

# **The International Regime on the Physical Protection of Nuclear Material and the Amendment to the Convention on the Physical Protection of Nuclear Material**

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## **A. Abstract**

1. On 8 July 2005, States Parties to the Convention on the Physical Protection of Nuclear Material (the “convention”), adopted by consensus an “amendment” to the convention.
2. The amendment to the convention represents the culmination of work that had been progressing for a number of years at the International Atomic Energy Agency (IAEA). It is a major achievement – another milestone in international efforts to improve nuclear security and reduce the vulnerability of nuclear material and nuclear facilities to crime and terrorism.
3. This paper provides an overview of the instruments that comprise the physical protection regime, and gives account of the scope of the present convention and the efforts to strengthen it. It also identifies some of the significant changes introduced by the amendment to the convention.

## **B. The Physical Protection Regime**

4. Physical protection against the theft or unauthorised use of nuclear material and against the sabotage of nuclear material and facilities by individuals or groups of persons has become a matter of increased national and international concern. Although the responsibility for establishing and operating an appropriate physical protection regime for nuclear material and facilities under the jurisdiction of a state rests entirely with the government of that state, it should not be a matter of indifference to other states whether and to what extent that responsibility is fulfilled. In fact, the effectiveness of physical protection measures in one state also depends on the taking by other states of adequate measures to deter or defeat hostile actions against nuclear facilities and nuclear material. International cooperation in this field has therefore become more and more relevant.
5. In simple terms, the “physical protection” of nuclear material can be described as a set of legal, administrative and technical measures, including physical barriers, to “physically protect” such material.

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6. The present convention and its amendment is a part of a set of rules – the overall objective of which is to have a strong physical protection regime, one in which security is everywhere and at an acceptable level. This regime also includes basic guidelines for the establishment of national physical protection systems which were developed within the IAEA, in particular, the Physical Protection of Nuclear Material and Nuclear Facilities,<sup>1</sup> and the Physical Protection Objectives and Fundamental Principles.<sup>2</sup>

*(i) The Physical Protection of Nuclear Material and Nuclear Facilities*

7. IAEA document “The Physical Protection of Nuclear Material and Nuclear Facilities”, originated as “Recommendations for the Physical Protection of Nuclear Material” prepared by a panel of experts convened by the Director General and published by the IAEA in 1972.<sup>3</sup>

8. The latest revision of this document [INFCIRC/225/Rev.4(Corrected)] reflects the recommendations of national experts to improve the structure and clarity of the document and to take account of improved technology and international and national practices.<sup>4</sup> The recommendations included in INFCIRC/225/Rev.4(Corrected) are intended to apply to the physical protection of nuclear material in use, storage and transport, whether domestic or international and whether peaceful or military.

9. The document provides recommendations on the elements of a state’s system of physical protection of nuclear material and nuclear facilities, and on the requirement for a state’s legislation in this field. It also specifies requirements for physical protection against unauthorised removal of nuclear material in use and storage and against sabotage of nuclear facilities and nuclear material during use and storage and of nuclear material during transport. In addition, it includes a table of categorisation of nuclear materials for determining the appropriate level of physical protection measures.

10. While these recommendations are provided for consideration by the competent authorities in states and as such are not mandatory, an undertaking relating to physical protection has been included in the IAEA Project and Supply Agreements and in the Revised Supplementary Agreement for the Provision of Technical Assistance by the IAEA, since the early 1980s. Through this mechanism, states are obliged to take all measures necessary for the physical protection of nuclear material, equipment and materials relating directly to the assistance provided by or through the IAEA.

*(ii) The Physical Protection Objectives and Fundamental Principles*

11. The Physical Protection Objectives and Fundamental Principles (the Objectives and Fundamental Principles) were prepared by the IAEA Secretariat with the assistance of Member States’

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1. IAEA document INFCIRC/225/Rev. 4(Corrected).

2. IAEA document GC(45)/INF/14.

3. These recommendations were revised by a group of experts in cooperation with the IAEA Secretariat, and the revised version was published in 1975 in the INFCIRC series. The document was subsequently revised four times in 1977, 1989, 1993 and 1997.

4. In particular, the revised document includes a chapter which provides specific recommendations related to sabotage of nuclear facilities and nuclear material. As a result of this addition, the title was changed to “The Physical Protection of Nuclear Material and Nuclear Facilities”.

physical protection experts pursuant to a recommendation of the Working Group of the “Informal Open-Ended Expert Meeting to Discuss Whether there is a Need to Revise the Convention [...]” convened by the Director General in 1999.<sup>5</sup>

12. In September 2001, the IAEA endorsed these “Physical Protection Objectives and Fundamental Principles” for publication as a “Security Fundamentals” document, “as a step towards strengthening the physical protection regime, it being understood that their adoption would not lead to diminished interest on the part of Member States in becoming parties to the convention [...] and that they were not a substitute for the convention or for the recommendations in [the aforementioned IAEA] document INFCIRC/225/Rev.4 (Corrected)”.<sup>6</sup>

13. The Objectives and Fundamental Principles are based on the recommendations, concepts and terminology contained in the aforementioned IAEA document INFCIRC/225/Rev.4(Corrected). The Objectives and Fundamental Principles are intended for nuclear material in use and storage, and during transport, and for nuclear facilities using or storing such materials. The Objectives and Principles provide the basic elements that states need to take into account when developing their national regimes for preventing the theft, misuse or sabotage of nuclear material and facilities.

