the 2018-2021 time period include the following:

- Overall management and operations in support of nuclear security activities implemented for enhancing nuclear materials security using accounting and control;
- Development of guidance publications within the IAEA Nuclear Security Series in the area of the nuclear material accounting and control for nuclear security purposes at facilities;
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including:
 - Assisting States to develop appropriate methodologies for accounting and control for nuclear security;

- Advising States on taking further preventive and protective measures against insider threats to enhance nuclear security, including through the use of nuclear material accounting and control for nuclear security purposes at facilities, including training;
- Continuing work to assist States' efforts to establish effective and sustainable national nuclear security regimes that support countering the insider threat and enhancing accounting and control for nuclear security purposes at facilities; and
- Coordinated research projects, as requested by Member States.

38. Main planned outputs in this area for the period 2018-2021 include:

- Comprehensive support including guidance, procedures and methodologies, including:
 - Production of Nuclear Security Series guidance publications on countering the insider threat and enhancing nuclear material accounting and control for nuclear security purposes at facilities;
 - Projects arising from INSSPs; and
 - Coordinated research projects, as requested by Member States.

Upgrading security of radioactive material and associated facilities

39. The Agency develops guidance and provides training and assistance to States, upon request, for the security of radioactive material and associated facilities, including the end-of-life management of radioactive material. The Agency also provides advisory services in this area and initiates and manages coordinated research projects to address emerging nuclear security issues identified by the Member States and help enhance States' technical capabilities. Tasks under this project include the following:

- Overall management and operations in support of nuclear security activities implemented for the security of radioactive material and associated facilities;
- Development of guidance publications within the IAEA Nuclear Security Series in the area of security of radioactive material and associated facilities;
- Activities undertaken, upon request, to support the implementation of the Nuclear Security Plan 2018-2021, including:
 - Assisting States to develop plans for the lifecycle management of disused radioactive sources and to meet the provisions of international instruments relevant to the security of radioactive material, such as the Code of Conduct for the Safety and Security of Radioactive Sources;
 - Continuing work to assist States' efforts to:
 - Ensure the security of radioactive material and associated facilities, including through the offer of assistance in meeting the provisions of Agency Nuclear Security Fundamentals and Recommendations when radioactive material is supplied by the Agency, and through the provision of such assistance, when requested, such as through training and the use of security by design for radiological devices and associated facilities; and

- Establish effective and sustainable national nuclear security regimes for the security of radioactive material and associated facilities;
- Supporting continued dialogue on the security of radioactive sources and disused radioactive sources, and promoting research and development in this field, upon request; and
- Continuing to carry out IPPAS missions, upon request, focusing on radioactive material and associated facilities, using experts made available to the Agency by Member States;
- Analyzing data and feedback from States to increase effectiveness of IPPAS missions, including good practices and lessons learned; and
- Coordinated research projects, as requested by Member States.

40. Main planned outputs in this area for the period 2018-2021 include:

- Capacity building: Support for capacity building in States, upon request;
- Production of Nuclear Security Series guidance publications on how to develop, enhance, implement and maintain a national nuclear security regime for radioactive material, associated facilities and associated activities;
- Provision of advisory services: Carrying out of IPPAS missions, upon request; and
- Upgrades of physical protection systems: Upgrading physical protection systems for radioactive material and associated facilities.

Nuclear security in the transport of nuclear and other radioactive material

41. The Agency develops guidance and provides training and assistance to States, upon request, for the security of nuclear and other radioactive material during transport. The Agency also initiates and manages coordinated research projects to address emerging nuclear security issues identified by the Member States and help enhance States' technical capabilities. Tasks under this project include the following:

- Overall management and operations in support of nuclear security activities implemented for the security of nuclear and other radioactive material in transport;
- Development of guidance publications within the IAEA Nuclear Security Series in the area of the secure transport of nuclear and other radioactive material;
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including continuing work to assist States' efforts to:
 - Ensure the security of nuclear and other radioactive material, provided that the requests are within the scope of the Agency's statutory responsibilities, focused on the secure transport of nuclear and other radioactive material, including through trainings and exercises; and
 - Establish effective and sustainable national nuclear security regimes for the secure transport of nuclear and other radioactive material;
- Coordinated research projects, as requested by Member States.

