Reaching Critical Will

2010 NPT Review Conference Action Plan
Non-proliferation of nuclear weapons

Monitoring Report, 29 September 2011
Reaching Critical Will
A project of Women's International League for Peace and Freedom.
1, Rue de Varembé, 1211 Genéve
Tel: +41 (22) 919 7080
Fax: +41 (22) 919 7081
Email: disarm@wilpf.ch

Acknowledgements
Edited by: Beatrice Fihn
Research: Beatrice Fihn, Mia Gandenberger, and Gabriella Irsten.
Photo: UN Photo/Eskinder Debebe

This report was made possible with the kind contribution of the Swiss Federal Department of Foreign Affairs.
Table of Contents

Introduction 4
Summary of implementations of actions 6
Chapter 1 – Universalization of the NPT 9
  Action 23
Chapter 2 – Nuclear Energy 23
  Action 38 and 39
Chapter 3 – Nuclear Security 27
  Action 40, 41, 42, 43, and 45
Chapter 4 – Safeguards and Additional Protocols 35
  Action 24, 25, 26, 27, 28, 29, 30, 31, and 32
Chapter 5 – Illicit Trafficking in Nuclear Materials 52
  Action 44
Chapter 6 – Nuclear Export and Transfers 61
  Action 35, 36, and 37
Chapter 7 – The International Atomic Energy Agency 66
  Action 33, 34, and 46
Introduction

The multilateral field of arms control, disarmament, and the non-proliferation of nuclear weapons has been marked by important developments in the recent year; one of the most significant was the 2010 nuclear Non-Proliferation Treaty (NPT) Review Conference. After four weeks of negotiations in May 2010, states parties to the NPT adopted a final document for the first time since 2000. In that final document, states agreed on 64 actions in order to implement the obligations contained in the three “pillars” of the NPT: nuclear disarmament, nuclear non-proliferation, and the peaceful uses of nuclear energy. In addition, it contains a decision to convene a conference for the establishment of a zone free of weapons of mass destruction in the Middle East and to appoint a Special Coordinator on the issue.

The final document and its action plan have been called successes by many governments, but the negotiations and previous drafts of this action plan highlight a resistance by the nuclear weapon states to accept any concrete commitments on nuclear disarmament and, in response, reluctance by some non-nuclear weapon states to agree on further substantial measures to deal with non-proliferation challenges, while promoting the so-called “virtues” of nuclear energy. The document was carefully crafted and modified to stay within the “red lines” of every delegation and it was, as the Chair described it, the best that could be offered at that point in time.

However, a final document is just a document, and states must now make significant progress in implementing it in order to move forward. The international community—states and civil society—have expressed frustration with the pace and scope of nuclear disarmament. The degree of compliance of some states parties with the NPT’s provisions, and the lack of universality of that Treaty give rise to serious concerns or suspicions. The Comprehensive Test Ban Treaty (CTBT) has yet to enter into force 15 years after it was opened for signature and the Conference on Disarmament is still unable to make progress on the negotiation of a treaty to prohibit the production of fissile material for weapons purposes, or on any other nuclear disarmament issues.

In light of the context described above, Reaching Critical Will and the Geneva Centre for Security Policy are cooperating in a project aimed at providing a platform for examining the degree of implementation and operationalisation of the action plan in the three NPT “pillars”. The project is supported by the United Nations Institute for Disarmament Research (UNIDIR) and the Geneva Branch of the United Nations Office for Disarmament Affairs (UNODA). The research has been made possible with a generous contribution by the Swiss Federal Department of Foreign Affairs.

This research report is Reaching Critical Will’s contribution to this project, where we have reviewed the implementation of one part of the actions as set out in the 2010 NPT Review Conference action plan, the second pillar on the non-proliferation of nuclear weapons. A similar research report on the third pillar,
peaceful uses of nuclear energy was released in June 2011, and a report on the first pillar, nuclear disarmament, will be released in January 2012.

The project is formed to work to provide factual and clear information on the status of the implementation of the NPT Action Plan on non-proliferation of nuclear weapons. The empirical data for this first part of the project was collected during the period of June to September 2011.

The research has been done through extensive review of publicly available information and through a survey aimed at all parties to the NPT. The answers from states parties were used to help guide the third round of information seeking, to verify the information each individual state contributed. The research is not a full technical investigation of all related facts, but is an attempt to provide an overview of states’ compliance with the NPT action plan and to capture the most significant developments since May 2010 under actions 23 to 46. The research has been carried out within the limits of available resources, such as time, publicly available information, and limited participation of states in our survey.

We encourage states and organizations to submit any comments or feedback to us.

We would like to thank the other partners of this project, the GCSP and UNIDIR, and we are particularly grateful to Dr. Christian Schoenenberger, Head of the Task Force on Nuclear Disarmament and Non-Proliferation at the Swiss Federal Department of Foreign Affairs for his support of this project and for Reaching Critical Will.

Beatrice Fihn
Project Associate
Reaching Critical Will
Summary of implementation of actions

**Action 23**: The Conference calls upon all States parties to exert all efforts to promote universal adherence to the Treaty, and not to undertake any actions that can negatively affect prospects for the universality of the Treaty.

**Action 24**: The Conference re-endorses the call by previous review conferences for the application of IAEA comprehensive safeguards to all source or special fissionable material in all peaceful nuclear activities in the States parties in accordance with the provisions of article III of the Treaty.

**Action 25**: The Conference, noting that 18 States parties to the Treaty have yet to bring into force comprehensive safeguards agreements, urges them to do so as soon as possible and without further delay.

**Action 26**: The Conference underscores the importance in complying with the non-proliferation obligations, addressing all compliance matters in order to uphold the Treaty’s integrity and the authority of the safeguards system.

**Action 27**: The Conference underscores the importance of resolving all cases of non-compliance with safeguards obligations in full conformity with the IAEA statute and the respective legal obligations of Member States. In this regard, the Conference calls upon Member States to extend their cooperation to the Agency.

**Action 28**: The Conference encourages all States parties which have not yet done so to conclude and to bring into force additional protocols as soon as possible and to implement them provisionally pending their entry into force.

**Action 29**: The Conference encourages IAEA to further facilitate and assist the States parties in the conclusion and entry into force of comprehensive safeguards agreements and additional protocols. The Conference calls on States parties to consider specific measures that would promote the universalization of the comprehensive safeguards agreements.

**Action 30**: The Conference calls for the wider application of safeguards to peaceful nuclear facilities in the nuclear-weapon States, under the relevant voluntary offer safeguards agreements, in the most economic and practical way possible, taking into account the availability of IAEA resources, and stresses that comprehensive safeguards and additional protocols should be universally applied once the complete elimination of nuclear weapons has been achieved.
**Action 31:** The Conference encourages all States parties with small quantities protocols which have not yet done so to amend or rescind them, as appropriate, as soon as possible.

**Action 32:** The Conference recommends that IAEA safeguards should be assessed and evaluated regularly. Decisions adopted by the IAEA policy bodies aimed at further strengthening the effectiveness and improving the efficiency of IAEA safeguards should be supported and implemented.

**Action 33:** The Conference calls upon all States parties to ensure that IAEA continues to have all political, technical and financial support so that it is able to effectively meet its responsibility to apply safeguards as required by article III of the Treaty.

**Action 34:** The Conference encourages States parties, within the framework of the IAEA statute, to further develop a robust, flexible, adaptive and cost effective international technology base for advanced safeguards through cooperation among Member States and with IAEA.

**Action 35:** The Conference urges all States parties to ensure that their nuclear related exports do not directly or indirectly assist the development of nuclear weapons or other nuclear explosive devices and that such exports are in full conformity with the objectives and purposes of the Treaty as stipulated, particularly, in articles I, II and III of the Treaty, as well as the decision on principles and objectives of nuclear non-proliferation and disarmament adopted in 1995 by the Review and Extension Conference.

**Action 36:** The Conference encourages States parties to make use of multilaterally negotiated and agreed guidelines and understandings in developing their own national export controls.

**Action 37:** The Conference encourages States parties to consider whether a recipient State has brought into force IAEA safeguards obligations in making nuclear export decisions.

**Action 38:** The Conference calls upon all States parties, in acting in pursuance of the objectives of the Treaty, to observe the legitimate right of all States parties, in particular developing States, to full access to nuclear material, equipment and technological information for peaceful purposes.

**Action 39:** States parties are encouraged to facilitate transfers of nuclear technology and materials and international cooperation among States parties, in conformity with articles I, II, III and IV of the Treaty, and to eliminate in this regard any undue constraints inconsistent with the Treaty.

**Action 40:** The Conference encourages all States to maintain the highest possible standards of security and physical protection of nuclear materials and facilities.
**Action 41:** The Conference encourages all States parties to apply, as appropriate, the IAEA recommendations on the physical protection of nuclear material and nuclear facilities (INFCIRC/225/Rev.4 (Corrected)) and other relevant international instruments at the earliest possible date.

**Action 42:** The Conference calls on all States parties to the Convention on the Physical Protection of Nuclear Material to ratify the amendment to the Convention as soon as possible and encourages them to act in accordance with the objectives and the purpose of the amendment until such time as it enters into force. The Conference also encourages all States that have not yet done so to adhere to the Convention and adopt the amendment as soon as possible.

**Action 43:** The Conference urges all States parties to implement the principles of the revised IAEA Code of Conduct on the Safety and Security of Radioactive Sources, as well as the Guidance on the Import and Export of Radioactive Sources approved by the IAEA Board of Governors in 2004.

**Action 44:** The Conference calls upon all States parties to improve their national capabilities to detect, deter and disrupt illicit trafficking in nuclear materials throughout their territories, in accordance with their relevant international legal obligations, and calls upon those States parties in a position to do so to work to enhance international partnerships and capacity-building in this regard. The Conference also calls upon States parties to establish and enforce effective domestic controls to prevent the proliferation of nuclear weapons in accordance with their relevant international legal obligations.

**Action 45:** The Conference encourages all States parties that have not yet done so to become party to the International Convention for the Suppression of Acts of Nuclear Terrorism as soon as possible.

**Action 46:** The Conference encourages IAEA to continue to assist the States parties in strengthening their national regulatory controls of nuclear material, including the establishment and maintenance of the State systems of accounting for and control of nuclear material, as well as systems on regional level. The Conference calls upon IAEA Member States to broaden their support for the relevant IAEA programmes.
CHAPTER 1
Universalization of the NPT

Introduction

With its near-universal membership, the NPT has the widest adherence of any arms control agreement, with only India, Israel, and Pakistan remaining outside the treaty. The Democratic People’s Republic of Korea (DPRK) announced on 10 January 2003 that it was withdrawing from the treaty, effective the next day. Although Article X of the NPT requires that a country give three months notice in advance of withdrawing, DPRK argued that it satisfied this requirement because it originally announced its decision to withdraw 12 March 1993, and suspended the decision one day before it was to become legally binding. There is not yet definitive legal clarity as to whether DPRK’s withdrawal was carried out correctly or not.

We have divided the obligations under this action into two parts: 1) to exert all efforts to promote universal adherence to the Treaty and 2) not to undertake any actions that can negatively affect prospects for the universality of the Treaty.

Exert all efforts

General calls for universalization
The G8 summit on 26-27 June 2011 in Deauville, France, highlighted its commitment to implement all obligations under the NPT and to support and promote the global non-proliferation architecture in all its aspects. The declaration noted the G8’s commitment to stemming “severe proliferation challenges,” particularly in Iran and DPRK, but did not mention any of the non-NPT states (India, Israel, and Pakistan) by name nor did it call specifically for the universalization of the NPT.

Efforts regarding India
On 23 and 24 June 2011, the Nuclear Suppliers Group (NSG) adopted new guidelines that can be interpreted as affecting the exemption of India granted in 2008. The current member states of the NSG are Argentina, Australia, Austria, Belarus, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Kazakhstan, Republic of Korea, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom, and the United States.
During this meeting, the NSG:

- agreed to strengthen its guidelines on the transfer of sensitive enrichment and reprocessing technologies;
- reviewed the status of adherence to the additional protocol;
- continued to consider all aspects of the implementation of the 2008 Statement on Civil Nuclear Cooperation with India and discussed the NSG relationship with India.1

The NSG also called upon all states to “exercise vigilance and make best efforts to ensure that none of their exports of goods or technologies contribute to nuclear weapons programmes”.2

While the full decision is still unreleased, it is reported that the NSG recommends that members should “not authorize the transfer of enrichment and reprocessing facilities and equipment and technology” to any country that has not ratified the NPT, that does not have a complete inspections arrangement with the International Atomic Energy Agency (IAEA), and that has not implemented the IAEA additional protocol, which permits closer scrutiny of atomic sites in signatory nations.3

While the new guidelines would not prevent India from importing nuclear power reactors from NSG member states, government officials in New Delhi have suggested it might curb such purchases from countries that rule out access to nuclear fuel enrichment and reprocessing systems. Companies in the United States, France, and Russia hope to make such reactor sales to the South Asian state. India has not received enrichment and reprocessing systems from NSG member states in the past, but according to reports, the new rules explicitly restrict exports of such materials.4

Shortly after the annual NSG meeting, US Secretary of State, Ms. Hillary Clinton stated at a press conference that the new guidelines on the enrichment and reprocessing technology “should not be construed as detracting from the Indo-US civilian nuclear deal.” She further emphasized that “the US remains fully committed to expanding our civil nuclear cooperation with India” and that the NSG “clean waiver was an important joint accomplishment for both our governments and we stand by it.” “Nothing”, she said, about “the new ENR transfer restrictions agreed to by the NSG members should be construed as detracting from the unique impact and importance of the US-India civil nuclear agreement or our commitment to full civil nuclear cooperation”.5

---

2 Ibid
4 Ibid
Efforts regarding Israel

The G8 summit on 26-27 June 2011 concluded in its final declaration, “We remain committed to holding a conference in 2012 on a zone free of weapons of mass destruction in the Middle East, as endorsed by the 2010 Nuclear Non-Proliferation Treaty Review Conference, with a view to creating a peaceful environment in the region.” However, the declaration did not mention Israel nor any other non-NPT state by name.

The IAEA General Conference adopted a resolution on the implementation of safeguards in the Middle East on 24 September 2010. It calls upon all states in the region to accede to the NPT and invites the countries concerned which have not yet done so to adhere to international non-proliferation regimes. Despite being the only country in the Middle East not party to the NPT, Israel is not mentioned by name.

The European Union arranged a seminar in July 2011 on the issue of a conference on a zone free of WMDs in the Middle East. No conclusions were drawn from this conference.

Finland, the Netherlands, and Canada are reported to be considered as host countries of the WMD-free zone in the Middle East and a decision should be made in September 2011. No special coordinator has been appointed yet.

On 23 August 2011, the three depositary states of the NPT, the UK, the US, and Russia reported to the Conference on Disarmament (CD) that work on implementing the 2010 NPT decision on a zone free of WMDs in the Middle East was ongoing. All three states assured members of the CD that while no progress might have been reported on yet, they were “handling this issue delicately and quietly.”

Efforts regarding the DPRK

The G8 summit in June 2011 condemned the DPRK’s continued development of nuclear and missile programmes and its uranium enrichment programme and light water reactor construction activities in violation of UN Security Council resolutions 1718 and 1874. The declaration urged the DPRK to comply with its

---

9 Ibid
international obligations, including the complete, verifiable, and irreversible abandonment of all its nuclear programmes and ballistic missile programmes and promptly to address international humanitarian concerns, such as the issue of abduction.\footnote{G20-G8 France 2011 official website, “G8 Declaration Renewed Commitment for Freedom and democracy”, 26-27 May 2011, http://www.g20-g8.com/g8-g20/g8/english/the-2011-summit/declarations-and-reports/declarations/renewed-commitment-for-freedom-and-democracy.1314.html}

The six-party talks between the DPRK, the United States, China, Russia, Japan, and the Republic of Korea were last held in December 2008.\footnote{Arms Control Association official website, “Cronology of U.S. – North Korean Nuclear and Missile Diplomacy”, 8-11 December 2008, http://www.armscontrol.org/factsheets/dprkchron#2008} The DPRK had pulled out the talks shortly before conducting a second nuclear test in April 2009.\footnote{BBC News Asia-Pacific, ”North Korea ‘keen’ for six-party nuclear talks”, 1 August 2011, http://www.bbc.co.uk/news/world-asia-pacific-14361567}


Unilateral statements regarding universalization at the General Assembly
In October 2010 at the General Assembly, several countries took the opportunity to call for universalization of the NPT.