14. As concerns the relationship between the convention and the Objectives and Fundamental Principles, it is noted in a later section of this paper that the Final Report of the Working Group recommended that “the well-defined amendment” of the convention should cover, *inter alia*, the content of these Objectives and Fundamental Principles.

### ***(iii) The Convention on the Physical Protection of Nuclear Material***

15. For some considerable time there was growing recognition of the need for co-operation between states to ensure adequate physical protection of potentially hazardous nuclear material. Even though the main responsibility in this area rested with the states concerned, it was suggested that it would be necessary for there to be an appropriate international legal instrument regulating state co-operation in this area.<sup>7</sup>

16. In light of the growing importance of the subject and the attention being paid to it, the Director General of the IAEA circulated for comment to all IAEA Member States, in June 1977, a draft

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5. The work of the Working Group and the Expert Meeting is described in a later section of this paper.

6. See IAEA document GOV/OR.1033, paras. 157-162.

7. This need was, *inter alia*, reflected in the declaration of the Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons in May 1975, which called upon all States engaging in peaceful nuclear activities to enter into such international agreements and arrangements as may be necessary to ensure the proper protection of nuclear material. Further recognition was also given in the Resolution of the IAEA General Conference in September 1975 (GC/XIX/RES/328), which called upon IAEA Member States and the Director General to consider ways and means of facilitating international co-operation in dealing further with problems of physical protection of nuclear facilities and materials which are common to Member States. Also, IAEA document “The Physical Protection of Nuclear Material” (INFCIRC/225) and the report of an Advisory Group on Physical Protection of Nuclear Material (which met in February 1977) recommended the conclusion of international agreements or conventions on cooperation among states in particular for the protection of nuclear material in international transport. It invited the Director General to consider, in consultation with Member States as appropriate, the initiation of a process for the preparation of an international convention on the physical protection of nuclear materials during international transport.

“Convention on Physical Protection of Nuclear Facilities, Material and Transports”, which had been prepared by the United States of America. This draft convention and the comments from 16 Member States were examined by governmental representatives convened at IAEA Headquarters, Vienna from 31 October to 10 November 1977 to consider the preparation of a convention on the physical protection of nuclear material.

17. Following two years of negotiations in which representatives of 58 states and the European Atomic Energy Community participated, the text of the convention was adopted on 26 October 1979, and opened for signature at Vienna and New York on 3 March 1980.<sup>8</sup> The convention entered into force on 8 February 1987.<sup>9</sup>

18. The present convention is the only international legally binding instrument by which states make specific undertakings for protecting nuclear material.

19. Strictly speaking, the convention has a threefold scope of application: the physical protection of nuclear material during international transport; the criminalisation of offences and international co-operation and information exchange.

(a) *Physical Protection of Nuclear Material during International Transport*

20. The first area covered by the convention refers to states’ commitments to protect nuclear material (e.g. plutonium, <sup>235</sup>U) during international transport (and during storage incidental to such transport).<sup>10</sup> For this purpose, the convention defines three categories of nuclear material,<sup>11</sup> according to which different levels of protection apply.<sup>12</sup> States commit themselves not to undertake or authorise the undertaking of such international transport unless assurances are provided that nuclear material will be protected at the required levels.<sup>13</sup>

21. Nuclear material in transit from one part of a States Parties’ territory to another, when passing through international waters or airspace, should also be protected at the prescribed levels.<sup>14</sup> For example, if a state wishes to carry a consignment of nuclear material intended to go beyond its own territory, the state would be required to ensure that such material would be “physically protected”, at the levels described by the convention, from the facility of the shipper in that particular state, until it arrives at a facility of the recipient in the state of ultimate destination. The different levels of protection are described in Annex I of the convention and refer to specific precautions, including constant surveillance by escorts and close communication with appropriate “response forces” and they are ensured through making prior arrangements between sender and receiver.

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8. The text of the convention was transmitted to the 23<sup>rd</sup> (1979) regular session of the IAEA General Conference, pursuant to paragraph 11 of the Final Act, as document INFCIRC/274. The text of the convention is now in INFCIRC/274/Rev.1, dated May 1980.

9. As of 2 September 2005 there were 115 States Parties (including Euratom) and 45 Signatories to the convention.

10. See Article 3 of the convention.

11. See Annex II of the convention.

12. See Annex I of the convention.

13. See paragraphs 1 and 2 of Article 4 of the convention.

14. See paragraph 4 of Article 4 of the convention.

(b) *Criminalisation of Offences*

22. The second area covered by the convention refers to states' undertakings to make the intentional commission of certain acts (e.g. theft or robbery of nuclear material, threat to use nuclear material to cause death and other ancillary offences such as attempts and participation in such acts) punishable offences under their national law,<sup>15</sup> to establish jurisdiction<sup>16</sup> over such offences and to detain<sup>17</sup> alleged offenders for the purpose of prosecution<sup>18</sup> or extradition. In this context, States Parties undertake to include those offences as extraditable offences in every future extradition treaty to be concluded between them. However in the absence of such an extradition treaty, the convention may be considered as the legal basis for extradition in respect of those offences.<sup>19</sup>

23. It should be noted that these "crime-related" provisions also apply to nuclear material used for peaceful purposes while in domestic use, storage and transport.