42. Main planned outputs in this area for the period 2018-2021 include:

- Training and practical assistance, including exercises for security in the transport of nuclear and other radioactive material, upon request by States;
- Assistance with the development of regulatory frameworks for transport security;
- Technical guidance, procedures and methodologies, including the production of IAEA Nuclear Security Series guidance on the secure transport of nuclear and other radioactive material, as well as methodologies to support States in drafting regulations; and
- Coordinated research projects, as requested by Member States.

C.4. Nuclear Security of Materials out of Regulatory Control

C.4.1. Background

43. Where appropriate and upon request, the Agency provides assistance to States to establish and sustain their capabilities for the detection of criminal or intentional unauthorized acts involving nuclear and other radioactive material out of regulatory control and the response to nuclear security events.

44. The Agency's work in this area also includes advisory services, such as INSServ, which provide opportunities for exchanges of views and good practices as well as advice on nuclear security measures.

C.4.2. Projects and main planned outputs

45. Agency work under this sub-programme is carried out under three projects: institutional infrastructure for nuclear and other radioactive material out of regulatory control; nuclear security detection and response architecture; and radiological crime scene management and nuclear forensic science. Tasks to be implemented during the period 2018-2021 in response to the priorities of Member States as expressed through those decisions and resolutions of the Agency Policy Making Organs are listed in the following sub-sections. The execution of these tasks will be subject to the availability of resources and will be modified to respond to changes in Member State priorities as expressed through those decisions and resolutions of the Agency Policy Making Organs.

Institutional infrastructure for material out of regulatory control

46. The Agency develops guidance and provides training and assistance, upon request, to help States to establish the institutional infrastructure needed with respect to nuclear and other radioactive material out of regulatory control. The Agency also provides advisory services in this area. Tasks under this project include the following:

- Overall management and operations in support of activities implemented to assist States in establishing and sustaining effective institutional infrastructure;
- Development of guidance publications within the IAEA Nuclear Security Series for nuclear security infrastructure; and
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including:

- Continuing work to assist States' efforts to:
 - Ensure the security of nuclear and other radioactive material through addressing the establishment of a national nuclear security infrastructure related to nuclear and other radioactive material out of regulatory control, and
 - Establish effective and sustainable national nuclear security regimes for addressing the establishment of a national nuclear security infrastructure related to nuclear and other radioactive material out of regulatory control;
- Continuing to carry out INSServ missions, upon request, to provide a general overview of the nuclear security regime in a State or a specific area of interest, using experts made available to the Agency by Member States; and
- Analyzing data and feedback from States to increase effectiveness of INSServ missions, including good practices and lessons learned.

47. Main planned outputs in this area for the period 2018-2021 include:

- Support for States to establish a national nuclear security infrastructure related to nuclear and other radioactive material out of regulatory control;
- Assistance in capacity building: Building human and technological capacity to maintain an effective infrastructure to discharge their responsibilities related to nuclear and other radioactive material out of regulatory control;
- Projects arising from INSSPs;
- Provision of advisory services: Carrying out of INSServ missions, upon request; and
- Nuclear Security Series Guidance: Production of Nuclear Security Series guidance on establishing and sustaining an effective institutional infrastructure for nuclear and other radioactive material out of regulatory control.