Ambassador Wang Qun of China said the 2010 Review Conference and its outcome was of “great significance to further enhancing the authority,
effectiveness and universality of the Treaty.” Delegates from Qatar and Syria pointed out that preventing proliferation requires states to stop making decisions to grant exceptions on nuclear trade with states that are not party to the NPT.

Several delegations, including most countries from the Middle East region, called on Israel to accede to the NPT and to place its nuclear facilities under IAEA safeguards. Ambassador Maged Abdelaziz of Egypt called on Israel to realize that the decision of the 2010 NPT Review Conference to convene a conference in 2012 on establishing a nuclear weapon free zone in the Middle East actually achieves Israel’s security interests by laying “the foundations for Israel to abandon its ambiguous nuclear program and assure us all that no other State in the regional shall seek to acquire nuclear weapons in the future.”

Iran, Yemen, Lebanon, Qatar, Iraq, and Syria all pointed to Israel’s refusal to join the NPT as being the major impediment to the establishment of a nuclear weapon free zone in the Middle East.

A few delegations focused on country-specific concerns. The European Union, Australia, France, Japan, and the Republic of Korea expressed their concern over the DPRK’s nuclear activities. These countries, along with the New Agenda Coalition and Turkey, urged the DPRK to fulfill its commitments under the 2005 joint statement to abandon its nuclear weapons and return to the NPT and IAEA safeguards. Turkey’s delegation called on the DPRK to return to the six-party talks immediately and without condition, though the Republic of Korea’s delegate made it clear that his country expects the DPRK to first “demonstrate its sincerity toward denuclearization by taking concrete actions” before talks can resume.

Changes of voting pattern at the General Assembly
A/RES/65/88: The risk of nuclear proliferation in the Middle East

This resolution recalls that Israel remains the only state in the Middle East that has not yet become a party to the NPT, reaffirms the importance of Israel’s accession to the NPT and placement of all its nuclear facilities under comprehensive International Atomic Energy Agency safeguards, and calls upon Israel to accede to the Treaty without further delay.

---

21 Statement made by Egypt, UNGA First Committee 2010, 5 October 2010, http://www.reachingcriticalwill.org/political/1com/1com10/statements/5Oct_Egypt.pdf
Voting result 2010:
Yes: 172
No: 6 (Israel, Marshall Islands, Micronesia, Nauru, Palau, United States)
Abstain: 8 (Madagascar, Australia, Ethiopia, India, Cameroon, Canada, Panama, Cote d'Ivoire)

The voting pattern was very similar to 2009, the only changes were that Madagascar went from voting yes to abstention and Ethiopia went from not participating in the vote to abstention.

In its explanation of vote, the US stated, “this resolution fails to meet the fundamental tests of fairness and balance” and reiterated the “longstanding position of the United States in support of universal adherence to the NPT.”24

Canada explained its abstention by noting that the resolution “unfairly singled out Israel.”25

While emphasizing its strong advocacy record for universalisation of the NPT, Australia explained its abstention by arguing that this resolution, which only refers to Israel without any reference to Middle East states of current proliferation concern, is, in their view, unbalanced.26

A/RES/65/59: Towards a nuclear-weapon-free world: accelerating the implementation of nuclear disarmament commitments

The resolution calls upon all states parties to the NPT to work towards the full implementation of the resolution on the Middle East as well as calls upon all states parties to “spare no effort to achieve the universality” of the NPT. The resolution specifically urges India, Israel, and Pakistan to accede to the Treaty as non-nuclear-weapon states promptly and without conditions, while also urging the DPRK to return to the NPT.

Voting result 2010:
Yes: 173
No: 5 (India, Israel, United States, DPRK, France)
Abstain: 5 (Bhutan, Micronesia, Pakistan, Palau, United Kingdom)

The voting for this resolution has not changed since the previous year.

A/RES/65/72: United action towards the total elimination of nuclear weapons

24 Explanation of vote, United States, UNGA First Committee 2010,
http://www.reachingcriticalwill.org/political/1com/1com10/eov/L3_US.pdf
25 Explanation of vote, Canada, UNGA First Committee 2010,
http://www.reachingcriticalwill.org/political/1com/1com10/eov/L3_Canada.pdf
26 Explanation of vote, Australia, UNGA First Committee 2010,
http://www.reachingcriticalwill.org/political/1com/1com10/eov/L3_Australia.pdf
The resolution reaffirms the vital importance of the universality of the NPT, and calls upon all states not parties to accede as non-nuclear-weapon states promptly and without any conditions and, pending their accession to the Treaty, to adhere to its terms and take practical steps in support of the Treaty.

The resolution also declares that the DPRK cannot have the status of a nuclear-weapon state under the NPT under any circumstances.

Voting results 2010:
Yes: 173
No: 1 (DPRK)
Abstain: 11 (Brazil, China, Cuba, India, Iran, Israel, Mauritius, Myanmar, Pakistan, Syria, South Africa)

Changes from 2009: India changed its vote from no to abstain. France changed its vote from abstain to yes. Mauritius and Syria changed their votes from yes to abstain.

Actions that can negatively affect prospects for the universality of the treaty

One of the main reasons cited for joining the NPT as a non-nuclear weapon state is the promise of the “inalienable right” to develop nuclear energy for “peaceful purposes”. This has been reinforced by nuclear export groups, such as the Nuclear Suppliers Group (NSG) and the Zangger Committee. These export groups have adopted guidelines that prevent members from exporting nuclear technology to non-states parties to the NPT.

Nuclear trade with non-NPT states parties
The US-India nuclear deal and the resulting NSG exemption waiver for nuclear trade with India was concluded well before the 2010 NPT action plan was adopted. However, as this was the first time such a deal was concluded with a non-NPT state party, it has set a standard for similar deals.

In 2005, US President George W. Bush and Indian Prime Minister Manmohan Singh released a joint statement lifting the United States moratorium on nuclear trade with India. The resulting 123 Agreement was published in August 2007, approved by the Nuclear Suppliers Group (NSG) in September 2008, and in October of the same year by the US Congress. The waiver approved by the NSG on 6 September 2008 allows any NSG member to trade with India, which means countries other than the United States can engage in nuclear trade with India.

In this agreement, India has committed itself to selective safeguards of the IAEA, strengthening the security of its nuclear arsenals, placing a moratorium on nuclear weapons testing (but not committing to signing and ratifying the Comprehensive Test Ban Treaty), and working towards negotiations of a Fissile Material Cut-off Treaty (FMCT). US companies were to build nuclear reactors and India would be eligible to buy US dual-use nuclear technology,
“including materials and equipment that could be used to enrich uranium and process plutonium, potentially creating the material for nuclear bombs.”27

The agreement was received by the international community with mixed feelings and it has been criticized for the fact that the forty-five countries in the NSG have made a decision on behalf of the 189-strong membership of the NPT. Objections have been raised that the NSG has never been given the authority to reinterpret the NPT, overturn NPT decisions, or violate existing international standards. When the NSG waiver was approved in 2008, Namibia, Kazakhstan, Mongolia, Russia, France, Argentina, United Kingdom, Canada, Japan, and the Republic of Korea joined the US in approving nuclear trade agreements with India. In addition to this, China has initiated a nuclear reactor deal with Pakistan.

Ahead of the NSG annual plenary meeting in the Netherlands, the United States circulated a “Food for Thought” paper28 as a follow-up to its announcement on 8 November 2010, when President Obama announced his support for Indian membership of the NSG.29

Since the adoption of the NPT action plan, several new deals and cooperation agreements have been concluded.

**China-Pakistan:** In June 2010, China planned to provide Pakistan with two new nuclear reactors. Spokespeople emphasised that the reactors were for peaceful uses, in line with Chinese international obligations and under IAEA supervision.30 In March 2011 China announced it was to sell further nuclear reactors to Pakistan.31

**France-India:** On 6 December 2010 France and India signed a civil nuclear deal.32 The “Commissariat à l’Energie Atomique et aux Energies Alternatives – CEA” for France and the “Department of Atomic Energy – DAE” for India concluded a Cooperation Agreement in the field of Nuclear Science and Technology for peaceful uses of nuclear energy with the aim of establishing a general framework to enhance their collaboration and signed a specific

---

implementation agreement in the field of education and research. It is expected that two French nuclear reactors will be built at Jaipur.33

Russia-India: Russia agreed to supply India with another two civilian nuclear reactors in Tamil Nadu.34

US-India: The US and India signed in late July 2010 an agreement for the reprocessing of spent fuel.35 The agreement enables India to reprocess US-obligated nuclear material under the IAEA safeguards. On 19 March 2011 the US announced it was still very much committed to the deal despite the incidents in Japan.36

Canada-India: During the G20-summit the two states signed an agreement that permits members of Canada’s nuclear industry to cooperate with designated civilian nuclear installations under International Atomic Energy Agency (IAEA) safeguards in India.37

Japan-India: The two foreign ministers of Japan and India held talks on civil nuclear cooperation agreements in August and October 2010.38 So far nothing has been signed and in light of the events in March 2011 priorities might have shifted, though both countries will continue to discuss possible ways of cooperation.39

Kazakhstan-India: On 16 April 2011 the two countries signed an intergovernmental framework agreement that covers research, technology transfer and exploration of uranium in Kazakhstan.40

---

United Kingdom-India: In July 2010, the UK government agreed to lift a ban on the export of nuclear technology and components to India.41 A UK Civil Nuclear Power trade delegation of eight leading UK companies coordinated by the UK Nuclear Industry Association (NIA) and led by UK Business Ambassador Lady Barbara Judge, Director and Former Chairman of the UK Atomic Energy Authority and a Member of the UK Nuclear Development Forum, visited India in February 2011 to explore the possibility of potential business partnerships with leading Indian companies organizations in the civil nuclear sector.42

Tanzania-India: In March 2011, Tanzania’s prime minister expressed a wish that India would invest in uranium mining in Tanzania.43

Republic of Korea – India: In July 2011 India and the Republic of Korea (ROK) signed a nuclear cooperation agreement, which will allow ROK to export its nuclear energy technology to India. ROK is thereby the ninth country to sign such deal with India.44

Uranium sales
India may be seeking uranium from various countries in Africa. The potential African uranium suppliers that are mentioned include Gabon, Namibia, Niger, Nigeria, Uganda, Tanzania, and Angola—some of which are major uranium exporters. These kinds of uranium deals could also be considered to be actions that significantly harm the prospects of the universality of the NPT. It would also be a violation of the African Nuclear Weapon Free Zone, the Pelindaba Treaty, as states parties to this treaty are not permitted to exchange in nuclear trade with non-NPT states parties.

Permanent seat in the UN Security Council
The current five permanent seats coincide with the nuclear weapon states under the NPT. Promoting an additional seat for India, also a state with nuclear weapons, can be considered harmful to the prospects for universality of the NPT.

Previously, the United States had opposed India’s bid to become a permanent member on the grounds of nuclear proliferation and because India has not signed the NPT. However, on 8 November 2010, US President Barack Obama backed India for a permanent seat on the UN Security Council.45

45 J. Lamont & E. Luce, “Obama calls for top India role at UN”, Financial Times, 8 November.
India was elected a non-permanent member of the UN Security Council in 2011, with an overwhelming majority where only three UN member states did not vote for India. In addition to this, several other countries and organizations openly supports India’s aim of a permanent seat, such as the United Arab Emirates, Kazakhstan, Bangladesh, Chile, Australia, Czech Republic, Tanzania, the African Union, France, Russia, United Kingdom, Hungary, Poland, Croatia, Belarus, Romania, Norway, Finland, Slovakia, Portugal, Belgium, Armenia, Bulgaria, Greece, Luxembourg, Denmark, Iceland, Oman, Singapore, Laos, Sri Lanka, Malaysia, Mongolia, Uzbekistan, Kyrgyzstan, Vietnam, Tajikistan, Syria, Myanmar, Maldives, Qatar, Brunei, Palau, Micronesia, Tuvalu, Suriname, Bolivia, Guyana, Peru, Cuba, Belize, Bahamas, and Jamaica.

In addition, Japan, Germany, and Brazil, which have also expressed a desire to become permanent members of the UN Security Council, all support a joint bid together with India and one or two African states.46

Nuclear non-proliferation efforts
At the Nuclear Security Summit in April 2010, representatives of India, Pakistan, and Israel were invited and the final communiqué did not include any call upon these countries to join the NPT nor any reference to the NPT at all.47 The three countries are expected to attend the next meeting in the Republic of Korea in 2012.

In October 2009, the UN Security Council adopted resolution 1887 on nuclear non-proliferation. According to a Wikileaks cable released in late 2010, Ms. Ellen Tauscher of the United States stressed that UNSCR 1887 was not directed at India and expressed hope that experts could work together to come up with a formulation that would allow India to support such initiatives in the future. Nothing was mentioned about the NPT and its universality.48

Prospects for a WMD free zone in the Middle East
The decision to convene a conference in 2012 on a WMD free zone in the Middle East was a part of the final outcome of the 2010 NPT Review Conference, although the decision isn't officially incorporated in the action plan. However, a WMD free zone in the Middle East would have significant positive impact for the universalization of the NPT, and therefore this process is relevant to this action.

Immediately after the conclusion of the 2010 NPT Review Conference, General James Jones, the US national security adviser, said the US “will not permit a conference or actions that could jeopardise Israel's national security” and that it “will not accept any approach that singles out Israel or sets unrealistic

expectations.”49 In a separate statement, US President Obama said he “strongly oppose efforts to single out Israel.”50 Ellen Tauscher, the US under-secretary of state for arms control, said “the United States deeply regrets” that the final document pressures Israel to join the NPT.51

Gary Samor, President Obama’s advisor on nuclear disarmament and proliferation, did not show up at the EU seminar on a WMD-free zone in Brussels in July 2011 to make his scheduled keynote speech. He pleaded commitments back in Washington, but it was hardly the show of support from Washington that the idea of a WMD-free zone needs if it is to survive.52

In September 2010, the US “joined international partners to defeat a resolution at the IAEA that singled out Israel’s nuclear program for rebuke.”53

**Military aid and arms sales to non-NPT states**

India is among the world’s largest importer of major conventional weapons. According to the latest SIPRI Yearbook, India’s volume of imports of major weapons in 2006–2010 was 21 per cent higher than in 2001–2005. There is no indication that this pace of arms acquisition is slowing down after the conclusion of the 2010 NPT Review Conference.54 India imports roughly 70% of its weapons from other countries.55

The major arms supplier to India in 2010 were56:

1. Russia
2. United Kingdom
3. Israel
4. Poland
5. United States
6. Germany
7. Uzbekistan
8. France
9. Italy
10. Netherlands

55 Ibid
56 “Table 6A.3. The 10 largest recipients of major conventional weapons”, SIPRI Yearbook 2011 Armaments, Disarmament and International Security, p. 304
In late September 2001, President Bush of the United States lifted sanctions imposed under the terms of the 1994 Nuclear Proliferation Prevention Act following India’s nuclear tests in May 1998. Since then, military cooperation between the two countries has expanded.

Pakistan is also among the world’s largest importer of major conventional weapons and remains highly dependent on foreign suppliers. For example, all combat aircraft, tanks, and major warships inducted into service by Pakistan in 2001–2010 are of foreign origin. It appears that Pakistan will continue to reply heavily on arms imports to fulfil their procurement plans.