(c) *International co-operation and information exchange*

24. As a third subject area, the convention also promotes international co-operation. In particular, States Parties undertake to co-operate in the recovery and protection of stolen nuclear material, by sharing information on nuclear material in accordance with their national laws and in ensuring the return of nuclear material stolen or missing as consequence of unlawful taking.<sup>20</sup>

25. States Parties also undertake to identify and make known to each other, directly or through the IAEA, their central authority and point of contact having responsibility for physical protection of nuclear material and for coordinating recovery and response operations in the event of unauthorised removal, use or alteration of nuclear material or in the event of a credible threat thereof.<sup>21</sup>

26. States Parties also commit themselves to co-operate and consult with each other, directly or through intergovernmental organisations, with a view to obtaining guidance on aspects related to the design, maintenance and improvement of systems of physical protection of nuclear material in international transport.

27. Finally, States Parties undertake to afford one another the greatest measure of assistance in connection with criminal proceedings brought in respect of the relevant offences, including the supply of evidence at their disposal necessary for the proceedings. In all such cases, however, the law of the state requested to provide assistance shall apply.<sup>22</sup>

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15 See Article 7 of the convention.

16 See Article 8 of the convention.

17 See Article 9 of the convention.

18 See Article 10 of the convention.

19 See paragraphs 1 and 2 of Article 11 of the convention.

20 See Article 5 of the convention.

21 See paragraph 1 of Article 5 of the convention.

22 See Article 13 of the convention.

*(d) Review and amendment of the convention*

28. Lastly, the convention has two provisions that deal with its review and amendment: Articles 16 and 20, respectively. Concerning the review of the convention pursuant to Article 16, a Review Conference five years after its entry into force was held at IAEA Headquarters, Vienna from 29 September to 1 October 1992. Thirty-five of the States Parties at that time attended this Review Conference.

29. The 1992 Review Conference unanimously expressed its full support for the convention and urged all states to take action to become a party to the convention. The Conference reaffirmed that the convention provided a sound basis for the physical protection of the transport of nuclear material, the recovery and return of any stolen material, and the application of sanctions against any person who may commit criminal acts involving nuclear material. It concluded at that time, however, that no changes to the convention were needed.

**C. Efforts to strengthen the convention**

30. Nonetheless, in the years following the 1992 Review Conference, questions relating to the adequacy of the convention began to arise. Notably, as mentioned above, there was no commitment by States Parties to protect nuclear material in domestic use, storage and transport. In addition, there was no commitment regarding the protection of nuclear material and nuclear facilities against sabotage.

*(i) Informal Open-ended Expert Meeting to discuss whether there is a need to revise the convention*

31. In light of comments made during the meetings of the IAEA Board of Governors and taking into account the recommendations in 1999 of the Senior Expert Group for the Review of the IAEA's Programme of Activities, the Director General convened, from 15 to 19 November 1999, an "Informal Open-ended Expert Meeting to discuss whether there is a need to revise the convention [...]" (the Expert Meeting). The Director General requested these experts to provide their views on the basic question of whether there was a need to revise the convention.

32. The name of the Expert Meeting reflects the fact that at that time not all states were convinced of this "need". Therefore it was agreed that before embarking in any amendment process as foreseen in Article 20 of the convention, the question as to "whether there was a need to revise the convention" required answering.

33. To facilitate its work, the Expert Meeting decided to establish an open-ended Working Group to examine all relevant issues for reaching a conclusion on the matter. This Working Group took fifteen months and four meetings<sup>23</sup> to submit in January 2001, its Final Report<sup>24</sup> to the Expert Meeting. Its

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23. The first meeting: 22-24 February 2000; the second meeting 26-30 June 2000; the third meeting 20-24 November 2000; and the fourth meeting 29 January-2 February 2001.

24. The Final Report of the Working Group was circulated under a Note Verbale by the IAEA Secretariat to all States Parties of the convention and to Member States in March 2001.

Final Report identified several recommendations intended “to promote further the effective implementation and improvement of physical protection worldwide.”<sup>25</sup>

34. Following the submission of the Working Groups’ Final Report, the Expert Meeting at its second meeting held from 21 to 23 May 2001, adopted its own Final Report,<sup>26</sup> in which it concluded that there was “a clear need to strengthen the international physical protection regime” and that a spectrum of measures should be employed – including the drafting of a well-defined amendment to strengthen the convention, to be reviewed by States Parties with a view to determining whether it should be submitted to a Conference to consider the amendment, in accordance with Article 20 of the convention.

35. In recommending that a “well-defined amendment” be prepared by a group of legal and technical experts, the Final Report of the Expert Meeting indicated the subjects that should be covered. This list included:

- the extension of its scope to cover, in addition to nuclear material in international nuclear transport, domestic use, transport and storage of nuclear materials, as well as protection of nuclear material and facilities from sabotage;
- the importance of national responsibility for physical protection;
- the importance of protection of confidential information;
- (as mentioned earlier) the incorporation of the Physical Protection Objectives and Fundamental Principles; and
- relevant definitions.

36. At the same time, the Expert Meeting also indicated the subjects that should clearly not be covered. This list included:

- a requirement to submit reports to the international community on the implementation of physical protection;
- a peer review mechanism;<sup>27</sup>
- a mandatory application of INFCIRC/225 e.g. through direct reference or through “due consideration”;

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25. The Working Group made the following four recommendations to the Expert Meeting: A. Strengthen the Convention on the Physical Protection of Nuclear Material; B. Prepare a resolution by the General Conference; C. Endorse Security Fundamentals; and D. Improve IAEA Programmes. It should be noted that while there was support in the Working Group for each recommendation, there was not universal commitment to each recommendation.