Nuclear security detection and response architecture

48. The Agency develops guidance and provides training and assistance to States, upon request, to establish and sustain their capabilities to detect criminal or intentional unauthorized acts involving nuclear and other radioactive material out of regulatory control and respond to nuclear security events. The Agency also initiates and manages coordinated research projects in this area to address emerging nuclear security issues identified by Member States and help enhance States' technical capabilities. Tasks under this project include the following:

- Overall management and operations in support of activities implemented to assist States in detecting of nuclear and other radioactive material and responding to nuclear security events as well as assistance provided for nuclear security at major public events;
- Development of guidance publications within the IAEA Nuclear Security Series for nuclear security detection and response architecture;
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including

- Continuing work to assist States' efforts to:
 - Ensure the security of nuclear and other radioactive material through addressing detection of criminal or intentional unauthorized acts involving nuclear and other radioactive material out of regulatory control and response to nuclear security events, including through training, and
 - Establish effective and sustainable national nuclear security regimes for addressing detection of criminal or intentional unauthorized acts involving nuclear and other radioactive material out of regulatory control and response to nuclear security events; and
 - Coordinated research projects, as requested by Member States.
49. Main planned outputs in this area for the period 2018-2021 include:
- Technical support for States to establish detection and response measures, including:
 - Development of guidance and training to support Member States' encouragement that they organize exercises to strengthen their national capacities to prepare for and respond to nuclear security events; and
 - Development of guidance and training for building a nuclear security detection architecture;
 - Assistance in capacity building and installation of radiation detection equipment;
 - Projects arising from INSSPs;
 - Nuclear Security Series guidance: Production of Nuclear Security Series guidance for nuclear security detection and response; and
 - Coordinated research projects, as requested by Member States.

Radiological crime scene management and nuclear forensic science

50. The Agency develops guidance and provides training and assistance to States, upon request, on radiological crime scene management and nuclear forensic science. The Agency also initiates and manages coordinated research projects to address emerging nuclear security issues identified by Member States and help enhance States' technical capabilities, while ensuring that sensitive information is adequately protected. Tasks under this project include the following:

- Overall management and operations in support of activities implemented to assist States in building their national capacity in managing a radiological crime scene, evidence collection and nuclear forensics examination in supporting law enforcement and nuclear security vulnerability assessments as required to investigate a nuclear security event;
- Development of guidance publications within the IAEA Nuclear Security Series for radiological crime scene management and nuclear forensics science;
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including:
 - Continuing work to assist interested States, through the provision of education and training in radiological crime scene management and nuclear forensic science with due regard to the principle of protection of sensitive information;

- Assisting States, if they have not yet done so, to consider establishing, where practical, national nuclear material databases or national nuclear forensics libraries in order to support the encouragement expressed by Member States; and
 - Coordinated research projects, as requested by Member States.
51. Main planned outputs in this area for the period 2018-2021 include:
- Assistance to States, upon request, to strengthen their capacity for radiological crime scene management and nuclear forensic science;
 - Nuclear Security Series guidance: Production of IAEA Nuclear Security Series guidance publications on radiological crime scene management and nuclear forensic science;
 - Nuclear Security Training Programme: A training programme on radiological crime scene management and nuclear forensic science;
 - Provision of advisory services: Carrying out of INSServ missions, upon request; and
 - Coordinated research projects, as requested by Member States.

C.5. Programme Development and International Cooperation

C.5.1. Background

52. The Agency's nuclear security programme supports the enhancement of international cooperation in nuclear security and of nuclear security globally and provides coordinated education and training programmes. The Agency also manages the Nuclear Security Fund, described in Section D of this Plan.

53. The activities of the Agency to enhance international cooperation in nuclear security are not limited to activities such as the continuing organization of Information Exchange Meetings, but also extend to the strengthening of coordination among States and other organizations upon request through the organization of a range of events and conferences. The Agency also provides representatives to meetings and conferences on nuclear security organized by other initiatives.

54. The Agency promotes universalisation of relevant legally binding instruments and commitment to non-binding instruments under Agency auspices, notably including activities undertaken in support of the CPPNM and its 2005 Amendment, as well as through the development of comprehensive guidance in the IAEA Nuclear Security Series according to the priorities set by Member States through the decisions and resolutions of the Agency Policy Making Organs and priorities as recommended by the NSGC, in order to support the encouragement expressed by Member States that they take into account, as appropriate, the relevant recommendations in the Nuclear Security Series, and make use of them at their national discretion in their efforts to strengthen nuclear security.