The major arms suppliers to Pakistan in 2010 were:
1. United States
2. China
3. France
4. Sweden
5. Switzerland
6. Germany
7. Ukraine
8. Turkey
9. Italy
10. Libya

Today Pakistan is among the US top recipients of foreign military assistance. On 22 October 2010 the US announced a $2 billion aid package to Pakistan for military assistance. The aid does not include any references to the universalization of the NPT nor does it ask for any restrictions on Pakistan’s nuclear weapons programme.

Israel’s largest supplier of weapons is the United States. Much of Israel’s arms exports come through US military aid. The military cooperation between the two countries is an important contributing factor to Israel’s military superiority in the Middle East region. US President Obama stated recently, “The bonds between the United States and Israel are unbreakable—and the commitment of the United States to the security of Israel is ironclad.”

Proposed US Military Aid to Israel FY2009-FY2019
FY2009: $2.55 billion
FY2010: $2.77 billion
FY2011: $3.00 billion

---

57 Ibid
Despite restrictive policies on arms exports to Israel, some EU countries assess licence applications for weapons exports on a case-by-case basis. Many EU member states do grant licences for the export of significant quantities of military equipment to Israel. Between 2005–2010, EU member states granted arms export licenses worth €747.9 million to Israel. Germany was the only EU member state that agreed to deliver major conventional weapons to Israel in 2006–2010. In addition, companies in Germany, Ireland, the Netherlands, and the United Kingdom provide subsystems or components for US-manufactured aircrafts supplied to Israel, such as Apache helicopters and F-16 planes.62

**Conclusion**

The language in action 23 is rather strong and requires member states to “exert all efforts” to promote universalization of the NPT, while not undertaking any actions that can negatively affect such prospect. Universalization of the NPT is not an easy task to solve for member states, but by examining the concrete events that taken place since the conclusion of the 2010 NPT action plan, it is possible to conclude that member states are not exerting all efforts in order to reach this goal. While certain vague statements from multilateral initiatives as the G8 are being made, they consistently avoid calling out the names of the non-members of the NPT. Furthermore, the increased nuclear cooperation, military aid, and arms sales to India, Pakistan, and Israel show that such rhetoric is not matched by corresponding actions. In fact, any calls for universalization are undermined by the reality of the international community’s relations with these three states. Also, the voting results in the General Assembly concerning resolutions calling for universalization of the NPT have not significantly changed since the conclusion of the Action Plan.

This action is clearly not being implemented and states parties will need to make concrete efforts before 2015 if this action will be able to be considered fulfilled.

---

CHAPTER 2
Nuclear Energy

**Action 38:** The Conference calls upon all States parties, in acting in pursuance of the objectives of the Treaty, to observe the legitimate right of all States parties, in particular developing States, to full access to nuclear material, equipment and technological information for peaceful purposes.

**Action 39:** States parties are encouraged to facilitate transfers of nuclear technology and materials and international cooperation among States parties, in conformity with articles I, II, III and IV of the Treaty, and to eliminate in this regard any undue constraints inconsistent with the Treaty.

**Introduction**

The commitment under these action calls upon states to “observe” the right of states to use full access to nuclear material, equipment, and technological information for “peaceful purposes” and to “encourage to facilitate transfers” of nuclear technology and materials. However, no consistent and internationally agreed definition of these terms exists in the context of the NPT.

States have debated whether or not actions 38 and 39 imply obligations of states with nuclear power to transfer technology to non-nuclear states that are party to the NPT. It is difficult to ascertain systematically how the facilitation of such access has been achieved in the past or what the reaction to such facilitation has been. These questions are beyond the scope of this report.

By examining statements at the IAEA General Conference, IAEA press releases, and IAEA reports and documents, we have sought to find any potential critiques or concerns about current procedures of cooperation in the “peaceful uses” of nuclear energy. Additionally we reviewed statements delivered during the United Nations General Assembly General Debate and its First Committee. Some states have raised the issue in international fora and called for equal treatment of NPT states parties trying to pursue nuclear energy.

**Existing restrictions on the development and trade of nuclear technology**

The Nuclear Suppliers Group (NSG) is a group of nuclear supplier countries that seeks to contribute to non-proliferation efforts by drawing up guidelines for nuclear experts and nuclear-related exports. The NSG member states argue that its guidelines aim to ensure that the nuclear trade for “peaceful purposes” does not contribute to the proliferation of nuclear weapons or other nuclear explosive devices while at the same time does not hinder international trade and cooperation in the nuclear field. The first set of NSG guidelines governs the export of items that are especially designed or prepared for nuclear use. These include: (i) nuclear material; (ii) nuclear reactors and equipment therefore; (iii) non-nuclear material for reactors; (iv) plants and equipment for the reprocessing, enrichment and conversion of nuclear material and for fuel fabrication and heavy
water production; and (v) technology associated with each of the above items.\(^1\)

The second set of guidelines governs the export of nuclear related dual-use items and technologies, that is, items that can make a major contribution to an unsafeguarded nuclear fuel cycle or nuclear explosive activity, but that have non-nuclear uses as well, for example in industry.\(^2\)

The members of the NSG are: Argentina, Australia, Austria, Belarus, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Kazakhstan, Republic of Korea, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom, and the United States.

The Zangger Committee consists of a group of nuclear supplier states. Its objective is to reach a common understanding on (i) the definition of “equipment or material especially designed or prepared for the processing, use or production of special fissionable material;” and (ii) the conditions and procedures that would govern exports of such equipment or material in order to meet the obligations of article III of the NPT on the basis of fair commercial competition. The Committee is an informal group and its decisions are legally-binding upon its members. The Committee maintains and updates a list of equipment that may only be exported if safeguards are applied to the recipient facility (called the “Trigger List” because such exports trigger the requirement for safeguards); and allows members to coordinate on nuclear export issues. The relative informality of the Zangger Committee has enabled it to take the lead on certain non-proliferation issues that would be more difficult to resolve in the NSG.

The members of the Zangger committee are: Argentina, Australia, Austria, Belarus, Belgium, Bulgaria, Canada, China, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Kazakhstan, South Korea, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom, and the United States.

These two export control regimes have been criticized for putting additional restrictions on nuclear technology exports, and thereby effectively preventing countries from participating in the fullest possible exchange of activities for developing “peaceful uses” of nuclear energy. This criticism has continued after the adoption of the NPT action plan. For example, at the September 2010 general debate of the General Assembly, the Cuban representative argued that “the


existence of a club of the privileged and the countries of the South denial of the right to a peaceful use of nuclear energy should cease.”

The NPT states that “all the parties to the treaty undertakes to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy” and that states must be subject to full scope IAEA safeguards.

However, members of these two export control regimes argue that all members of the NPT are able to enjoy the benefits of peaceful uses of nuclear energy “in accordance with their international obligations.” What these “international obligations” should consist of is difficult to objectively define without a decision by, for example, the NPT Review Conference. Some members of these export control regimes want to include the IAEA additional protocol, together with other decisions from other fora, such as UN Security Council resolutions and resolutions from the IAEA Board of Governors. Others believe that it should only include the original comprehensive safeguard agreement, as was agreed upon at the time of the conclusion of the NPT in 1968.

Comments in international fora
As in previous years before the action plan was adopted, developing states have used international fora such as the General Assembly to highlight the right of all states to use nuclear technology peacefully. However, most references after May 2010 are generic calls for the “inalienable right” to develop nuclear energy and few countries have specified any incidents of lack of respect for their choices.

During the UN General Assembly General Debate, the Non-Aligned Movement and the African Union called for “justice and equal treatment for all concerned nations.” As during the NPT Review Conference, Cuba expressed concerns regarding the denial of the right to a peaceful use of nuclear energy.

Several states reasserted the right to “peaceful uses” of nuclear energy during the UN Assembly First Committee debate. Nigeria, Iran, Kenya, China, Chile, Senegal.

---

4 Article IV (2) of the NPT
5 Article III of the NPT
and others emphasized that all states parties to the NPT have the right to develop nuclear energy for “peaceful purposes”. South Africa’s delegation argued that restricting access to the nuclear fuel cycle impedes states’ rights to pursue the technology. It asserted that such pursuits should remain “sovereign” decisions based on domestic needs. While it recognized the proliferation implications associated with the transfer of nuclear technology, South Africa’s ambassador maintained that these concerns should not lead to “unwarranted restrictions and controls over the legitimate peaceful use of nuclear energy.”

On 26–27 May 2011, the G8 met in Deauville, France, and agreed on a declaration on “Renewed commitment for freedom and democracy”. In this declaration, the governments of Canada, France, Italy, Russia, United States, Germany, Japan, the United Kingdom, and the European Union declared their support for “the exchange, in conformity with the obligations of the NPT, of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy, in particular for developing countries.”

**Conclusion**

Many states continue to highlight the importance of having the right to develop nuclear energy for peaceful purposes and to have the ability to participate in nuclear technology exchange programmes. At the same time, there are few examples of states parties making additional and publicly visible efforts to make sure that all states can participate in nuclear energy exchanges. The statement by the G8 shows that countries continue to support the notion of exchange of technology for development of nuclear energy, but it remains difficult to assess what this actually means in practice.

It is therefore appropriate to conclude that states parties are currently appearing to comply with the obligations under action 38 and 39 of the 2010 NPT action plan, but that disagreement on the implementation of these commitments are based on the interpretation of certain wording in the action plan and the NPT itself.

It is beyond the scope of this research paper to make a legal determination of what such concepts as “legitimate right to full access to nuclear material, equipment and technological information for peaceful purposes” or the legality of trade restrictions through the NSG would actually mean. It would require a more comprehensive examination of the right to “peaceful use” of nuclear energy, the right of states to apply export restrictions on technologies to prevent proliferation, and how these actions and commitments are interpreted in light of the context and purpose of the NPT itself. Such an examination would need to be done by international legal experts in order to get an authoritative interpretation.

10 Patti, L & Carlson, T, “Nuclear energy and the fuel cycle”, First Committee Monitor, Week 1. http://www.reachingcriticalwill.org/political/1com/FCM10/week1.html#energy
**CHAPTER 3**

**Nuclear Security**

- **Action 40:** The Conference encourages all States to maintain the highest possible standards of security and physical protection of nuclear materials and facilities.
- **Action 41:** The Conference encourages all States parties to apply, as appropriate, the IAEA recommendations on the physical protection of nuclear material and nuclear facilities (INFCIRC/225/Rev.4 (Corrected)) and other relevant international instruments at the earliest possible date.
- **Action 42:** The Conference calls on all States parties to the Convention on the Physical Protection of Nuclear Material to ratify the amendment to the Convention as soon as possible and encourages them to act in accordance with the objectives and the purpose of the amendment until such time as it enters into force. The Conference also encourages all States that have not yet done so to adhere to the Convention and adopt the amendment as soon as possible.
- **Action 43:** The Conference urges all States parties to implement the principles of the revised IAEA Code of Conduct on the Safety and Security of Radioactive Sources, as well as the Guidance on the Import and Export of Radioactive Sources approved by the IAEA Board of Governors in 2004.
- **Action 45:** The Conference encourages all States parties that have not yet done so to become party to the International Convention for the Suppression of Acts of Nuclear Terrorism as soon as possible.

**Introduction**

This group of actions focuses on nuclear security and the application of security measures for nuclear materials and facilities. There are various binding and non-binding standards for the handling of nuclear materials under the umbrella of the International Atomic Energy Agency (IAEA). The term “highest possible standards” of nuclear security and physical protection of nuclear materials is not officially defined anywhere in the NPT action plan. It is therefore difficult to assess state compliance with this term. However, we have chosen to highlight the existing nuclear security instruments and only to examine the implementation of the instruments that are referenced in the actions above. In order to review their implementation we looked at the current status of the conventions and changes of states support for them.

**International Security Standards**

**IAEA instruments**

The IAEA safeguard agreements¹ as contained in INFCIRC/153 together with their respective additional protocols² as contained in INFCIRC/540 form the basis of the

---


nuclear security guidelines. Additionally the IAEA has classified the following instruments as fundamental for nuclear security:

- Convention on the Physical Protection of Nuclear Material;
- International Convention for the Suppression of Acts of Nuclear Terrorism (Nuclear Terrorism Convention);
- Security Council resolutions 1373 (2001) and 1540 (2004);
- Code of Conduct on Safety and Security of Radioactive Sources;
- Physical Protection Objectives and Fundamental Principles;
- INFCIRC/225/Rev.4 (Corrected); and

The IAEA is working on a document called "Fundamentals of a State's Nuclear Security Regime: Objective and Essential Elements". The document will set out the overall objective of a national nuclear security regime and establish a set of appropriate and effective elements of such regime. A release date has yet not been announced for this publication.

In the Nuclear Security Plan from 2010–2013 the IAEA is scheduled to carry out a nuclear security needs assessment by collecting and analysing the available resources. The plan is intended to contribute to the enhancement of a global nuclear security framework and aims at reducing risks and improving security.

**UN instruments**

UNSC Resolution 1373 on "Threats to international peace and security caused by terrorist acts" was adopted under Chapter VII of the UN Charter on 28 September 2001. Apart from calling on UN member states to work together to suppress terrorist financing, share intelligence on terrorism, and monitor borders, it addresses the need for coordination of efforts on national, sub-regional, regional, and international levels to combat the illegal movement of nuclear and other potentially deadly materials in order to "strengthen a global response to this serious challenge and threat to international security".

UN Security Council resolution 1540 on the non-proliferation of weapons of mass destruction was adopted unanimously under Chapter VII of the UN Charter on 28 April 2004. It calls on states "to refrain from supporting by any means non-state actors from developing, acquiring, manufacturing, possessing, transporting, transferring or using nuclear, chemical or biological weapons and their delivery systems."
The UN Security Council extended the mandate of resolution 1373 (2001) three times until 25 April 2021. Through resolution 1540 (2004), the UN Security Council has called upon all states to present to the associated “1540 Committee” a first report, not later than six months from the adoption of the resolution 1540 (2004), i.e. 28 October 2004, on steps they have taken or intend to take to implement this resolution. Since May 2010, Ireland, Poland, Togo, Uganda, Finland, Ethiopia, Gabon, Rwanda, and Ukraine have reported to the 1540 Committee.

The Security Council also adopted the 10th programme of work, for 1 June 2011 to 31 May 2012, for the 1540 Committee, in S/2011/380. The Committee will focus its attention on five main areas of work: (i) monitoring and national implementation; (ii) assistance; (iii) cooperation with international organizations, including the Security Council Committees established pursuant to resolutions 1267 (1999) and 1373 (2001); (iv) transparency and media outreach; and (v) administration and resources.

Physical protection of nuclear material

The Convention on the Physical Protection of Nuclear Material entered into force on 8 February 1987. It is the only legally-binding international instrument in the area of physical protection of nuclear material. It establishes measures related to the prevention, detection, and punishment of offences related to nuclear material.

The Convention has 145 parties and 44 signatories. Since May 2010 it has entered into force in Bahrain (09 June 2010), Lao PDR (29 October 2010), and Lesotho (17 September 2010).


From 4–8 July 2005 the IAEA held a “CPPNM Amendment Conference”. The resulting Amendment to Convention on the Physical Protection of Nuclear Material was adopted

---

16 Ibid
on 8 July. It makes it legally-binding for states parties to protect nuclear facilities and material in peaceful and domestic use, and in storage as well as transport. Further, the amendment includes the identification of a point of contact and provisions for an expanded cooperation between and among states “regarding rapid measures to locate and recover stolen or smuggled nuclear material, mitigate any radiological consequences of sabotage, and prevent and combat related offences.”