26. The Final Report of the Expert Meeting was circulated by the Secretariat as an attachment to a Note, dated 3 August 2001 (Secretariat 2001/Note 18) to all States Parties to the convention and to Member States of the IAEA.

27. As provided, for example, under the Convention on Nuclear Safety (see IAEA document INFCIRC/449, 5 July 1994) and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (see IAEA document INFCIRC/546, 24 December 1997).

- a mandatory international oversight of physical protection measures;
- nuclear material and nuclear facilities for military use.

37. By preparing a “well-defined amendment” before the formal amendment process as mandated by Article 20 of the convention, States Parties aimed at limiting as much as possible the introduction of “undesirable” subjects at a Conference to consider the amendment.

**(ii) *Open-ended Group of Legal and Technical Experts to prepare a draft amendment to the convention (the Group)***

38. On 6 September 2001, only three days before 9/11, in response to the recommendation of the Expert Meeting, the IAEA Director General formally convened an Open-ended Group of Legal and Technical Experts to prepare a draft amendment aimed at strengthening the convention (the Group).<sup>28</sup>

39. This Group held six meetings in total and took two years and three months to conclude its work. At its final meeting, held on 14 March 2003, the Group adopted by consensus its Final Report (which included three attachments)<sup>29</sup> and submitted it to the IAEA Director General. With the submission of that Final Report, the Group completed the task for which it was established.

40. In light of the aforementioned subjects that the Group should and should not cover in the drafting of a “well-defined amendment” to the convention, the Group was able to agree on a significant number of possible amendments. In particular, the Group agreed on the following possible amendments:

- the extension of the scope of the convention to cover the physical protection of nuclear facilities, and a consequential amendment of the title;
- a new article setting out the purposes of the convention;
- two definitions for “sabotage” and “nuclear facilities”;
- provisions to reflect the extension of scope, the importance of national responsibility and the exclusion of nuclear material and nuclear facilities for military use;
- a new article to cover domestic use, storage and transport and the protection of nuclear material and nuclear facilities from sabotage and also to cover the Physical Protection Objectives and Fundamental Principles;
- a new paragraph to cover cooperation between states and also the IAEA in the case of a credible threat of sabotage of nuclear material or a nuclear facility, or in case of sabotage thereof;
- provisions on strengthening the protection of information received in confidence;

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28. The first meeting was held 3-7 December 2001. Subsequent meetings were held 11-15 March 2002, 17-21 June 2002, 2-6 Sept 2002, 4-8 November 2002 and 3-14 March 2003.

29. Attachment 1 set out possible amendments to be made to the convention. Attachment 2 reproduced the Opening statement by the Director General at the first meeting of the Group, on 3 December 2001. Attachment 3 comprised the Group’s Working Papers.

- new offences relating to sabotage, contributing to and organising or directing the commission of an offence and nuclear smuggling; and
- a new article relating to transfer of nuclear technology for peaceful purposes to strengthen physical protection of nuclear material and nuclear facilities.

41. However, the text prepared by the Group also contained in brackets a number of clauses on which the Group was unable to reach agreement. Primarily, there were three such issues:

- The first issue was one of the most debated and controversial. It concerned the explicit exclusion of activities of states' military forces in the conduct of official duties. Some experts were of the view that these activities should not be governed by the convention, since they were governed by other rules of international law and that the exclusion was in effect only a choice of law provision. Other experts did not want an explicit exclusion as this might leave gaps in the applicability of the convention as amended where such activities were not covered by other rules of international law. During the course of discussions on this issue two texts related to the activities of military forces were developed as options, complemented by a third option that no such related text should be included. All three options appeared bracketed in Attachment 1 to the Final Report. As noted later, it was decided at the Amendment Conference to include an exclusion provision.
- The second issue concerned the introduction into the text of the Fundamental Principles. Given the central importance of Fundamental Principles to the strengthening of the convention and to the task of the Group, a vast amount of effort was spent in seeking consensus on the precise way to cover these principles. The Group agreed that the Fundamental Principles should be kept together as a whole and their language should not be modified. However, concerning the introduction of the Fundamental Principles, two options remained: the first option, which received extensive support, involved a legal commitment to apply the Fundamental Principles, insofar as is reasonable and practicable; the second option, which received less support, introduced a legal commitment to be guided by the Fundamental Principles. This issue was resolved at the Amendment Conference by choosing the first option.
- The third issue concerned whether or not to include, in the relevant offences, a reference to "substantial damage to the environment". As noted later, it was agreed to extend the relevant offences to this type of damage.

42. Finally, the Final Report of the Group also identified a number of areas and proposals which were either objected to or not examined by the Group and consequently were not reflected in the proposed amendments.<sup>30</sup>

43. On 16 June 2003, the IAEA Director General circulated the Final Report of the Group to all States Parties to the convention for their consideration as to whether to initiate the procedure for the convening of an Amendment Conference in accordance with Article 20 of the convention.