55. The Agency plays an important role in the provision of coordinated education and training programmes that strengthen capabilities in States to address and sustain nuclear security. This activity is not limited to the preparation of training courses, but also involves coordination through the maintenance of networks such as the International Nuclear Security Education Network (INSEN) and the network of Nuclear Security Support Centres (NSSCs).

C.5.2. Projects and main planned outputs

56. Agency work under this sub-programme is carried out under three projects: international cooperation on nuclear security networks and partnerships; coordinating nuclear security guidance and advice services; and education and training programmes for human resource development. Tasks to

be implemented during the period 2018-2021 in response to the priorities of Member States as expressed through those decisions and resolutions of the Agency Policy Making Organs are listed in the following sub-sections. The execution of these tasks will be subject to the availability of resources and will be modified to respond to changes in Member State priorities as expressed through those decisions and resolutions of the Agency Policy Making Organs.

International cooperation on nuclear security networks and partnerships

57. The Agency's work to facilitate international coordination on nuclear security between States and relevant organizations is not limited to reducing duplication of efforts, but also includes facilitating of information exchange on nuclear security and strengthening the international legal framework. Tasks under this project include the following:

- Overall management and operations in support of international cooperation, information exchange and promotion of the international nuclear security framework;
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including:
 - Convening nuclear security conferences, working groups, and other information and technical exchanges, including organizing an International Conference on Nuclear Security in the 2019-2020 timeframe;
 - Playing a central and coordinating role in nuclear security activities among international organizations and initiatives, taking into account their respective mandates and memberships, and working jointly, as appropriate, with relevant international and regional organizations and institutions, including through regular Information Exchange meetings and the coordination of cooperation and complementary activities between NSSCs;
 - Increased attention to any emerging nuclear security issues identified by Member States and identification of possible national responses through coordination and information exchange;
 - Continuing efforts to promote further adherence to the CPPNM and its 2005 Amendment, as well as assisting States Parties with the aim of its universalization, through assisting in the development of national legislative and regulatory frameworks and promoting and facilitating information exchange on implementation, including through organizing a review conference in accordance with Article 16, paragraph 1 of the 2005 CPPNM Amendment, , and CPPNM Points of Contact meetings; and
 - In consultation with Member States, considering ways of further promoting and facilitating the exchange, on a voluntary basis, of information on the implementation of nuclear security provisions of international instruments relevant to nuclear security.

58. Main planned outputs in this area for the period 2018-2021 include:

- Practical arrangements, contribution agreements and reports to the Agency Policy Making Organs, including:
 - Regular information exchange meetings; and
 - CPPNM Points of Contact meetings.

For the period 2020-2021, outputs will also include:

- An International Conference on Nuclear Security; and
- A conference of States Parties to the Amendment to the CPPNM, to review the implementation of the Convention and its adequacy as concerns the preamble, the whole of the operative part and the annexes in the light of the then prevailing situation.

Education and training programmes for human resource development

59. The Agency develops education and training programmes for human resource development and coordinates the development and maintenance of a suite of training courses based on Agency nuclear security guidance. Tasks under this project include the following:

- Overall management and operations in support of education and training;
- Development of guidance publications within the IAEA Nuclear Security Series for education and training; and
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including:
 - Development of a suite of training courses, based on IAEA Nuclear Security Series guidance, and making these training courses available for delivery by NSSCs;
 - Continue training and train-the trainers programmes taking account of the IAEA Nuclear Security Series and adapting the courses as appropriate, within the Agency's mandate, to meet the needs of Member States;
 - Promoting the NSSC Network to support international adoption of the Agency's human resource development efforts following the systematic approach to training process and holding Agency courses and exercises at NSSCs where possible; and
 - Assisting States in developing NSSCs to facilitate regional and international cooperation in human resource development, technical support and scientific support for nuclear security.