For the amendment to enter into force, two thirds of the states parties to the Convention on the Physical Protection of Nuclear Material have to ratify, accept, or approve the amendment. At the time of the conclusion of the NPT Review Conference in May 2010, 35 contracting parties to the CPPNM had ratified the amendment. Since then, 13 additional countries have ratified it; namely Bahrain, Bosnia & Herzegovina, Czech Republic, Finland, Germany, Indonesia, Kazakhstan, Latvia, Nauru, Netherlands, Portugal, Saudi Arabia, and Tunisia.

Georgia reports that the amendment has been translated into Georgian and the parliament has initiated ratification. The official procedures for ratification will start in mid-September 2011.

Greece is intending to conclude the ratification process soon, which is already under way.

The IAEA recommendations on the physical protection of nuclear material and nuclear facilities (INFCIRC/225/Rev.4) were published in 2005. The recommendations include an additional chapter, which “provides specific recommendations related to the sabotage of nuclear facilities and nuclear material”. These recommendations as contained INFCIRC/225/Rev.4 (Corrected) reflected “a broad consensus among

---

22 Ibid
23 Ibid
member states on the requirements which should be met by systems for the physical protection of nuclear material and facilities”.\textsuperscript{24} In 2011 the IAEA has published a fifth revised version.\textsuperscript{25} The fifth version is intended to assist member states in further implementing a comprehensive physical protection regime. As the document does not entail a legal commitment and does not require signature and ratification of member states, it is difficult to assess compliance levels.

The following are national implementation measures on the IAEA recommendation undertaken by states, according to a questionnaire sent to governments by Reaching Critical Will in July 2011:

- **Australia** implements this instrument through a nuclear material permit system;
- **Croatia** has initiated the implementation of the recommendations by drafting a new national legislation called “Ordinance on control of nuclear materials”;
- **The Czech Republic** fully implemented the IAEA recommendation into the national legislation in 2005 through the “Atomic act and relevant Decree of the SONS No. 144/1997 on Physical Protection of Nuclear Materials and Nuclear Facilities and their Classification;
- **Georgia’s** system of physical protection of nuclear material and nuclear facilities is based on the elements described in Sections 4.2-–4.4 of the INFCIRC/225/Rev.4;
- **Germany** already has in force very strict national regulatory control of nuclear material in compliance with all relevant international conventions, IAEA standards, EU regulations, etc., in particular the CPPNM as amended, ICSANT, etc.; and
- **Romania** implements the recommendations on the physical protection of nuclear material and nuclear facilities through the national norms on physical protection in nuclear field.

**Handling of radioactive sources**

The IAEA Code of Conduct on the Safety and Security of Radioactive Sources\textsuperscript{26} was approved by the Board of Governors in September 2003.\textsuperscript{27} Though not covering nuclear material addressed in the Convention on the Physical Protection of Nuclear Material,\textsuperscript{28} the Code applies to all radioactive sources “that may pose a significant risk to individuals, society and the environment”.\textsuperscript{29} It lays out basic principles for states to ensure the security of radioactive sources in within their territory, the appropriate training of relevant personnel, and the establishment of necessary information channels.

\textsuperscript{24} Ibid
\textsuperscript{28} Except for sources incorporating plutonium-239
\textsuperscript{29} “Code of Conduct on the Safety and security of Radioactive sources and the Supplementary Guidance on the Import and Export of Radioactive Sources (INFCIRC/663), IAEA, 29 December 2005, p. 4
It also gives recommendations for an effective national legislative system of control over the management and protection of radioactive sources.30

The supplementary Guidance on the Import and Export of Radioactive Sources31 was approved by the Board of Governors in September 2004.32 The practical guidance has been developed by the IAEA Secretariat together with member states to support member states compliance with the Code.33 It recommends the designation of a point of contact in every state, responding to a self-assessment questionnaire developed by the IAEA, and that states should become parties of the Convention on Nuclear Safety in accordance with operative paragraph 8 of GC(48)/RES/10/D.

103 states have expressed their support for the Code in a letter to the Director General of the IAEA.34

44 countries explicitly support all aspects of the supplementary Guidance on the Import and Export of Radioactive Sources: Albania, Argentina, Armenia, Australia, Belarus, Bosnia and Herzegovina, Brazil, Bulgaria, Burkina Faso, Burundi, Canada, Costa Rica, Croatia, Czech Republic, Denmark, Ecuador, Egypt, Ethiopia, Finland, Gabon, Greece, Iceland, India, Iraq, Japan, Latvia, Lebanon, Lithuania, Luxembourg, Mexico, Moldova, Namibia, Peru, Poland, Romania, Russian Federation, Senegal, Slovenia, Sweden, Tajikistan, Thailand, United Kingdom, United States, and Uruguay.35

Most states have designated a national point of contact for radioactive sources. However Cameroon, Colombia, Ireland, Madagascar, Mauritania, Oman, Paraguay, Serbia, the former Yugoslav Republic of Macedonia, Turkmenistan, Uzbekistan, and Zimbabwe, have not yet done so.

Algeria, Bangladesh, Benin, Bolivia, Botswana, Burkina Faso, Cameroon, Chad, Chile, China, Colombia, Cuba, the Dominican Republic, Estonia, Germany, Ghana, the Holy See, Indonesia, Ireland, Israel, Italy, Jordan, Kazakhstan, the Republic of Korea, Madagascar, Mali, Malta, Mauritania, the Netherlands, New Zealand, Niger, Oman, Pakistan, Paraguay, the Philippines, Portugal, Qatar, Serbia, Slovakia, Switzerland, the Syrian Arab Republic, the former Yugoslav Republic of Macedonia, Tanzania, Tunisia, Turkmenistan, Uzbekistan, Vietnam, Yemen, and Zimbabwe have not responded to the IAEA self-assessment questionnaire.

The following are national initiatives in-line with the IAEA guidelines on radioactive

---

32 The IAEA General Conference welcomed this approval in resolution GC(48)/RES/10.D, endorsing the guidance while recognizing it is not a legally binding instrument. http://www.iaea.org/About/Policies/GC/GC48/Resolutions/gc48res10.pdf
sources, according to a questionnaire sent out by Reaching Critical Will in July 2011:

- **Australia** has a national Code of Practice for the Security of Radioactive Sources;\(^{36}\)
- **Croatia** has initiated the implementation of the recommendations by drafting a new national legislation called “Ordinance on control of nuclear materials”;\(^{37}\)
- **The Czech Republic** fully implements IAEA’s guidelines for the security of radioactive sources, in particular the Code of Conduct on the Safety and Security of Radioactive Sources; and
- **Georgia** has not yet expressed political support for the IAEA code of conduct, but the formal process for expressing such support will be formally initiated later this year.

Some states have withdrawn their political commitment to the Code as of 6 May 2010, including Democratic Republic of Congo, Egypt, Honduras, Kazakhstan, Nicaragua, and Senegal.\(^{38}\) States that have not, since May 2010, reaffirmed their commitment to the International Support for the IAEA Guidance on the Import and Export of Radioactive Sources are Bosnia and Herzegovina, Democratic Republic of Congo, Egypt, Honduras, Iceland, Kazakhstan, Nicaragua, and Senegal.\(^{37}\)

**Nuclear terrorism**

Both the International Convention for the Suppression of Acts of Nuclear Terrorism\(^{39}\) and the 2006 Measures to Protect Against Nuclear Terrorism\(^{40}\) focus on the danger of proliferation of nuclear material into the possession of so-called non-state actors.

The International Convention for the Suppression of Acts of Nuclear Terrorism was adopted by the UN General Assembly on 13 April 2005.\(^{41}\) It entered into force on 7 July 2007 and currently has 115 signatories and 77 parties.\(^{42}\) States parties to the Convention have the obligation to establish the offences within the scope of the convention as criminal offences under their national laws. They are also required to establish jurisdiction, both territorial and extra-territorial, over the offences set forth in the Convention and to cooperate with each other in the exchange of information.\(^{43}\)

Since May 2010, the Convention has 11 new parties, including Armenia (22 September

---


2010), Chile (27 September 2010), China (8 November), Lesotho (22 September 2010), Algeria (22 September 2010), Bahrain (4 May 2010), the Democratic Republic of the Congo (23 September 2010), Nauru (24 August 2010), St. Vincent and the Grenadines (8 July 2010), Tunisia (28 September 2010), and the Netherlands (30 June 2010).

Afghanistan, Albania, Andorra, Argentina, Australia, Benin, Bosnia and Herzegovina, Bulgaria, Burkina Faso, Cambodia, Canada, Colombia, Costa Rica, Djibouti, Ecuador, Egypt, Estonia, France, Ghana, Greece, Guatemala, Guinea, Guyana, Iceland, Ireland, Israel, Italy, Jamaica, Jordan, Kuwait, Liberia, Madagascar, Malaysia, Malta, Mauritius, Monaco, Montenegro, Mozambique, New Zealand, Norway, Palau, the Philippines, Portugal, Qatar, the Republic of Korea, Rwanda, Senegal, Seychelles, Sierra Leone, Singapore, Swaziland, Sweden, the Syrian Arab Republic, Tajikistan, Thailand, Timor-Leste, Togo, Turkey, the United States, and Uruguay have signed the convention but not yet ratified it.

**Conclusion**

The actions under this section emphasize the importance of adhering to international standards and conventions concerning the physical security of nuclear facilities and materials.

Action 41 is difficult to assess since the term “highest possible standards” is not defined in the action plan. The IAEA provides a list of instruments that are “fundamental for nuclear security” but does not indicate if these are considered to be a general interpretation of the “highest possible standards”.

Adherence to the various conventions is improving but a significant number of countries that are party to the NPT still remain outside these instruments. Therefore, additional progress is needed in order to implement the actions.

---

44 Ibid
CHAPTER 4
Safeguards and additional protocols

**Action 24:** The Conference re-endorses the call by previous review conferences for the application of IAEA comprehensive safeguards to all source or special fissionable material in all peaceful nuclear activities in the States parties in accordance with the provisions of article III of the Treaty.

**Action 25:** The Conference, noting that 18 States parties to the Treaty have yet to bring into force comprehensive safeguards agreements, urges them to do so as soon as possible and without further delay.

**Action 26:** The Conference underscores the importance in complying with the non-proliferation obligations, addressing all compliance matters in order to uphold the Treaty’s integrity and the authority of the safeguards system.

**Action 27:** The Conference underscores the importance of resolving all cases of non-compliance with safeguards obligations in full conformity with the IAEA statute and the respective legal obligations of Member States. In this regard, the Conference calls upon Member States to extend their cooperation to the Agency.

**Action 28:** The Conference encourages all States parties which have not yet done so to conclude and to bring into force additional protocols as soon as possible and to implement them provisionally pending their entry into force.

**Action 29:** The Conference encourages IAEA to further facilitate and assist the States parties in the conclusion and entry into force of comprehensive safeguards agreements and additional protocols. The Conference calls on States parties to consider specific measures that would promote the universalization of the comprehensive safeguards agreements.

**Action 30:** The Conference calls for the wider application of safeguards to peaceful nuclear facilities in the nuclear-weapon States, under the relevant voluntary offer safeguards agreements, in the most economic and practical way possible, taking into account the availability of IAEA resources, and stresses that comprehensive safeguards and additional protocols should be universally applied once the complete elimination of nuclear weapons has been achieved.

**Action 31:** The Conference encourages all States parties with small quantities protocols which have not yet done so to amend or rescind them, as appropriate, as soon as possible.

**Action 32:** The Conference recommends that IAEA safeguards should be assessed and evaluated regularly. Decisions adopted by the IAEA policy bodies aimed at further strengthening the effectiveness and improving the efficiency of IAEA safeguards should be supported and implemented.

**Introduction**

The actions in this chapter focus on the implementation of IAEA safeguards and Additional Protocols and other non-proliferation obligations of member states. In order to monitor compliance we looked at the current status of the Comprehensive Safeguard Agreements (CSA), the Additional Protocol (AP), and the Small Quantities Protocol (SQP). Further we reviewed resolutions and statements of the General Conference 2010 and available records of other meetings.
To summarise the development of cases of non-compliance with IAEA safeguard obligations we reviewed IAEA press releases, information circulars on the topic, and news reports.

This group of actions involved some interpretation difficulties. For example, action 24 calls for the application of the IAEA comprehensive safeguards in accordance with the provisions of article III of the NPT. Article III of the NPT states that safeguards are to be “applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere.”\(^1\) As was already laid out in the previous report on the peaceful uses of nuclear energy, states are debating whether safeguards should be interpreted as they were set out in 1968 or in a more comprehensive manner to incorporate the additional protocol as some states call for. As no agreement has been reached by the NPT states parties on the interpretation of safeguards in today’s context, we will base this report on the view that the safeguards obligations represent the IAEA comprehensive safeguards agreement, unless the additional protocol is specifically referred to.

**Comprehensive Safeguard Agreements**

IAEA comprehensive safeguards are safeguard agreements that cover all nuclear material in a state and mandatory under the NPT. Each Comprehensive Safeguard Agreement (CSA) between the IAEA and non-nuclear weapon states follows the structure and content of IAEA INFCIRC/153 (Corr.),\(^2\) under which a state undertakes to accept Agency safeguards on all source or special fissionable material in all peaceful nuclear activities as set out in article III of the NPT.\(^3\)

Action 25 specifically calls upon those 18 member states that have not yet signed or ratified a Comprehensive Safeguard Agreement to do so.

Since May 2010 new IAEA Safeguards Agreements have entered into force in the following states:\(^4\) Andorra (18 Oct 2010); Chad (13 Mar 2010); Montenegro (4 March 2011); Mozambique (1 March 2011); Pakistan (15 April 2011), and Rwanda (17 May 2011).

A few states have signed but not yet put into force the CSA:\(^5\) Benin (7 June 2005), Cape Verde (28 June 2005), The Republic of the Congo (13 April 2010), Djibouti (27 May 2010), Timor-Leste (6 October 2009), and Togo (29 November 1990).

For some states—Equatorial Guinea (13 June 1986), Guinea (8 June 2011), and Vanuatu (8 September 2009)—CSAs have been approved by the Board of Governors but have not yet been signed. Others—Eritrea, Guinea-Bissau, Liberia, Micronesia, São Tomé &

\(^1\) Article III of the NPT
\(^2\) “The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear weapons” INFCIRC/153, IAEA, June 1972
Principe and Somalia—have not yet submitted CSAs to the IAEA Board of Governors for its consideration.6

**Additional Protocol (AP)**

The Model Additional Protocol7 to the IAEA safeguard agreements requires states to provide the IAEA with information covering all aspects of a states’ nuclear fuel cycle. It also ensures the IAEA short notice inspector access to all buildings on a nuclear site and other nuclear-related locations, information on the manufacture and export of sensitive nuclear-related technologies, and inspection mechanisms for manufacturing and import locations. It also enables the IAEA to use the most advanced verification technologies.8

As of 21 June 2011, 109 states have additional protocols in force.9 26 states have signed the Additional Protocol but have not put it into force: Andorra, Bahrain, Belarus, Benin, Cameroon, Cape Verde, The Republic of the Congo, Côte d'Ivoire, Djibouti, Honduras, India, Iran, Iraq, Kiribati, Kyrgyzstan, Liechtenstein, Malaysia, Namibia, Senegal, Serbia, Thailand, Timor-Leste, Togo, Tunisia, Viet Nam, and Zambia.10

Since May 2010 the additional protocol has entered into force in: Albania (3 November 2010), Chad (13 May 2010), Costa Rica (17 June 2011), Dominican Republic (5 May 2010), Mozambique (1 March 2011), Romania (1 May 2010) Rwanda (17 May 2010), Swaziland (8 September 2010), United Arab Emirates (20 December 2010), Mexico (4 March 2011), and Montenegro (4 March 2011).11

Bahrain (21 September 2010) and Djibouti (27 May 2010) signed the AP. The IAEA Board of Governors gave its approval for Guinea on 8 June 2011.12

**Small Quantities Protocol (SQP)**

States with little or no nuclear material may conclude, in addition to the Comprehensive Safeguard Agreement, a protocol “which holds in abeyance the implementation of most of the detailed safeguard procedures of comprehensive safeguards agreements.”13 In 2005 the IAEA Board of Governors decided to modify the standard text of the SQP14 and change the criteria for eligibility. States with existing or planned facilities are no longer eligible for an SQP. States with a revised SQP in force need to report on their material and inform the IAEA about changes and enable the Agency to conduct verification

---

6 Ibid
8 IAEA, "IAEA Safeguards: Stemming the Spread of Nuclear Weapons", http://www.iaea.org/Publications/Factsheets/English/S1_Safeguards.pdf
10 Ibid
11 Ibid
12 Ibid
14 IAEA Board of Governors “The Standard Text of Safeguards Agreements in connection with the Treaty on the Non-Proliferation of Nuclear Weapons” (GOV/INF/276/Mod.1) and GOV/INF/276/Mod.1/Corr.1, IAEA, February 2006
activities in the field. Action 31 encourages all states with a Small Quantities Protocol to amend or rescind them.