**(iii) Amendments proposed by the government of Austria and 24 co-sponsoring states**

44. The Final Report of the Group, however, was just one of a number of steps towards a possible amendment to the convention. According to Article 20 paragraph 1 of the convention, to trigger the amendment process a State Party is required to propose amendments to the convention. The proposed amendments then need to be submitted to the IAEA Director General who must circulate them immediately to all States Parties. Only when a majority of States Parties request the Director General to convene a conference to consider the proposed amendments is the Director General required to invite all States Parties to attend such a conference which must begin not earlier than 30 days after the invitations are issued.<sup>31</sup>

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30. In particular, these concerned:

- A proposal by Mexico relating to extradition. The objectives of this proposal were, *inter alia*, to update the provisions of the convention on issues pertaining to legal assistance and to achieve an adequate coordination between the convention and the international legal instruments to combat terrorism (i.e. the International Convention for the Suppression of Terrorist Bombings and the International Convention for the Suppression of the Financing of Terrorism). The main part of this proposal was not objected to in substance, but its necessity was questioned. Therefore, the Group decided that further analysis was required. In the course of analysis, other proposals on extradition were made to include in the text provisions relating to political offences or offences inspired by political motives, and non-discrimination. Due to a lack of consensus, no decision was made in this regard.
  - A proposal to amend the provision concerning the review conference of the convention. The Group felt that such a review conference should explicitly exclude peer review mechanisms and a requirement to submit national reports to the international community on the implementation of physical protection. The Group agreed that nothing in the text required or implied peer review mechanisms or national reporting. A view was also expressed that the relevant provision of the convention was sufficient.
  - A proposal to include an additional article on amendments to the convention by simplified procedure was not examined by the Group.
  - A proposal to add language to clarify the scope of the physical protection regime of States Parties regarding nuclear material in international nuclear transport and to explain how the physical protection regime would relate to the existing convention provisions on international nuclear transport.
31. Article 20, paragraph 1 of the convention reads: “Without prejudice to Article 16 a State Party may propose amendments to this convention. The proposed amendment shall be submitted to the depositary who shall circulate it immediately to all States Parties. If a majority of States Parties request the depositary to convene a conference to consider the proposed amendments, the depositary shall invite all States Parties to attend such a conference to begin not sooner than thirty days after the invitations are

45. Further consultations were held among a number of States Parties on the outstanding issues as identified in the Final Report of the Group (see paragraph 41 above), in order to select which of the options to include in a proposal to the Director General for circulation and to trigger the amendment process. As a result of these consultations, some states finally agreed on a text.

46. Essentially, this text reflected the inclusion (and non-inclusion) of the major subjects recommended by the Expert Meeting in 2001 (see paragraphs 36 and 37 of this paper), as incorporated into the “well-defined amendment” prepared by the Group in 2003. In addition, it also included text concerning the aforementioned outstanding issues (for example, the introduction of the Fundamental Principles), in a form which it was felt that consensus could easily be reached amongst States Parties.

47. On 1 June 2004, the Director General of the IAEA received a letter from the Austrian Federal Minister of Foreign Affairs, proposing on behalf of the government of Austria and of the governments of Australia, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Finland, France, Greece, Hungary, Ireland, Italy, Japan, Lithuania, Luxembourg, Norway, Poland, Portugal, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland and the United States of America, amendments to the convention.

48. Pursuant to this letter, the Director General circulated to all States Parties on 5 July 2004, the proposed amendments. At the same time, the Director General requested confirmation as to whether he should as depositary, call for a conference to consider these proposed amendments.

49. By 19 January 2005 the Director General had received requests to convene such a conference from 55 States Parties, which represented the majority of States Parties to the convention. Accordingly, on 3 February 2005, the Director General, pursuant to paragraph 1 of Article 20 of the convention, invited all States Parties to participate in such a Conference.

#### **D. The Conference to consider proposed amendments to the convention and the amendment to the convention**

50. The Conference to consider and adopt proposed amendments to the convention (the Amendment Conference) was held at IAEA Headquarters, Vienna, from 4 to 8 July 2005.<sup>32</sup> Mr. D.B. Waller, Acting Director General of the Agency, opened the Conference and served as the Secretary-General of the Conference, as provided for in the Rules of Procedure<sup>33</sup> of the Conference. The Conference elected Prof. A. J. Baer (Switzerland) as president.<sup>34</sup>

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issued. Any amendment adopted at the conference by a two-thirds majority of all States Parties shall be promptly circulated by the depositary to all States Parties.”

32. A Preparatory Meeting for the Amendment Conference, attended by 58 Parties to the convention (including Euratom), was held from 4 to 7 April 2005. As reflected in the Agenda of the Meeting, some of the specific issues to be discussed during the meeting included several which arose from the draft Provisional Rules of Procedure of the Amendment Conference; for example the rules on the officers and the observers at the Conference and the rules concerning the quorum of, and voting, by Parties to the convention at, the Conference. The Preparatory Meeting also provided an opportunity for informal and non-binding consultations between States Parties to resolve further outstanding issues.

33. See CPPNM/AC/2 (4 July 2005).

34. The Conference also elected Mr. R.J.K. Stratford (United States of America), Ms. P. Espinosa-Cantellano (Mexico), Mr. P. Nieuwenhuys (Belgium), Mr. A.A. Matveev (Russian Federation), Ms. T. Feroukhi

51. Eighty-eight States Parties and the European Atomic Energy Community (Euratom) participated in the Conference.<sup>35</sup> Eighteen States not Party and three intergovernmental organisations participated as observers.<sup>36</sup>

52. While there were still some open issues at the start of the Amendment Conference, the Conference adopted by consensus an amendment to the convention on 8 July 2005. Delegates of 81 States Parties signed the Final Act of the Conference.<sup>37</sup>

53. Taking up from the threefold scope of application of the present convention, the amendment strengthens the international physical protection regime in the following main areas:

*(i) Objectives of the convention*

54. The objectives of the amended convention are now “to achieve and maintain worldwide effective physical protection of nuclear material used for peaceful purposes and of nuclear facilities used for peaceful purposes; to prevent and combat offences relating to such material and facilities worldwide; as well as to facilitate co-operation among States Parties to those ends.”