60. Main planned outputs in this area for the period 2018-2021 include:

- Modular training programmes covering all aspects of nuclear security following a systematic approach to training; and
- Textbooks and course materials on nuclear security, including for a master's degree in accordance with the revised IAEA Nuclear Security Series No 12. The material will be made freely available, through the NUSEC portal, to academic institutions who are members of the INSEN network for them to use either as part of an existing course or for new courses.

For the period 2020-2021, outputs will also include:

- E-learning courses in all official languages.

Coordinating nuclear security guidance and advice services

61. While the production of international consensus guidance in the IAEA Nuclear Security Series is covered under other sub-programmes, the Agency also coordinates the development of the Series according to the priorities set by Member States through the decisions and resolutions of the Agency

Policy Making Organs as well as priority-setting by the NSGC. In addition, the Agency supports work to consider future directions for Agency guidance and assistance in nuclear security, in response to requests from Member States, with a particular focus on future scientific and technical innovations that may result in future guidance or coordinated research projects. Tasks under this project include the following:

- Overall Management and operations in support of coordinating nuclear security guidance and advice services;
- Support of the Director General's Advisory Group on Nuclear Security (AdSec) and the NSGC, including:
 - Further developing the IAEA Nuclear Security Series Guidance, according to the priorities set by Member States through the decisions and resolutions of the Agency Policy Making Organs and priorities as recommended by the NSGC; and
 - Facilitating, while recognizing the distinction between nuclear safety and nuclear security and in close cooperation with Member States, a coordination process to address their interfaces and developing safety and security publications and fostering culture accordingly;
- Activities undertaken upon request to support the implementation of the Nuclear Security Plan 2018-2021, including:
 - Supporting efforts of Member States to take into account, as appropriate, the relevant recommendations in the Nuclear Security Series; and
 - Undertaking further efforts to enable representatives of all Member States to participate in the work of the NSGC.

62. In the course of implementing the NSP, in response to requests from Member States, the project will expand to encompass:

- Seeking to enhance the Agency's technical capabilities and keeping abreast of scientific and technological innovations with a view to confronting current and evolving challenges and risks to nuclear security.

63. Main planned outputs in this area for the period 2018-2021 include:

- Expert advice to the Director General on the Agency's nuclear security programme and relevant issues; and
- Nuclear security guidance publications approved by Member States.

For the period 2020-2021, outputs will also include:

- Activities addressing current and evolving challenges and risks to nuclear security.

D. Programme Management

D.1. Programme Management and Resources

64. The Secretariat will implement the actions called for in this Plan in a prioritized manner within available resources.

65. Resource requirements for 2018 and 2019 are set out in document GC(61)/4, The Agency's Programme and Budget 2018-2019. The regular budget primarily funds staff costs to support the implementation of those activities designed to benefit the greatest number of Member States. As assistance is provided at the request of States, the actual resources required for implementation of the Plan over the four years will depend on the number and complexity of requests received. The Secretariat will provide further information in the course of the implementation of the Plan.

66. Member States have emphasised the need to continue providing appropriate technical, human and financial resources, including through the Nuclear Security Fund, for the Agency to implement its nuclear security activities and to enable the Agency to provide, upon request, the support needed by Member States.

67. The Agency will continue to rely on voluntary contributions to the Nuclear Security Fund to implement the majority of programme activities under the Plan. The Secretariat is prepared to address possible future reductions in contributions to the Nuclear Security Fund and the consequences of such reductions on the implementation of the Plan.

68. The Secretariat has taken note of different views and concerns expressed by Member States on resourcing for the implementation of activities set out in this Plan, such as on the importance of good programme management and reliable resources through the Nuclear Security Fund; and, as appropriate, through the Regular Budget which primarily funds staff costs.