Since May 2010 they were amended by Panama (4 March 2011), San Marino (13 May 2011), Swaziland (23 July 2010), and El Salvador (10 June 2011) and signed by Djibouti (27 May 2010). The IAEA Board of Governors approved the SQP for Guinea on 8 June 2011.

Since May 2010 SQPs have entered into force in: Chad (13 May 2010), Montenegro (4 March 2011), Mozambique (1 March 2011), and Rwanda (17 May 2010).

Afghanistan, Andorra, Antigua and Barbuda, Barbados, Belize, Bhutan, Bolivia, Brunei Darussalam, Cambodia, Cameroon, Dominica, Equatorial Guinea, Ethiopia, Fiji, France, Gabon, Gambia, Grenada, Guyana, Haiti, Jordan, Kiribati, Kuwait, Kyrgyzstan, Lao P.D.R., Maldives, Mauritania, Mongolia, Myanmar, Namibia, Nauru, Nepal, Netherlands, New Zealand, Oman, Papua New Guinea, Paraguay, Republic of Moldova, St Kitts and Nevis, Saint Lucia, St Vincent and the Grenadines, Samoa, San Marino, Saudi Arabia, Sierra Leone, Solomon Islands, Sudan, Suriname, Togo, Tonga, Trinidad and Tobago, Tuvalu, United Arab Emirates, United Kingdom, United States of America, Yemen, Zambia, and Zimbabwe still have a SQP in force but have not amended or rescinded them.

Voluntary Offer Agreements

For the five nuclear weapons states—China, France, Russia, United Kingdom, and the United States—special safeguards agreements have been established, since they are not required by the NPT to accept safeguards. The so-called Voluntary Offer Safeguard Agreements (VOAs) between the IAEA and a nuclear weapon state usually follow the format of INFCIRC/153 (Corr.) but vary in the scope of materials and facilities covered. They also include the possibility of withdrawing materials and facilities for safeguards.

There have been no reported changes in the application of VOAs in the nuclear weapon states since May 2010.

The role of the IAEA

The Director General of the IAEA repeatedly calls on states that have not already done so to sign and ratify the comprehensive safeguard agreements and the additional protocol. In every introductory statement to the IAEA Board of Governors he reports on the progress made, the signatory of new agreements, developments in the cases of non-compliance, and the IAEA’s role in it.

---


17 Ibid

18 Ibid


In its mid-term strategic plan 2012–2017, the IAEA states that it will continue to "encourage Member States to conclude comprehensive safeguards agreements which are in accordance with relevant obligations, and additional protocols, and will provide associated assistance where requested." Further, it will provide states with the necessary guidance and training.

**Non-proliferation cases of concern**

According to the IAEA, safeguards are successfully implemented in the majority of member states. However some countries are reported by the IAEA to have not fully complied with their obligations under their respective safeguard agreements. These countries are Iran, Syria, and the Democratic People’s Republic of Korea (DPRK).

**Iran**

In the case of Iran, the conflicting accounts of the situation by the IAEA and Iran show the complexity of the topic. The IAEA has not found Iran to be in non-compliance with its safeguards obligations and in fact continues to verify the non-diversion of declared nuclear materials at Iran’s nuclear facilities, in accordance with Iran’s safeguards agreement. However, the IAEA asserts that Iran has “not fully implemented its binding obligations” and that the “full implementation of these obligations is needed to establish international confidence in the exclusively peaceful nature of Iran’s nuclear programme.”

These obligations include, according to the IAEA:

- The implementation of the provision of the additional protocol;
- The implementation of the modified Code 3.1 of the subsidiary arrangement general part to the safeguard agreement;
- The suspension of enrichment related activities; and
- Suspension of heavy water related activities and clarification of the remaining outstanding issue on the possible military dimensions of Iran’s nuclear programme.

In the follow-up report from 15 September 2010, GOV/2010/46, in connection to the adoption of the 9 June 2010 UN Security Council resolution 1929 on the Islamic Republic of Iran, the IAEA argued that Iran has failed to meet the requirements of the Board of Governors and to comply with UN Secretary Council resolutions 1696 (2206), 1737 (2006), 1747 (2007), and 1803 (2008). Resolution 1929 also affirms that Iran should take steps required in the GOV/2006/14 and GOV/2009/82.

In the IAEA report GOV/2010/62, released on 23 November 2010, the IAEA states that Iran has provided IAEA with new revised information including estimations on the hold

---

22 Ibid
up of nuclear material. With this new information the IAEA has been able to completely evaluate the nuclear material balance for the period 18 November 2008 to 22 November 2009 and they have thereby concluded that the results are within those normally associated with a facility of this type. Furthermore, the IAEA conducted a physical inventory verification (PIV) at FEP between 16 and 27 October 2010 and the IAEA is continuing its assessment of the PIV.

The IAEA still argues that it is waiting for more information on the announcement made on the 23 June 2010 by Iran’s Vice President Mr. Ali Akbar Salehi concerning the construction of the new uranium enrichment facilities that was planned to start around 20 March 2011.

Iran has answered to these IAEA reports and the raised issues in documents INFCIRC/796, INFCIRC/797, INFCIRC/798, INFCIRC/153, INFCIRC/804, and INFCIRC/214. Regarding the implementation of the additional protocol, Iran reiterates the voluntary basis of the additional protocol. To the issue on safeguards agreements, Iran stated on 3 June 2010 (INFCIRC/796) that confidential information coming to the knowledge of the IAEA through implementing of the safeguard agreement, have regrettably been leaked by the IAEA and imparted to the media. This violated one of the most important elements in the application of the safeguard agreement between the IAEA and the member states. Iran also informs the IAEA through this document that, due to these breaches, if more confidential information is leaked, Iran will withdraw the designation of the relevant inspector(s).

In the additional response (INFCIRC/797) to the document GOV/2010/28, Iran states that it has, in accordance with Article 8, 42, 43, and 44 of the safeguard agreement (INFCIRC/153), fulfilled its obligation in providing information. Iran continues by stating that the additional information requested by the IAEA is beyond their safeguard obligations. In a third corresponding response (INFCIRC/798) from Iran, it points to a misunderstanding on the side of the IAEA inspectors, regarding paragraph 28 of the GOV/2010/28. They consequently ask the IAEA to therefore correct the report.

On 9 June 2011 Iran sent a fourth statement (INFCIRC/804) on the matter of GOV/2010/28. Iran wrote that the IAEA should provide objective technical and factual-based reports and that paragraph 27 of the GC(53)/RES/14 requires the IAEA not to step beyond its statutory and legal mandate in preparing its report. Iran concluded that the IAEA is, in the Director General’s report GOV/2010/28, in contradiction with the Agency’s statutory mandate and that the safeguard agreement (INFCIRC/214) contains tremendous confidential technical details which do not necessarily need to be published.

Finally, Iran reiterates in document INFCIRC/810 that the report consist of unnecessarily extensive details and that for the IAEA to be able to report in such detail the agency has full access to all nuclear material and facilities in Iran.

Since May 2010 Iran has provided more information on the incidents involving the breaking of seals by the operator Fuel Enrichment Plant (FEP). It has also provided the Agency with an explanation to the higher enrichment level of the FEP that stated in the Design Information Questionnaire (DIQ). Iran’s explanation was consistent with the Agency’s findings. On 9 February 2010 Iran increased its enrichment level and the
interconnection of the two cascades and implemented the necessary new safeguard approach on 13 July 2010.

On 19 July 2011 Iran announced the installing of two new centrifuges.25

On 2 August 2011 Iran announced the launching of the Bushehr power plant would take place without delay.26 The construction of the power plant began in 1975 but was halted due to a US embargo on hi-tech supplies to Iran.27 In 1998 Russia signed a contract to complete the construction of the plant. However it has been postponed several times. The estimated starting date is 30 August 2011.28

In response to an invitation from Iran, the Deputy Director General for Safeguards visited Iran from 14 to 19 August 2011. During his visit, the Deputy Director General “visited the Bushehr Nuclear Power Plant, the enrichment plants at Natanz and Fordow, the IR-40 Reactor and Heavy Water Production Plant (HWPP) at Arak, and the conversion and fuel fabrication facilities at Esfahan. Iran also provided access to an installation where research and development (R&D) on advanced centrifuges was taking place.”29

In its latest report on 2 September 2011, the IAEA Board of Governors maintains that Iran needs to submit design information to the IAEA “as soon as the decision to construct, or to authorize construction of, a new facility has been taken.”30 In the report, the IAEA Director-General is said to be “increasingly concerned about the possible existence in Iran of past or current undisclosed nuclear-related activities involving military-related organizations, including activities related to the development of a nuclear payload for a missile, about which the Agency continues to receive new information.”31

However, the Iranian government argues that it no longer needs to provide early notification of the construction of nuclear facilities. The specific agreement in question, “modified Code 3.1,” was accepted by Iran in 2003 but not ratified by its parliament. In March 2007, Iran informed the IAEA that it had “suspended” implementation of the Code and would revert back to the implementation of its earlier, 1976 version.32 This original Code only requires the submission of design information for new facilities “normally not later than 180 days before the facility is scheduled to receive nuclear material for the first time.” However, the IAEA argues that the modified Code, which indicates that “countries must notify inspectors as soon

---

30 Ibid
as a decision is made to build a nuclear plant,” is still applicable to Iran.\textsuperscript{33} The IAEA says that states who adopted the modified Code cannot unilaterally revert to the old Code.\textsuperscript{34}

Regarding its additional protocol, in GOV/2011/54 the IAEA continues to complain that Iran has not implemented its additional protocol. It notes in a footnote that “Iran’s Additional Protocol was approved by the Board on 21 November 2003 and signed by Iran on 18 December 2003, although it has not been brought into force. Iran provisionally implemented its Additional Protocol between December 2003 and February 2006.”\textsuperscript{35}

As for the other two obligations cited by the IAEA, suspending enrichment-related and heavy water-related activities, these are obligated by resolutions of the UN Security Council, not by Iran’s safeguards agreement or any other instrument.

**Diplomatic efforts**

The P5+1—China, France, Russia, the United Kingdom, the United States, and Germany—have met with Iran on two occasions since May 2010.\textsuperscript{36} The first meeting on 6–7 December 2010 in Geneva was a seen as a starting point for discussion\textsuperscript{37} after the group had not met since October 2009.\textsuperscript{38} Not much progress on substance was made, but the parties agreed to meet again in January 2011 in Istanbul in order to further discuss.\textsuperscript{39} The meeting from 20–21 January 2011 was seen as disappointing and little progress was reported.\textsuperscript{40}

On 12 July 2011 the Foreign Minister of Iran, Ali Akbar Salehi, met with the Director General of the IAEA to discuss the issue related to the implementation of Iran’s safeguard obligations.\textsuperscript{41} Whereas the Director General reiterated the Agency’s position that Iran was not meeting its obligations,\textsuperscript{42} the Iranian Foreign Minister called the talks “very fruitful” and “indicated a new approach could follow as a result of the Agency declaring the completion of the Work Plan that was agreed in 2007.”\textsuperscript{43} Iran regards its obligations under this work plan as fulfilled.\textsuperscript{44}

\begin{footnotes}
\item[38] “Real Progress with Iran, The Daily Best, 2 October 2009, http://www.thedailybeast.com/articles/2009/10/02/real-progress-with-iran.html
\item[39] Ibid
\item[42] Ibid
\item[43] Ibid
\end{footnotes}
During an official visit to Washington in mid-July 2011, Russian Foreign Minister Sergei Lavrov announced a “step-by-step” approach that would, if Iran agreed to clarify questions about its nuclear programme, lead to a gradual easing of sanctions. Reactions to the proposal are hesitant so far. The US Secretary of State, Hillary Clinton, said the United States would give the Russian plan serious attention, but so far there has been no official reaction. Iran’s Foreign Minister said Iran would discuss the proposal during his visit in Moscow and Iranian President Ahmadinejad said it was the West’s turn to take a step towards Iran.

On 5 September, the Head of Iran’s Atomic Energy Agency, Mr. Fereydoon Abbasi, announced that Iran would offer international inspectors full supervision of the country’s nuclear activities for the next five years (though not on the basis of the additional protocol), on the condition that the sanctions against Iran be lifted.

In a letter on 6 September 2011, Iran informed the High Representative of the European Union for Foreign Affairs and Security Policy that it was ready to engage in new negotiations, as long as its “inalienable right” to nuclear energy would be respected.

On 14 September, the United States and E3 “took note” of the offers but expressed scepticism over the sincerity of the proposal.

Syria

In an interview with the Washington post on 14 February 2011, the Director General of the IAEA explained that the main issue in Syria is the al-Kibar site that was destroyed in 2007 by Israel. Since then Syria constructed a new building on the same site. The IAEA checked the site in 2008. It has since then asked for access once again but was denied. Syria states that this new facility is not a nuclear reactor.

Despite the stalemate in cooperation since 2008, other collaborations between the IAEA and Syria have been continued and several active technical cooperation projects throughout this period have been conducted, including a feasibility study and site selection for what would be Syria’s first nuclear power plant. Approved in early 2009,
the project’s stated objective is “to perform technical specification and economic evaluation to obtain the most technically beneficial and economically advantageous nuclear power plant.”

In February 2011 the Syrian Minister for Foreign Affairs responded to a letter from IAEA, sent in November 2010, stating that Syria would continue to work with the Agency to resolve all outstanding technical issues. Since this correspondence, the IAEA and Syria have reached an agreement on a visit by the Agency to locations at Homs.

In his report to the Board of Governors on 24 May 2011, the Director General gave his assessment of the implementation of NPT safeguards in Syria. He came to the conclusion that the destroyed building in Dair Alzour most likely “was very likely a nuclear reactor” that should have been reported to the IAEA. The IAEA also reported that it had been unable to provide any assessment concerning the nature or operational status of three other locations that it determined were related to the Dair Alzour site. Further, after several exchanges of information and a visit to Homs, the IAEA concluded that the information provided by Syria regarding the detection of uranium particles at the Miniature Neutron Source Reactor in 2008 and 2009 is “not inconsistent with the Agency’s findings” and would therefore be addressed in the routine implementation.

During a statement on 7 June 2011 to the IAEA Board of Governors, the Director General explained, “the Agency has performed a physical inventory verification at the Miniature Neutron Source Reactor (MNSR) with Syria’s cooperation.” Syria had provided information on previously unreported activities and the presence of anthropogenic natural uranium particles and subsequently submitted inventory change reports concerning the newly declared nuclear material. This information provided by Syria is still being assessed by the Agency. The Director General also urged Syria “to cooperate with the Agency on all issues in a timely manner and to bring into force an Additional Protocol to its Safeguards Agreement to enable the Agency to verify the correctness and completeness of Syria’s declarations.”