*(ii) Effective physical protection of nuclear material and of nuclear facilities used for peaceful purposes*

55. As provided for in the “well-defined amendment” prepared in 2003 by the Group and as foreseen in the recommendations of the Expert Meeting in 2001, the amendment extends the scope of the convention to cover the physical protection of nuclear material in domestic use, storage and transport and of nuclear facilities.<sup>38</sup>

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(Algeria), Mr. S.K. Sharma (India), Mr. T.A. Samodra Sriwidjaja (Indonesia) and Mr. Wu Hailong (China) as Vice-Presidents of the Conference.

35. Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Belarus, Belgium, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chile, China, Colombia, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Guatemala, Honduras, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Kenya, Korea Republic of, Kuwait, Latvia, Lebanon, Libyan Arab Jamahiriya, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Malta, Mexico, Monaco, Mongolia, Morocco, Mozambique, Namibia, Netherlands, New Zealand, Nicaragua, Norway, Oman, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Senegal, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sudan, Sweden, Switzerland, The Former Yugoslav Republic of Macedonia, Tunisia, Turkey, Turkmenistan, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay and the European Atomic Energy Community (Euratom).

36. Cambodia, Egypt, Ethiopia, Haiti, Iran, Iraq, Jordan, Kazakhstan, Malaysia, Myanmar, Nigeria, Saudi Arabia, South Africa, Syrian Arab Republic, Venezuela, Yemen, Zambia and Zimbabwe. Representatives of the following intergovernmental organisations participated in the Conference as observers: the United Nations, the IAEA and the League of Arab States.

37. The Final Act is deposited with the Director General of the IAEA. In accordance with paragraph 1 of Article 20 of the convention, the Director General, as depositary, circulated a certified copy of the Amendment to the convention to all States parties and Euratom on 25 July 2005.

38. During the Amendment Conference, it was proposed by Paraguay to amend the convention to apply to “all radioactive material and associated facilities.” Some States noted that the issue of security of

56. Also, as reflected in the text of the 2003 “well-defined amendment” and pursuant to the Expert Meeting recommendations of 2001 that an amendment to the convention should reflect the importance of national responsibility for physical protection, the amendment contains a new “core” undertaking by states to “establish, implement and maintain a physical protection regime applicable to nuclear material and facilities under [their] jurisdiction.”<sup>39</sup>

57. Further, the amendment introduces a legal commitment to have and implement a physical protection regime covering the Physical Protection Objectives, and introduces a legal commitment covering the Physical Protection Fundamental Principles. Through this, the aim of the physical protection regime is:

- protecting against theft and other unlawful taking of nuclear material;
- ensuring the implementation of measures to locate and, where appropriate, recover missing or stolen nuclear material;
- protecting nuclear material and nuclear facilities against sabotage; and
- mitigating or minimising the radiological consequences of sabotage.<sup>40</sup>

58. In implementing this undertaking, States Parties shall:

- establish and maintain an appropriate legislative and regulatory framework for physical protection;
- establish or designate a competent authority responsible for its implementation; and
- take other appropriate administrative measures necessary for the physical protection of such material and facilities.<sup>41</sup>

59. Further, in implementing the relevant obligations under the amendment, each State Party shall, without prejudice to any other provisions of the convention, “apply insofar as is reasonable and practicable” a number of Fundamental Principles of Physical Protection of Nuclear Material and

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radioactive material and associated facilities was being discussed by the IAEA Board of Governors and General Conference. The relevance of the Code of Conduct on the Safety and Security of Radioactive Sources, of the International Conference on the Safety and Security of Radioactive Sources, held 27 June-1 July 2005, in Bordeaux, France, of the Action Plan on Non Proliferation of Weapons of Mass Destruction, and of the Action Plan on Safety and Security of Radioactive Sources, both adopted by the G-8 at its Evian Summit in June 2003, were also mentioned. However the Conference, while noting the value of an international legally binding instrument on the safety and security of such material and facilities, agreed that the proposal went well beyond the scope of the convention, which was confined to nuclear material and nuclear facilities.

39. See Articles 2(2), 2(3) and 2A(1) of the amendment.

40. These provisions reflect the four objectives of physical protection as mentioned in paragraphs 11-14 of this paper. See new Article 2A(1)(a)-(d) of the amendment.

41. See new Article 2A(2)(a)-(c) of the Amendment.

Nuclear Facilities.<sup>42</sup> This particular way of drafting the chapeau of this provision was necessary in order to avoid weakening certain other obligations contained in other provisions of the convention.

60. Finally, it should be noted that a State Party, taking into account the nature of the material, its quantity and relative attractiveness and the potential radiological and other consequences associated with any unauthorised act directed against it and the current evaluation of the threat against it, may reasonably decide that nuclear material does not need to be subject to the established physical protection regime.<sup>43</sup> However, the amendment provides that “such nuclear material should be protected in accordance with prudent management practice”.<sup>44</sup> It should be mentioned that the current convention foresees a similar case for international transport of nuclear material in Annex II.