Following this report, the IAEA Board of Governors adopted a resolution on 9 June 2011 in which it determined that Syria’s “undeclared construction of a nuclear reactor” and failure to provide design information on the Dair Alzour site “constitutes non-compliance with its obligations under its Safeguards Agreement with the Agency in the context of Article XII.C of the Agency’s Statute.” It calls on Syria to “remedy urgently its non-compliance” with its obligations under the safeguard agreements, to respond to the Director General’s request for updated reporting, and to resolve all outstanding questions. It further calls upon Syria to sign, bring into force, and implement the

54 Ibid
55 Amano. Y, “Introductory Statement to Board of Governors, by IAEA Director General”, IAEA, 7 March 2011
57 Ibid, page 8
additional protocols. Furthermore, the Board reported the matter to the UN Security Council and General Assembly.

On 14 July 2011 the UN Security Council met in a closed session to discuss the issue. States were briefed on the Agency’s findings in connection with the destroyed site in Dair Alzour by the head of the IAEA safeguard department dealing with Syria and Iran. Western nations were concerned the UN Security Council would probably not take any action until the new report on the Syrian implementation of safeguards is released in September. Both China and Russia opposed the resolution of the IAEA Board of Governors that referred Syria’s case to the UN Security Council in June and China was “not very happy” to see the issue discussed in the UN Security Council.

Democratic People’s Republic of Korea
In the case of the Democratic People’s Republic of Korea (DPRK), not much has changed since the conclusion of the 2010 NPT action plan. Since April 2009 the IAEA has not had inspectors in the DPRK and since December 2002 it has not been permitted to implement safeguards.

In his introductory statements on 7 June 2010 and 13 September 2010, the Director General of the IAEA called on the DPRK to implement the relevant measures called for in UN Security Council resolutions 1718 an 1874 and to fully implement its non-proliferation obligations. Further he called on all parties concerned to “make concerted efforts for a resumption of the Six-Party Talks at an appropriate time.”

During its September 2010 meeting the IAEA General Conference adopted a resolution on the “Application of the NPT safeguards agreement between the Agency and the Democratic People’s Republic of Korea”. In this resolution the General Conference urges the DPRK not to conduct further nuclear tests and to comply with its obligations under the UN Security Council resolutions. Further it calls on the DPRK to come into full compliance with the NPT and to cooperate promptly with the IAEA.

In November 2010, Dr. Siegfried Heckler, former director of the Los Alamos National Laboratory, visited the DPRK where he was shown a small, operational, industrial-scale uranium gas-centrifuge enrichment facility at the site of a decommissioned fuel fabrication plant Yongbyon. According to Dr. Heckler, the enrichment plant contained about 2000 centrifuges in six cascades. He indicated that the DPRK officials informed him that the average enrichment level is 3.5 per cent U-235 and that its total capacity is

---

65 Ibid
66 "Implementation of the NPT safeguards agreement between the Agency and the Democratic People’s Republic of Korea” GC(54)/RES/12, IAEA, September 2010, http://www.iaea.org/About/Policy/GC/GC54/GC54Resolutions/English/gc54res-12_en.pdf
8000 kg SWU/year. Dr. Heckler reported that the 5 MW(e) plutonium production reactor at Yongbyon is still disabled and the fuel rods remain in storage. Apparently, DPRK officials told him that it operates a previously undisclosed uranium conversion plant, with sufficient through-put to provide feedstock for the uranium enrichment plant at Yongbyon. These claims have not been verified.\(^67\)

Like the year before, the IAEA Director General urged the DPRK in his introductory statement to the Board of Governors on 6 June 2011 to implement all relevant non-proliferation obligations and announced that he would present a comprehensive report on the IAEA’s previous verification activities in the DPRK in September 2011.\(^68\)

The six-party talks between the DPRK, the United States, China, Russia, Japan, and the Republic of Korea were last held in December 2008.\(^69\) The DPRK had pulled out of the talks shortly before conducting a second nuclear test in April 2009.\(^70\) On 1 August 2011 the DPRK called for the resumption of the six-party talks without preconditions.\(^71\) The United States however said it is looking for “progress along the lines of their commitments to pursue a denuclearization.”\(^72\) On 14 January 2011 China declared the six-party talks as more “suitable” than the UN Security Council for solving the issue.\(^73\)

**Myanmar**

The development of nuclear technologies in Myanmar is increasingly attracting international attention. In June 2010, the Oslo-based activist organisation Democratic Voice of Burma (DVB) released a documentary film about Myanmar’s nuclear ambitions and published a detailed report entitled “Nuclear Related Activities in Burma”.\(^74\)

Myanmar signed a Small Quantities Protocol with the IAEA in 1995. This stipulates that the country has no nuclear facilities and only small quantities of nuclear materials. Myanmar is bound to report the import or export of nuclear materials even in small quantities, or if it acquires materials in excess of the limit. If it constructs a nuclear facility it must notify IAEA six months before receiving nuclear material for it. In addition to the SQP, the IAEA has invited Myanmar to conclude an additional protocol (AP) to its safeguards agreement and to amend its small quantities protocol in line with the revised text approved by the IAEA Board of Governors in September 2005. Concluding an additional protocol would grant the IAEA expanded rights of access to

---


information and sites, but this has not yet happened.

The IAEA conducts no safeguards inspections in Myanmar at the present time and would have no right or obligation to do so unless it notifies the IAEA of a change in status.

**Universalisation of the Comprehensive Safeguards**

**Statements in international fora**
During the IAEA General Conference from 19–20 September 2010, states reconfirmed their commitment to the IAEA safeguard system. Algeria, Australia, Burkina Faso, Ecuador, Estonia, France, Kazakhstan, Lithuania, Poland, Republic of Korea, and Slovenia called for the universal application of safeguards.

Some states, including Canada, Burkina Faso, Guatemala, Ireland, Kuwait, Lithuania, Poland, Republic of Korea, Slovenia, Sudan, and Ukraine, called on states to adhere to the relevant instruments. Austria, the Czech Republic, Estonia, France, Ireland, Lithuania, Malta, Slovenia, and Ukraine spoke of the comprehensive safeguard agreements and the additional protocols as the standard for verification. Finland and Guatemala called on states to bring these instruments into force. Others, including Bulgaria, Germany, Lithuania, South Africa, Slovenia, and Zambia, expressed the need to strengthen the safeguards system. Lithuania and Thailand expressed their support for improvement efforts. Bahrain, Peru, and Tunisia commended the IAEA for the steps it had taken to strengthen the safeguards regime.

Cameroon and Peru called for the extension of nuclear weapon free zones (NWFZs). Some states, including Venezuela, Jordan, Kuwait, Lebanon, and Libya, expressed the need for the establishment of a NWFZ in the Middle East. Several states called for the implementation of the 1995 resolution on this subject.

Others, including Algeria, Australia, Bahrain, Lebanon, and Peru supported the universalisation of the NPT. Bulgaria supported the full and comprehensive implementation of the provisions of the NPT.

With regard to non-compliance with safeguard obligations, Australia, Austria, Bulgaria, the United Kingdom, Indonesia, Ireland, Kuwait, EU Singapore, expressed concern about the Islamic Republic of Iran. Some states, including Australia, Austria, the European Union, France, Italy, Ireland, Malta, and Singapore raised concerns about the case of the DKPR. Austria, France, and Germany also addressed the case of the Syrian Arab Republic.

Singapore and Guatemala pointed out that with the right to pursue peaceful uses of nuclear energy comes the responsibility to comply with non-proliferation efforts.

**Assessing and evaluating IAEA safeguards**

**Decisions of the IAEA Board of Governors**
The decisions of the Board of Governors are not all made public. Monitoring their implementation therefore is difficult.
Relevant Decisions of the General Conference

In September 2010 the General Conference adopted a resolution on “Strengthening the effectiveness and improving the efficiency of the safeguards system and the application of the Model Additional Protocol.” It deals with the promotion of the conclusion of safeguard agreements and additional protocols as well as the implementation, efficiency, and measures to strengthen the safeguards system. The Director General is to report to the General Conference on the implementation of the resolution.

For the upcoming IAEA General Conference a similar resolution has been proposed.

IAEA initiatives

In its annual report the IAEA focuses on the department of safeguards. The sections summarise latest developments, the different projects, and gives an outlook on future events and challenges.

The IAEA mid-term plan 2012–2017 includes a section on “Strengthening the effectiveness and improving the efficiency of the Agency’s safeguards and other verification activities”. It outlines the IAEA’s plan to further develop a state-level approach to the planning, implementation, and evaluation of the safeguards activities and by that making them “information driven, focused and more efficient”.

The department of safeguards itself has developed a long-term strategic plan from 2012–2023. It addresses the conceptual framework of the IAEA safeguards system, its legal authority, the technical capabilities, and the available resources. The three main long-term strategic objectives are to:

1. Deter the proliferation of nuclear weapons, by detecting early the misuse of nuclear material or technology, and by providing credible assurances that States are honouring their safeguards obligations;
2. Contribute to nuclear arms control and disarmament, by responding to requests for verification and other technical assistance associated with related agreements and arrangements; and
3. Continually improve and optimize departmental operations and capabilities to effectively carry out the IAEA’s verification mission.

75 “Strengthening the effectiveness and improving the efficiency of the safeguards system and application of the Model Additional Protocol” GC(54)/RES/11, IAEA, September 2010, http://www.iaea.org/About/Policy/GC/GC54/GC54Resolutions/English/gc54res-11_en.pdf
76 Ibid
77 Ibid
81 Ibid
84 Ibid
In November 2011 the IAEA in cooperation with the Institute of Nuclear Materials Management and the Europeans Safeguards Research and Development Association held a “Symposium on International Safeguards: Preparing for Future Verification Challenges”. Giving the IAEA Secretariat, member states, the nuclear industry, and “members of the broader safeguards and nuclear non-proliferation community” a chance for dialogue and the exchange of information, the symposium addressed upcoming challenges for nuclear verification and the IAEA safeguards programme.

The IAEA Enhancing Capabilities of the Safeguards Analytical Services project was initiated in 2010. In his introductory statement to the Board of Governors on 6 June 2011, the IAEA Director General announced the new Clean Laboratory at Seibersdorf “is now fully operational and has already analysed its first samples.” The work on a Nuclear Material Laboratory is progressing as scheduled and constructions are estimated to start in fall 2011. So far several countries have given their support for the project, such as Austria, Canada, and Germany.

Initiatives of other organisations
The European Safeguards Research and Development Association (ESARDA) held their annual meeting in Budapest from 16–20 May 2011. ESARDA is a coalition of European organisations, both governmental and commercial, actively involved in research and development of nuclear safeguards. Its main objective is to “assist the European safeguards community with the advancement of safeguards, enhancing the efficiency of systems and measures, as well as investigating how new techniques can be developed and implemented.”

The Asia Pacific Safeguards Network was launched on 1 October 2009, but held its inaugural meeting in June 2010. The objective of the network is to improve the quality, effectiveness, and efficiency of safeguards implementation in the Asia-Pacific region.

Other initiatives
The Center for International Security and Arms Control Studies (CESIM), in cooperation with Switzerland, has published a report on the “Optimizing of the IAEA Safeguard System”. The report addresses the issue of the optimisation of the IAEA safeguards system and includes a list of recommendations on:

- Optimization of the safeguards system as a means to universalize of the additional protocol;
- Global principles of optimization; and
- Suggested tracks for optimization.

---

86 Ibid
88 Ibid
90 European Safeguards Research and Development Association official website; http://esarda2.jrc.it/about/index.html
91 “Communication received from the Resident Representative of Australia to the Agency concerning the Asia-Pacific Safeguards Network” INFCIRC/769, IAEA, 25 September 2009
In connection with this report, Switzerland will also hold a side event to further discuss it on the margins of the IAEA General Conference in September 2011.

### Conclusion

Action 24 calls for the application of IAEA comprehensive safeguards on peaceful nuclear activities in all member states. As shown, only 13 countries have not yet implemented a CSA, and most of those countries do not carry out any significant civilian nuclear activities. Therefore, the call in this action seems to be complied with.

Action 25 calls specifically on the 18 member states that had not brought into force a CSA by May 2010 to do so. Only five countries, Andorra, Chad, Montenegro, Mozambique, and Rwanda have done so. Guinea has had its CSA approved by the IAEA Board of Governors on 8 June 2011, but no other progress by the remaining 12 countries has been noted. It is therefore appropriate to conclude that this action is not fully complied with and it will require additional efforts by the 13 countries that still have not brought the CSA into force.

Actions 26 and 27 are complicated to evaluate since the phrases “non-proliferation obligations” and “non-compliance” are undefined and open for interpretation. The IAEA Board of Governors has reported that Iran, Syria, and the DPRK are currently not complying with certain obligations. However, the view on what constitutes mandatory obligations and thereby compliance with such obligations differs quite significantly.

In the cases of both Iran and Syria, the IAEA Board has arguably made a determination of “non-compliance” beyond the comprehensive safeguards agreements. These agreements do not explicitly authorize the Board to report a country to the UN Security Council over alleged violations that do not involve diversion of nuclear materials. In both countries, the IAEA has continuously reported that it has found no indication of diversion.

Furthermore, in the case of Syria, a reference to the UN Security Council has been argued to be moot. For example, the Russian Federation has stated that the Security Council “is responsible for holding international peace and security and the site at Dair Alzour no longer exists and therefore poses no threat to international peace and security.”\(^92\) In the case of Iran, the government continues to cooperate with the IAEA in accordance with the terms of its safeguards agreement, with the exception of its modified subsidiary arrangement on the early provision of design information, which it has ceased to implement. In this connection, Iran continues to withhold cooperation with the IAEA on matters that it deems to be beyond its agreed obligations, including on questions and outstanding issues mandated by the UN Security Council.

Due to the gravity of these situations, it is imperative that the concerned states implement their legal obligations in good faith and exercise flexibility and cooperation to that end. “Non-proliferation obligations” is not a legally-defined term, whereas the safeguards agreements of each country are very specific. All parties need to implement

these agreements to the fullest extent. Further cooperation with the IAEA is necessary to this end. At the same time, it is also necessary for the IAEA to act in accordance with its mandate.

Action 28 encourages states to conclude and bring into force additional protocols. Currently, 109 states have additional protocols in force, an increase of 11 states since May 2010. 26 states have signed the additional protocol, but only two of these have done so since May 2010. In June 2011, the IAEA Board of Governors approved an additional protocol for Guinea. However, 80 member states of the NPT have still not brought into force an additional protocol, and therefore this action cannot be considered to have been implemented yet.

Action 29 encourages the IAEA and member states to further facilitate the entry into force and universalization of CSAs and additional protocols. Considering the slow rate of progress, the implementation of this action cannot be considered to have progressed significantly.

Action 30 calls for the wider application of safeguards in the five nuclear weapon states. There have been no reported changes in the application of the Voluntary Offer Agreement in the nuclear weapon states since May 2010 and therefore this action cannot be considered to be implemented.

Action 31 calls on states with small quantities protocols (SQP) to either amend or rescind them. Since the adoption of the action plan, Panama, San Marino, Swaziland, and El Salvador have amended their protocols. New SQPs have entered into force in Chad, Montenegro, Mozambique, and Rwanda. Djibouti has signed its SQP and Guinea has had its approved by the IAEA Board of Governors. However, a large number of SQPs from before 2005 remains and therefore this action will require further efforts by these states in order to be implemented fully.

Action 32 recommends that IAEA safeguards should be assessed and evaluated regularly. There has been some significant progress in this area, through new IAEA, multilateral, and national initiatives such as the Swiss study on optimization of safeguards. While it remains to be seen if any of these activities will have any concrete results on improving effectiveness and efficiency of safeguards, the action is currently being complied with.
CHAPTER 5
Illicit trafficking in nuclear materials

Action 44: The Conference calls upon all States parties to improve their national capabilities to detect, deter and disrupt illicit trafficking in nuclear materials throughout their territories, in accordance with their relevant international legal obligations, and calls upon those States parties in a position to do so to work to enhance international partnerships and capacity-building in this regard. The Conference also calls upon States parties to establish and enforce effective domestic controls to prevent the proliferation of nuclear weapons in accordance with their relevant international legal obligations.

Introduction

Preventing illicit trafficking of nuclear material is a significant aspect of non-proliferation efforts. This action calls upon states to improve their capabilities and to establish and enforce effective controls to prevent such illicit trafficking. We have examined different international, multilateral, and national initiatives to prevent illicit trafficking of nuclear materials in order to see if there have been any significant improvements in state capabilities to deal with such problems.

International Atomic Energy Agency (IAEA) initiatives
The IAEA illicit trafficking database (ITDB)
In 1995, the IAEA established a system to record and analyse incidents of illicit trafficking in nuclear and other radioactive material.1 The scope covers all types of nuclear material, naturally occurring and artificially produced radioisotopes, and radioactively contaminated material, such as scrap metal. As of September 2010 the ITDB has 111 states participating in the programme. Since 2009, new countries that have joined the ITDB are Bahrain, Côte d’Ivoire, the Democratic Republic of the Congo, Haiti, Malawi, United Arab Emirates, and Bosnia and Herzegovina.2

The information relating to what incidents have been submitted is restricted information and is not shared with the public. However, the agency reported that 35 incidents were reported during 2010, which involved relatively small amounts of nuclear material.3

The International Nuclear Security Advisory Service (INSServ)
The INSServ is an instrument created by the IAEA to help a state review the general status of measures that protect against nuclear terrorism and identify ways to improve a broad spectrum of nuclear security activities. The recommendations provide a platform for preparation of a country-specific Integrated Nuclear Security Support Plan (INSSP) for future implementation, through IAEA programme and bilateral assistance.

The International Conference on the Safe and Secure Transport of Radioactive Material. This conference will take place in October 2011 in Vienna and is organized by the IAEA. The objective of the conference is to encourage application of appropriate levels of safety and security during transport by:

- promoting international discussion on the safety and security of radioactive material transport;
- identifying and sharing best practices;
- identifying issues and problems;
- identifying opportunities, such as providing assistance, to support national adoption of comprehensive transport safety and security frameworks; and
- developing ideas for coordinating and enhancing transport safety and security.

The IAEA’s Nuclear Security Fund
The Nuclear Security Fund is a voluntary funding mechanism set up in 2002. It is designed to support IAEA activities in nuclear security and is working currently to improve worldwide security of nuclear and other radioactive material in use, storage, and transport by supporting member states’ efforts to establish, maintain, and sustain effective national nuclear security regimes.

The United Kingdom signed an agreement on 8 March 2011 to contribute £4 million, or approximately $6.4 million, to this fund.

The Russian Federation signed an agreement on 10 December 2010 to contribute $6.5 million to the Fund. The contribution will be used to enhance member states’ expert capacity in nuclear security, such as training in reporting illicit nuclear trafficking, evaluating nuclear security, reducing risk, and improving security to protect people, property, and the environment from security events involving nuclear or other radioactive materials.

Nuclear Security Training Programme
In 2010, the IAEA provided 72 nuclear security training courses to more than 1800 people from 120 states.

EU initiatives
The European Union (EU) has carried out a significant amount of activities related to combating illicit trafficking of nuclear material, including:

---


5 Ibid


• In June 2011, the EU’s Joint Research Centre (JRC) and its Institute for Transuranium Elements was reported to have carried out research on new methods of analysing radioactive materials to fight illicit trafficking; and
• The JRC has also carried out support programmes to the IAEA, where it has developed metrological tools to organisations and laboratories in the nuclear and environmental field.

**EUROPOL**

Since May 2010, Europol has started or completed the following projects and initiatives related to illicit trafficking on nuclear and radiological materials to a greater or lesser extent:

Project Rutherford is a joint EUROPOL-INTERPOL project implementing one of the actions included in the EU CBRN Action Plan, for a joint assessment on the criminal activities related to the illicit trafficking on nuclear and radiological materials. This project is intended to become an annual activity, resulting in an annual joint report. The first issue, covering the period 2007–2009 will be disseminated by the end of August, beginning of September.

The EU Bomb Data System (EBDS) has been available to EU member states since 29 October 2010. This system is intended for sharing intelligence and technical information on explosives, explosive and incendiary devices, and chemical, biological, radiological, nuclear, and explosive (CBRNe)-related incidents, including the theft, loss, discovery, seizure, disappearance, and lack of control of RN materials.

The Early Warning System on CBRNe, explosives, and firearms is a communication system intended for the circulation of warnings (alerts) about the theft, loss, disappearance, and lack of control of any material or precursors that could be used for terrorist purposes or when a terrorist background cannot be discarded. Available initially to Europol, Spain, France, Portugal, and Germany since the end of 2010, this Spanish-led initiative is now open to any other EU member state that decides to join the network. The idea of the system is to warn EU member states about relevant incidents so that each one can decide on the counter measures to adopt, based on the information circulated and their own threat level. It is not an incident database, but a communication system.

**INTERPOL**

Project Geiger is a joint initiative between INTERPOL and the IAEA, with the aim of gathering comprehensive data on the illicit traffic in nuclear and radiological materials, analysing the threats, and assisting with international investigations. INTERPOL launched Project Geiger in 2005 with data and financial support from the US Department of Energy, which continues to fund the project through the US National Nuclear Security Administration (NNSA).

---

8 “New method of analysing radioactive materials to fight illicit trafficking”, European Commission, 29 June 2011, n
10 “Nuclear and radiological terrorism (Project Geiger)”, Interpol official website, 6 July 2011, www.interpol.int/Public/NuclearTerrorism/default.asp
The Global Radiological and Nuclear Terrorism Prevention Conference was hosted by INTERPOL in May 2011. The Conference had more than 200 delegates from some 60 countries and representing the diplomatic corps, INTERPOL, national and international partners—including Europol, the FBI, and the IAEA—scientific experts, and INTERPOL National Central Bureaus (NCBs). It marked the public launch of INTERPOL’s Radiological and Nuclear Terrorism Prevention Unit, which “will expand the world police body’s anti-bioterrorism activities to take in [CBRNe] threats by using an integrated approach that leverages international partnerships and expertise across all sectors.”

Newly Independent States (NIS) Nuclear Trafficking Database

The NIS Nuclear Trafficking Database is a project of the Nuclear Threat Initiative, where researchers are compiling information from hundreds of foreign and domestic news sources as well as from field reports. The information in this database includes cases and reported incidents of trafficking in nuclear and radioactive materials in and from the NIS. The database also features trafficking incident tables and summaries and analysis of relevant articles and reports.

Since the adoption of the 2010 NPT action plan, the NIS Nuclear Trafficking Database has reported the following incidents:

- May 2010: Ukraine’s Security Service Detains seized strontium-90;
- 1 March 2010: Japan Pledges Funding to Equip Uzbek Customs Checkpoints;
- 22 April 2010: Ukraine to Receive Mobile Radiation Detection Vehicle with the Help from IAEA, Finland and Sweden; and
- 14 December 2010: A Cargo with radioactive Scrap Metal En Route to Turkey Detained in Kazakhstan.

World Customs Organization (WCO)

The Working Group on Border Management established under the aegis of the United Nations Counter-Terrorism Implementation Task Force (CTITF) held its inaugural session at WCO headquarters from 11 to 12 January 2011. Co-chaired by the Counter-Terrorism Executive Directorate (CTED), the International Criminal Police Organization (INTERPOL), and the WCO, the Working Group will compile a compendium of international instruments, standards, recommended practices, and guidance material which will be made available to all UN member states in support of their efforts to address terrorist threats at borders.

---

It is composed of about 15 international organizations and UN specialized bodies and its primary objective is to provide support and assistance to UN member states in their efforts to implement a comprehensive and coordinated approach to address the threat of terrorism in the context of cross-border activities. The mandate of the Working Group is drawn from pillars 2 and 3 of the UN Global Counter-Terrorism Strategy which refer to “Prevention of Terrorism and Capacity Building”.

**Nuclear Security Summit**

Just before the 2010 NPT Review Conference, the US hosted the first Nuclear Security Summit, which resulted in a joint communiqué and a work plan. Work on this plan is taking place at the moment and the results will be discussed at the next summit. The next meeting will be held in South Korea in 2012 and will most likely deal with illicit trafficking of nuclear materials.

**Proliferation Security Initiative (PSI)**

This initiative was created in 2003 by the US government and aims to stop shipments of biological, chemical, and nuclear weapons, as well as missiles and goods that could be used to deliver or produce such weapons, to terrorists and countries suspected of trying to acquire WMD. PSI is an informal arrangement among countries. To date, there is no list of criteria by which interdictions are to be made. There is also no secretariat or formal organization; instead, participants aim to readily share information among one another as appropriate and to act when necessary to help seize or thwart dangerous trade. By 2011, the PSI has now grown to include the endorsement of 98 nations. However, a number of countries have expressed opposition to the initiative, including India, China, Indonesia, and Malaysia.

Since May 2010, PSI has carried out the following activities:

- **Regional workshops:**
  14–15 September 2010 in Cairns, Australia
  1–2 November 2010 in Tokyo, Japan
  9–10 June 2011 in Honolulu, Hawaii

- **Bi-lateral workshops:**
  22–23 February 2011 in Ulan Bator, Mongolia, between Mongolia and the United States

- **New participant states since May 2010:**
  Antigua & Barbuda
  Saint Vincent and the Grenadines

---

18 “Proliferation security Initiative participants”, U.S. Department of State, 10 September 2010, www.state.gov/t/isn/c27732.htm
Global Initiative to Combat Nuclear Terrorism

The Global Initiative to Combat Nuclear Terrorism (GICNT) is an international partnership of 82 nations and four official observers who are committed to working individually and collectively to implement a set of shared nuclear security principles. The mission of the GICNT is to strengthen global capacity to prevent, detect, and respond to nuclear terrorism by conducting multilateral activities that strengthen the plans, policies, procedures, and interoperability of partner nations. The United States and Russia serve as Co-Chairs of the GICNT, and Spain serves as Coordinator of the Implementation and Assessment Group (IAG).

Since May 2010, the GICNT welcomed the following new partner countries: Mexico, Vietnam, the Philippines, Singapore, Argentina, and Thailand.

The GICNT has also carried out the following activities:

29 June 2010, Plenary Meeting of the GICNT in Abu Dhabi, the United Arab Emirates.
The GICNT adopted the following points:

- Adoption of a revised Terms of Reference (TOR) that more clearly defines participant roles and responsibilities and establishes concrete mechanisms for GICNT implementation;
- Endorsement of the Russian Federation and the United States to continue to serve as GICNT Co-Chairs;
- Agreement to activate the Implementation and Assessment Group (IAG), which provides strategic oversight and coordination of future GICNT activities;
- Selection of Spain as the first IAG Coordinator; and
- Identification of nuclear detection and nuclear forensics as priority functional areas for the next year.

30 June 2011 Plenary Meeting of the GICNT in Daejeon, Republic of Korea.
Partner nations briefed participants on key outcomes of GICNT exercises, workshops, and conferences conducted since the 2010 Plenary Meeting. During this time period, the partnership:

- Conducted a Conference on Countering the Financing of Nuclear Terrorism in Astana, Kazakhstan; this was the first time the GICNT addressed terrorism financing and the role of financial tools in combating nuclear terrorism;
- Supported Ukraine’s Fifth International Forum on “Physical Nuclear Security—Counteraction Measures for Acts of Nuclear Terrorism”;
- Supported “International Exercise Rabat 2011” in Morocco, which tested mechanisms for international cooperation and response in the event of a radiological attack; and
- Delivered a seminar in the United Kingdom to teach basic tools for designing, developing, and successfully evaluating nuclear and radiological emergency exercises.

By June 2011, partner nations have completed 45 activities aimed at building capacity to prevent, detect, deter, and respond to acts of nuclear terrorism.22

---

Workshops and meetings:

- Nuclear Forensics and related legal frameworks workshop, Israel, June 2010;
- Exercise on countering the financing of nuclear terrorism, Australia/United States/Kazakhstan, September 2010;
- Inaugural Implementation and Assessment Group (IAG) meeting, Spain/Kazakhstan, September 2010;
- Mid-Year Implementation and Assessment Group (IAG) meeting, Spain, February 2011;
- Exercise on enhancing Moroccan and international capabilities to detect and respond to malicious acts involving radioactive material, Morocco, March 2011;
- Radiological Exercise Design and Development Workshop, United Kingdom, May 2011;
- Nuclear Forensics Seminar and Tabletop Exercise, Germany, May 2011; and
- Implementation and Assessment Group (IAG) meeting, Republic of Korea, June 2011.23

The Security Council and the 1540 Committee

The Security Council has adopted UN Security council resolution 1977 on 20 April 2011. The resolution is a follow-up to resolution 1540. The resolution extends the mandate of the 1540 Committee to monitor efforts to prevent weapons of mass destruction from being acquired by terrorists or other non-state actors for another 10 years.24

In 2010, the 1540 Committee adopted revised procedures to rationalize, improve, and accelerate response to assistance requests and facilitate match-making. This process includes:25

- authenticating a request;
- the 1540 Committee Chairman acknowledging receipt of the request;
- distributing the request to potential assistance providers within one week after the request was received by the Committee;
- posting a summary of the request on the 1540 Committee website, with the consent of the requesting state;
- the 1540 Committee experts conducting informal ‘match-making’ on advice of the requesting State [see list of requests by country];
- the 1540 Committee Chairman circulating to the Committee Members offers of assistance regarding a specific request; and
- the 1540 Committee Chairman acknowledging such offers, and sending a letter to the requestor informing of such offers.26

It also adopted the 10th programme of work for 1 June 2011 to 31 May 2012 for the 1540 Committee, in S/2011/380. The Committee will focus its attention on five main areas of work: (i) monitoring and national implementation; (ii) assistance; (iii) cooperation with international organizations, including the Security Council Committees

established pursuant to resolutions 1267 (1999) and 1373 (2001); (iv) transparency and media outreach; and (v) administration and resources.

Through resolution 1540 (2004), the UN Security Council called upon all states to present to the Committee a first report, not later than six month from the adoption of the resolution 1540 (2004), i.e. 28 October 2004, on steps they have taken or intend to take to implement this resolution.

Since the conclusion of the 2010 NPT Review Conference, the following countries have submitted reports:27

- Ireland: S/AC.44/2007/24
- Poland: S/AC.44/2007/26
- Togo: S/AC.44/2007/15
- Uganda: S/AC.44/2007/25
- Finland: S/AC.44/2007/30
- Ethiopia: S/AC.44/2004/(02)/162
- Gabon: S/AC.44/2004(02)/161
- Rwanda: S/AC.44/2007/28
- Ukraine: S/AC.44/2007/27

In addition, on 12 August 2010, Canada submitted a national action plan on 1540.28

Requests for assistance:

On 16 June 2010, Iraq requested assistance for:

- Enhancement and upgrade of container and cargo security in seaports, borders.
- Improvement of existing licensing systems on export - import of materials.
- Improving logistics of customs and border concerning imported materials.

The Iraqi National Monitoring Directorate (INMD) needs help in developing a national control list for dual-use items based on relevant international arrangements to replace the control system of UNSCR 1051.

On 15 June 2010, the Central American Integration System (SICA) Secretariat requested assistance from the 1540 Committee, seeking to nominate a coordinator to provide a single point of contact between the 1540 Committee and SICA, to facilitate sustainable implementation of the Resolution by SICA member states.

On 7 January 2011, Colombia requested:

- Technical assistance in the training of police, and authority security officers relating to the: i) classification and function of military chemicals and nuclear munitions; ii) the recognition of biological agents used as weapons; and iii) the handling and disarming of a radiological dispersion device; and
- Equipment for the detection and identification of radioactive, chemical, and

---

biological materials for regional and departmental units of the national police.