**(iii) *Prevention and combating of offences relating to nuclear material and nuclear facilities worldwide***

61. Under the present convention a State Party is required, *inter alia*, to make a punishable offence under its national law, the intentional commission of:

- an act without lawful authority which constitutes the receipt, possession, use, transfer, alteration, disposal or dispersal of nuclear material and which causes or is likely to cause death or serious injury to any person or substantial damage to property;
- a theft or robbery of nuclear material;
- an embezzlement or fraudulent obtaining of nuclear material; and
- an act constituting a demand for nuclear material by threat or use of force or by any other form of intimidation.

62. Convinced that offences relating to nuclear material and nuclear facilities are matters of grave concern, and that there was an urgent need to adopt appropriate and effective measures or to strengthen existing measures to ensure the prevention, detection and punishment of such offences, the amendment reflects States Parties’ agreement for the inclusion of new offences and the revision of the majority of existing offences under the convention. In particular, to avert the potential dangers posed by illicit trafficking, the unlawful taking and use of nuclear material and the sabotage of nuclear material and nuclear facilities, the amendment now introduces as punishable offences:

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42. See new Article 2A(3) of the Amendment. It is recalled that the Final Report of the Expert Meeting of 2001 recommended that one of subjects that should be covered in a “well-defined amendment” of the convention, was the incorporation of the Physical Protection Objectives and Fundamental Principles. In fact, during the meetings of the Open-ended Group of Experts a vast amount of effort was spent in seeking consensus on the precise way to cover these principles. While the Open-ended Group of Experts agreed that the Fundamental Principles should be kept together as a whole and their language should not be modified, the introduction of the Fundamental Principles into the text of the convention was an issue on which the Open-ended Group of Experts was unable to reach agreement prior to the Amendment Conference.

43. See new Article 2A(4)(a) of the amendment.

44. See new Article 2A(4)(b) of the amendment.

- the intentional commission of an act which constitutes the carrying, sending, or moving of nuclear material into or out of a state without lawful authority (i.e. the offence of nuclear smuggling (or illicit trafficking)); and
- an act directed against a nuclear facility, or an act interfering with the operation of a nuclear facility, where the offender intentionally causes, or where he knows that the act is likely to cause, death or serious injury to any person or substantial damage to property or to the environment by exposure to radiation or release of radioactive substances, unless the act is undertaken in conformity with the national law of the State Party in the territory of which the nuclear facility is situated.<sup>45</sup>

63. The amendment also introduces new ancillary offences of contributing to and organising or directing the commission of an offence.<sup>46</sup> Whereas the ancillary crimes of threat, attempt and participation were already covered by the present convention, the amendment further extends their application to the relevant main offences in the convention.

64. Further, the offences relating to an act constituting the unlawful taking of nuclear material<sup>47</sup>, an act directed against a nuclear facility<sup>48</sup> and a threat to use nuclear material<sup>49</sup> were expanded to include “substantial damage to the environment.”

65. Also, as indicated earlier, the question of defining an offence relating to an act directed against a nuclear facility, which causes or is likely to cause death or serious injury to any person or substantial damage to the environment “by exposure to radiation or release of radioactive substances” was also solved. Under the amendment, such an act would be considered as an offence only when the consequent damage i.e. death or serious injury to any person is caused (or is likely to be caused) “by exposure to radiation or release of radioactive substances”.<sup>50</sup> In this context, the question of what was meant by the additional language “unless the act is undertaken in conformity with the national law of the State Party in the territory of which the nuclear facility is situated” was also raised. States Parties agreed that this phrase should be understood as covering acts of authorised personnel (e.g. police, firemen, other authorities and operators) carrying out their duties, so as to ensure that such acts would not constitute an offence under national law.

66. Finally, as foreseen during the work of the Group and as outlined in paragraph 41 above, following considerable discussions at the Amendment Conference,<sup>51</sup> states agreed to include a

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45. A threat either to commit such an offence per se or to commit such an offence in order to compel a natural or legal person, international organisation or state to do or refrain from doing any act, is also an offence.

46. See new paragraphs (j) and (k) of Article 7.

47. See the amendments to paragraphs 1(a) of Article 7 of the amendment.

48. See the amendments to paragraphs 1(e) of Article 7 of the amendment.

49. See the amendments to paragraphs 1(g)(i) of Article 7 of the amendment.

50. See the amendment to paragraph 1(e) of Article 7 of the amendment.

51. During the discussions of the proposed subparagraph 4(b) of Article 2, one state (Mexico) proposed to replace the word “inasmuch” with the word “insofar”. In the broad exchange that took place, it was recognised that there was a substantive difference between both terms. Some delegations made it clear that the phrase “inasmuch” had at least two meanings in English, one of them is “to the extent that” and a second meaning is “because”. The state accepted the wording “inasmuch”, on the understanding that the text it considers acceptable is the text in Spanish. The same state also expressed a reservation on preambular paragraph 6 which is reflected in the summary records of the Conference.

provision that explicitly excludes from the scope of the convention “activities of armed forces during an armed conflict” and the “activities undertaken by military forces of a state in the exercise of their official duties, inasmuch as they are governed by other rules of international law”. This was only possible after the inclusion of corresponding language that confirmed that “Nothing in th[e] convention shall be construed as a lawful authorisation to use or threaten to use force against nuclear material or nuclear facilities used for peaceful purposes.”<sup>52</sup> It should be noted that the same provision was the subject of considerable discussion during the negotiations of the International Convention for the Suppression of Acts of Nuclear Terrorism (the Nuclear Terrorism Convention).<sup>53</sup>