Workshop and outreach activities
There has been a significant amount of workshops and outreach activities done by the 1540 Committee. A full list of these activities can be found at the 1540 Committee website.29

Conclusion
The amount of activities dedicated to prevention of nuclear terrorism and the illicit trafficking of nuclear materials is significant. It has continued to grow after the conclusion of the 2010 NPT action plan. However, most initiatives are multilateral and not national. The action requires states to improve their national capabilities to detect illicit trafficking. While the multilateral initiatives are important for assisting states in improving their national capabilities, their direct effects are difficult to assess.

Aside from the difficulties to assess the impact of multilateral activities on national capacities, preventing nuclear terrorism and illicit trafficking of nuclear materials is one of the most fast-paced areas of the NPT action plan. The cooperation between governments, organizations, and some non-governmental actors is significant and we therefore consider states parties to currently implementing this action.

CHAPTER 6
Nuclear export and transfer

Action 35: The Conference urges all States parties to ensure that their nuclear related exports do not directly or indirectly assist the development of nuclear weapons or other nuclear explosive devices and that such exports are in full conformity with the objectives and purposes of the Treaty as stipulated, particularly, in articles I, II and III of the Treaty, as well as the decision on principles and objectives of nuclear non-proliferation and disarmament adopted in 1995 by the Review and Extension Conference.

Action 36: The Conference encourages States parties to make use of multilaterally negotiated and agreed guidelines and understandings in developing their own national export controls.

Action 37: The Conference encourages States parties to consider whether a recipient State has brought into force IAEA safeguards obligations in making nuclear export decisions.

Introduction

This group of actions relate to export and transfer of nuclear materials and technology. As is the case with many actions in the 2010 NPT action plan, many phrases and terms are open to interpretation and states parties to the NPT chose to interpret them differently.

Articles I, II, and III, and the decision on principles and objectives of nuclear non-proliferation and disarmament

Action 35 refers to the 1995 decision on objectives and purposes of the NPT. At the 1995 Review Conference, states parties decided on some principles and objectives of nuclear non-proliferation and disarmament. These principles include a programme of action beginning with the conclusion of the Comprehensive Test Ban Treaty by September 2009, immediate negotiations on a treaty banning the production of fissile material, and the determined pursuit of nuclear disarmament and general and complete disarmament. With regard to the export of nuclear material the decision states: “Transparency in nuclear-related export controls should be promoted within the framework of dialogue and cooperation among all interested States party to the Treaty.”

Action 35 also refers to articles I, II and III of the NPT. Under articles I and II of the NPT states parties commit themselves not to transfer (for nuclear weapon states) or receive (for non-nuclear weapons states) “nuclear weapons or other nuclear explosive devices

---

or control over such weapons or explosive devices directly, or indirectly."\(^4\) Article III states that safeguards "shall be applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere."\(^5\) This opens up debate if safeguards should be interpreted as they were set out in 1968 or in a more comprehensive manner to incorporate the additional protocol as some states suggest.

**Export Controls**

Action 36 refers to the existing agreed guidelines and understandings. This usually refers to the guidelines of the Nuclear Suppliers Group and the Zangger Committee. See chapter 2 for details on these groups and their recent undertakings.

**National export controls**

The following reports from countries have been provided to Reaching Critical Will by a questionnaire sent out to all NPT states parties. Unfortunately, the response was quite limited and only constitutes of a small number of states.

**Australia:**

Regulation 13E of the *Customs (Prohibited Exports) Regulations of the Customs Act 1901* states that any item on Australia's control list, the Defence and Strategic Goods List (DSGL), requires authorisation prior to export. The DSGL incorporates the Nuclear Suppliers Group (NSG) control list (parts I and II), the Zangger Committee Trigger List, and Annexes 1 and 2 of the IAEA Additional Protocol. The Australian Government has also enacted the *Weapons of Mass Destruction (Prevention of Proliferation) Act 1995* ("WMD Act"). The WMD Act and the associated regulations enable the government to control the export or transfer of any goods and services that may assist a WMD programme and that are not controlled under other legislation. Australia also reported that it implements all UN Security Council resolutions and has in some cases supplemented UN sanctions with its own WMD-related autonomous sanctions.

**Croatia:**

Croatia has been strengthening its legislative and operative procedures with regards to non-proliferation, export and import control for weapons and other military equipment, and export and import control for dual-use goods.

In accordance with its internationally-accepted obligations, Croatia reports that it has established a system of export control of dual-use goods that includes specific nuclear technology. The Ministry of the Economy, Labour and Entrepreneurship (MELE) is the responsible authority for issuing the licences, however, the decision of issuing or denying a license is taken upon the proposal of the Interagency Committee. The Interagency Committee has permanent members including representatives of the Ministry of Foreign Affairs and European Integration (MFAEI), Ministry of Interior (MoI), Ministry of Defence (MoD), Customs Administration, and MELE, all of whom give their opinion. However, when needed, representatives from other institutions such as authorities for nuclear safety, chemical control, communications, veterinary, the Croatian Chamber of Commerce, and intelligence agency are consulted. The interagency

---

\(^4\) Article I and II of the NPT  
\(^5\) Article III of the NPT
cooperation is facilitated by the Tracker system that Croatia put in place in 2009. Tracker is an IT tool that links different institutions such as permanent members of the interagency committee and the Joint National Security Committee (SONS), Ministry of the Sea, Transport and Infrastructure (MSTI), and the Security and Intelligence Agency (SIA). MELE issues licences through the Tracker system. Croatia has now brought all its systems fully in line with the European Union.

**Czech Republic:**
Export/import of nuclear materials, as well as transport of nuclear and radioactive materials are performed under the relevant licences of the Czech National Regulatory Authorities and in line with the guidelines of the Zangger Committee and NSG. Each company in the Czech Republic must have a licence for the export of nuclear items.

**Georgia:**
The Georgian national export legislation on nuclear technology is based on the IAEA recommendations. The principles of the national regulatory control of nuclear material in Georgia are set out by the Law of Georgia on Nuclear and Radiation Safety, the Criminal Code of Georgia, and the Law of Georgia on the Licenses and Permits. Several amendments have been introduced to all three laws to guarantee the approaches are up-to-date.6

**Germany:**
Germany fully complies with the guidelines of the Nuclear Suppliers Group, the Zangger Committee, as well as with EU Dual-Use regulation 428/2009.

**Greece:**
Greece has not conducted any nuclear technology exports/transfers. The export control legislative framework (IAEA/EU) is fully applied.

**Romania:**
The national export control is implying the obligation of each person legally established to obtain a license issued by CNCAN to export information pertinent to the proliferation of nuclear weapons and other explosive nuclear devices, followed by the obligation to obtain a license from the Department for Export Controls, within the Ministry of Foreign Affairs.

**Switzerland:**
Switzerland has an effective export control legislation in place, based on the NSG Guidelines.

**Countries without safeguard agreements**
Apart from Benin, Cape Verde, the Republic of Congo, Djibouti, Eritrea, Equatorial Guinea, Guinea, Guinea Bissau, Liberia, Micronesia, São Tomé & Príncipe, Somalia, Timor-Leste, Togo, and Vanuatu, non-nuclear weapon states parties to the NPT have signed a comprehensive safeguard agreement. The five nuclear weapon states of the NPT, China, France, Russia, the United Kingdom, and the United States, have Voluntary Offer

---

6 Georgia’s respond to the publications questioner
Agreements in some of their nuclear material and facilities dedicated to peaceful uses of nuclear energy.\textsuperscript{7} See chapter 4 for details.

Several nuclear cooperation deals have been concluded in the past year between NPT member states, none involving the remaining fifteen states without comprehensive safeguards in force.\textsuperscript{8} For the majority of those deals the implementation of IAEA safeguard obligations is part of the agreement. This shows a wide acceptance of the IAEA safeguards as a valid verification tool for the peaceful uses of nuclear energy and proliferation prevention.

Non-members of the NPT

IAEA obligations

For non-members of the NPT, the IAEA concludes so-called item-specific safeguard agreements according to INFCIRC/66/Rev.2 with the concerned state. Instead of covering all the nuclear activities of a state they only apply to the nuclear material, facilities, equipment, and/or materials specified in the agreement. “Under such agreements, the Agency is required to ensure that the nuclear material and other specified items are not used for nuclear weapons or other nuclear explosive devices or in such a way as to further any military purpose.” \textsuperscript{9} Currently the IAEA is implementing these agreements with India,\textsuperscript{10} Israel,\textsuperscript{11} and Pakistan.\textsuperscript{12}

Trade agreements

By avoiding defining safeguards obligations, the phrase “brought into force IAEA safeguard obligations” in action 36 has apparently been interpreted to allow deals with NPT non-members, since they are implementing the item-specific safeguard agreements on their declared peaceful facilities. Since the adoption of the 2010 NPT Review Conference action plan several trade agreements between a NPT state and a non-NPT state have been made—see chapter 1 for details.

Conclusion

As this group of actions are suffering from diverse interpretations, a concrete conclusion on whether or not they are implemented is difficult to make.

Action 35 does not add any additional obligations aside from what is already in the NPT and previous decisions, but it does serve as a reminder that states are obliged to ensure that their nuclear-related exports do not directly or indirectly assist the development of nuclear weapons and that the 1995 decision on objectives and purposes of the treaty requires states parties to promote transparency in nuclear-related export controls. This should imply that in order to fully comply with this action, all states with nuclear

\begin{footnotes}
\item[10] Safeguards agreements in force: INFCIRC/211, INFCIRC/260, INFCIRC/360, INFCIRC/374, INFCIRC/433, INFCIRC/754
\item[11] Safeguards agreements in force: INFCIRC/249/Add.1
\end{footnotes}
cooperation deals with non-parties to the NPT need to provide transparent information on how their nuclear exports do not directly or indirectly assist the development of nuclear weapons in these countries.

Action 36 is simply an encouragement and will be dependent on the state involved. We have not received any comments from states not applying the existing guidelines.

Action 37 depends on how one interprets safeguards obligations. While the requirement of a comprehensive safeguards agreement is applicable for all nuclear cooperation deals concerning parties to the NPT, it seems to become a different issue with non-states parties to the NPT. The action only refers to "IAEA safeguards obligations", which could also include the limited safeguards agreement on certain specified nuclear facilities in non-NPT states.
CHAPTER 7
The International Atomic Energy Agency (IAEA)

Action 33: The Conference calls upon all States parties to ensure that IAEA continues to have all political, technical and financial support so that it is able to effectively meet its responsibility to apply safeguards as required by article III of the Treaty.

Action 34: The Conference encourages States parties, within the framework of the IAEA statute, to further develop a robust, flexible, adaptive and cost effective international technology base for advanced safeguards through cooperation among Member States and with IAEA.

Action 46: The Conference encourages IAEA to continue to assist the States parties in strengthening their national regulatory controls of nuclear material, including the establishment and maintenance of the State systems of accounting for and control of nuclear material, as well as systems on regional level. The Conference calls upon IAEA Member States to broaden their support for the relevant IAEA programmes.

Introduction

The actions in this chapter focus on the work of the IAEA in relation to safeguards and other IAEA programmes. We have therefore chosen to examine relevant developments related to the IAEA safeguards and other relevant programmes in order to highlight any recent trends.

Financial support

The IAEA budget for “nuclear verification,” which includes safeguards, overall management, coordination, and common activities (in EUR):

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>€ 117 150 480¹</td>
</tr>
<tr>
<td>2010</td>
<td>€ 121 542 584²</td>
</tr>
<tr>
<td>2011</td>
<td>€ 123 143 928³</td>
</tr>
<tr>
<td>2012</td>
<td>€ 128 780 549 (estimated)⁴</td>
</tr>
</tbody>
</table>

While the annual budget for the IAEA safeguards and nuclear verification programme does increase each year, it does not appear to be a very significant change. The financial contribution for safeguards will remain the same and the increased budget will most likely be offset by inflation, changes in exchange rates, and other similar factors.

**Political support**

By comparing the statements made at the 54th IAEA General Conference to previous years shows that the nature of member states support for the IAEA and its safeguard programme remain on a similar level. No significant changes in language by member states could be detected.6

**Technical improvements**

The IAEA continued to work on the IAEA Safeguards Information System (ISIS) and Reengineering Project (IRP) to increase the effectiveness and efficiency of information processing by replacing the current information system with a modern one. The Secretariat has also continued to utilize high-resolution commercial satellite-based sensors to improve its ability to monitor nuclear sites and facilities worldwide.7 Germany has reported on taken steps to facilitate IAEA access to commercially available German satellite imagery.8

Since the 54th General Conference, the IAEA has tested a new inspection concept using new combinations of existing techniques and technologies to improve safeguard implementation. The techniques used were, among others: remote monitoring; unattended measurement; and unannounced or short-notice inspections. New short-notice random inspection (SNRI) approaches were introduced for the conversion/fuel fabrication plants in Belgium, Kazakhstan, and India.

Furthermore, since the last General Conference the IAEA has been involved in the early design-stage for a new spent fuel conditioning plant and new shelter over the damaged Reactor Unit 4 in the Chernobyl nuclear power plant. The IAEA has in addition produced a new surveillance system and upgraded existing systems at the same facility.

The IAEA is preparing new types of power plants in an effort to further develop better safeguards, for example geological repositories, pyroprocessing plants, and laser

---

5 Ibid
8 Germany’s response to RCW questionnaire
enrichment facilities. Furthermore, during 2010, Canada, Finland, and Sweden worked with the IAEA on improving design for upcoming facilities.

Since June 2010, the IAEA has connected seven more cameras connected to systems operating in safeguard facilities, but decreased the number of such system operations from 625 to 616 in 245 facilities in 33 states. However, this covers one more state since June 2010. Eight additional unattended monitoring systems have been installed in the same amount of states. As a result of significant effort at the end of 2010, new remote monitoring capabilities were being implemented for 26 unattended monitoring systems at the Rokkasho Reprocessing Plant in Japan.

Since 2009, the nuclear material and environmental samples that have been collected and analysed by the IAEA have increased with by a small amount. The IAEA reported on significant delays in the collection, distribution, analysis, and evaluation of environmental sampling during 2010. Since June 2010 a laboratory in Brazil has qualified for the IAEA Network of Analytical Laboratories. Furthermore laboratories in Belgium, China, Finland, France, Hungary, the Republic of Korea, and the United States are either being assessed in terms of their capabilities and capacities or are already at various stages of the qualification process. These laboratories are intended to contribute to reducing the delays in processing environmental samples. In addition, Germany has reported its support to the ECAS project towards modernising the IAEA Safeguards Laboratory and has contributed with 5 million Euros.

The IAEA reports that more intensified efforts have been made within the organisation to enhance and create new safeguards agreements and additional protocols, especially with significant nuclear activity states. Enhancement of implementation of safeguards agreements has been supported by the IAEA and other member States. Through extra budgetary funds, the IAEA has been able to encourage and facilitate wider connections to the safeguard system. Updates have also been made to the Plan of Action and the Agency's Medium Term Strategy.

The IAEA SSAC Advisory Service (ISSAS) provides requesting national authorities with recommendations and suggestions for improvements to their State systems for accountancy and control (SSACs) of nuclear material.

By the end of June 2011, 13 ISSAS missions had been conducted and a preparatory visit for a forthcoming ISSAS mission has been conducted in Mexico. Although continued training and meetings have been conducted, no significant increase in activities has been detected.

---

10 Ibid
12 Germany’s response to RCW questionnaire
In 2010, the IAEA has provided 12 international, regional, and national training courses for states to assist them in fulfilling their safeguards obligations. In 2009, the number was 9 training courses. The trainings were conducted in, among others, Russia, United States, Burkina Faso, Chile, Japan, Indonesia, Jordan, and Nigeria.

Conclusion

There has been modest progress reported in the area of the IAEA and safeguards. However, the actions do not call for specific increases of activities, but rather for “continued support” and to “further develop”. The work of the IAEA in this area is indeed appearing to continue forward and be of a predictable nature, and therefore all three actions seems to be complied with.