**(iv) *Facilitating international cooperation and information exchange among states and the IAEA***

67. In light of a desire to strengthen further international cooperation to establish effective measures for the physical protection of nuclear material and nuclear facilities, States Parties agreed on amending the convention to provide, in particular, that:

- States Parties co-operate, to the maximum extent feasible, in the case of a credible threat of sabotage of nuclear material or a nuclear facility or in the case of sabotage thereof.<sup>54</sup> In this regard, on the basis of the information and requests received from States Parties, the IAEA may be required to exchange information and facilitate coordination and cooperation amongst States Parties concerned;<sup>55</sup>
- States Parties consult and co-operate, as appropriate, amongst themselves directly or through the IAEA<sup>56</sup> and other relevant international organisations, with a view to obtaining their guidance on the design, maintenance and improvement of their national system of physical protection of nuclear material in domestic use, storage and transport and of nuclear facilities.<sup>57</sup>

68. The IAEA will assume, pursuant to the amendment, certain functions in addition to those foreseen in the existing convention, such as the usual depositary functions.<sup>58</sup> The IAEA will carry out these additional functions on request, which include, *inter alia*, in addition to the two aforementioned amendments concerning co-operation between States Parties, the IAEA’s participation in the exchange

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52. See proposal made by China and incorporated as paragraph 4(c) of Article 2 of the Amendment.

53. See UN General Assembly Resolution A/RES/59/290, 15 April 2005.

54. States Parties’ coordination and cooperation in these areas will be implemented “through diplomatic or other agreed channels” and such cooperation will be “determined bilaterally or multilaterally by the States Parties concerned.” [see paragraph 3(d) of Article 5].

55. See the amendment to paragraph 3 of Article 5.

56. It should be noted that cooperation between States Parties and, as a consequence, requests for the IAEA to act as a facilitator is expected to be significant particularly due to States Parties’ undertakings under the amendments to Articles 2 and 7.

57. See new paragraph 5 of Article 5.

58. These functions are identified in IAEA document GOV/INF/521, which informed the IAEA Board of Governors upon entry into force of the convention on 8 February 1987. The additional functions of the Agency under the Amendment are identified in IAEA document GOV/2005/51/Corr.1 of 17 August 2005.

of information with and between States Parties for recovering and protecting unlawfully taken nuclear material.<sup>59</sup>

69. In addition, although not amended, Paragraph 1 of Article 14 of the convention requires the Agency to communicate periodically information on laws and regulations giving effect to the convention, received from States Parties. Such communications are expected to increase since the amendment requires States Parties, *inter alia*, to make additional offences punishable under its national law and to establish, implement and maintain an appropriate physical protection regime applicable to nuclear material and nuclear facilities under its jurisdiction.

70. Finally, an amendment to paragraph 1 of Article 16 requires the Director General, as depositary for the convention, to convene a conference of States Parties five years after the entry into force of the amendment. The purpose of this conference will be to review the implementation of the convention as amended, as well as its adequacy as concerns the preamble, the whole operative part and the annexes in light of the then prevailing situation.

#### **E. Entry into force of the amendment**

71. The amendment requires no signature but is subject only to ratification, acceptance, or approval. It will enter into force in accordance with paragraph 2 of Article 20 of the convention “on the thirtieth day after the date on which two thirds of the States Parties have deposited their instruments of ratification, acceptance or approval with the depositary”.<sup>60</sup>

72. On 25 July 2005, the Director General of the IAEA, as depositary, circulated a certified copy of the amendment to the convention to all States Parties and Euratom. At the same time, governments were invited to deposit with the Director General of the Agency, at their earliest convenience, their instruments of ratification, acceptance or approval of the amendment to the convention, pursuant to paragraph 2 of Article 20 of the convention.

#### **F. Conclusion**

73. In conclusion, the amendment to the convention represents the culmination of work that had been progressing for a number of years. It is yet a major achievement – another milestone – in international efforts to improve nuclear security and reduce the vulnerability of States Parties to nuclear terrorism.

74. On 19 and 29 September 2005, the IAEA Board of Governors and General Conference, in welcoming the amendment to the convention encouraged “all States Parties to the convention to ratify the amendment as soon as possible and to deposit instruments of ratification, acceptance or approval with the depositary to enable the early entry into force of the amendment.” In addition, “all States

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59. See the amendment to paragraph 2 of Article 5 of the Amendment which introduces an explicit reference to the IAEA.

60. Article 20, paragraph 2 of the convention reads: “The amendment shall enter into force for each State Party that deposits its instrument of ratification, acceptance or approval of the amendment on the thirtieth day after the date on which two thirds of the States Parties have deposited their instruments of ratification, acceptance or approval with the depositary. Thereafter, the amendment shall enter into force for any other State Party on the day on which that State Party deposits its instrument of ratification, acceptance or approval of the amendment.”

Parties to the convention [were encouraged] to act in accordance with the object and purpose of the amendment until such time as the amendment enters into force”.<sup>61</sup>

75. The challenge that now lies ahead is not only to promote adherence to the amendment to the convention but even more so to assist states in the implementation of the amendment both at the technical (i.e. physical protection) and legal level and to coordinate such assistance with other conventions against nuclear terrorism. The IAEA maintains a legislative assistance programme to help states in this regard.

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61. See the General Conference Resolution number 10, adopted on 30 September 2005 [GC(49)/RES/10].