The report is aimed at providing a platform for discussion about the degree of implementation and operationalization of the Nuclear Non-Proliferation Treaty (NPT) Action Plan adopted during the 2010 NPT Review Conference. The first edition of this publication was published in April 2012 in preparation for the NPT Preparatory Committee in Vienna, Austria. This third edition is an updated version with progress until February 2014.

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Introduction


The 2010 NPT Action Plan was considered an accomplishment at the time of adoption, but another unfulfilled piece of paper will not contribute to the implementation of the Treaty or its goals and objectives. The only real value of the Action Plan lies in its implementation. The NPT has seen many concrete agreements over the decades, such as the 1995 resolution on the Middle East and the 13 steps from 2000. However, these previous agreements have not been implemented. Thus full implementation of the Action Plan is crucial for the credibility of the Treaty.

This report aims to provide factual and clear information on the status of the implementation of all 64 actions and to give the reader an overview of what is left to be done until 2015. The research has been carried out through review of open source information. It is not a full technical investigation of all related facts, but is an attempt to provide an overview of states’ compliance with the Action Plan and to capture the most significant developments since May 2010.

The research has been carried out within the limits of available resources, such as time, publicly available information, and limited responses from states to our requests for information. It is important to note that the Action Plan is a political document and the language is a carefully crafted compromise. Because the plan includes deliberately vague commitments such as “encourage,” “facilitate,” and “continue efforts,” it has been difficult to measure and quantify progress. In addition, the discrepancies in interpretation of the NPT remain unresolved in this Action Plan, opening it up for significant differences of opinion on what the actions specifically require. It has been beyond the scope of this project to make a legal analysis of such interpretations, which left us to focus on facts and general trends in order to make our assessment.

One of the biggest challenges we’ve faced in monitoring the Action Plan is both the lack of clear benchmarks against which to measure progress and the absence of any formal institutional mechanism to carry out the monitoring and to report back to the next review conference in an organized way.
In order to assess implementation, we have used a system of “traffic lights” signalling red, yellow, and green. The red traffic light indicates that to date, no concrete progress has been made in implementing the action. The yellow light indicates that while some efforts have been detected, additional progress needs to be made in order to fully implement the action. The green light shows that states are making progress and are currently implementing the action.

**Importance of the 2014 Preparatory Committee**

It has often been said that the NPT has been in danger since its inception, but since the end of the Cold War, the challenges are consistently growing and tensions are rising. The lack of concrete progress on nuclear disarmament, the problems of implementing agreements on the weapons of mass destruction free zone in the Middle East, and non-proliferation concerns have affected the credibility of the Treaty and put its future relevance in jeopardy.

The 2014 Preparatory Committee is a key moment for the implementation of the Action Plan, as the document from 2010 calls upon the nuclear-armed states to report on the undertakings in action 5 at this meeting. Unfortunately, it does not look like they will be in a position to do so. Public information about their activities indicate that they have not undertaken activities or even discussions on most of the issues contained in action 5.

It is therefore imperative that all governments take the opportunity at the 2014 Preparatory Committee to systematically assess the implementation of the Action Plan. If the nuclear-armed states are not prepared to report on the actions to which they committed to four years ago, NPT states parties must decide how to move forward. They will need to look ahead to the 2015 Review Conference and decide what needs be achieved there and how best to reach that goal.

Limiting efforts to the implementation of the 2010 NPT Action Plan will not guarantee the total elimination of nuclear weapons. But if the 2015 Review Conference is going to restore some of the NPT’s credibility, it will need to send a clear message to the world that the status quo is not acceptable.
Nuclear disarmament

Progress on the 22 Action Plan items dealing with nuclear disarmament has been the most eagerly anticipated by non-nuclear weapon states and civil society. However, the implementation of these actions has proven to be the most disappointing. Out of 22 actions, this report gives eleven red lights (no progress); six yellow lights (limited progress); and only five green lights (forward movement).

It is disappointing that the five nuclear-armed state parties to the NPT have indicated they will not meet their commitments on disarmament, in particular under action 5. This action asks them to engage on matters of global stockpile reduction; tactical nuclear weapons and nuclear “sharing”; diminishing the role of nuclear weapons in security policies; preventing nuclear weapons use and eliminating nuclear weapons; reducing operational status of nuclear weapons; reducing the risk of accidental use; and increasing transparency and mutual confidence. While the five nuclear-armed states have met with each other on a number of occasions since the 2010 Review Conference, it is clear from the reports on their discussions and statements these countries have made at NPT and First Committee meetings that they have had limited discussions on elements of transparency and have focused on developing a glossary of nuclear terms—something that was not even included in the Action Plan.

In the meantime, several new and dynamic initiatives, such as the conferences on the humanitarian impact of nuclear weapons, the open-ended working group on nuclear disarmament, and the high-level meeting on nuclear disarmament have opened up for a new momentum on this topic. These are all very welcome developments, and can contribute to fulfilling the obligations of article VI and the 2010 NPT Action Plan. Unfortunately, the NPT nuclear-armed states have been extremely reluctant to participate in any new initiatives, calling them “distracting” and undermining of existing efforts, including of the implementation of the NPT Action Plan. This is not only incorrect, but also disingenuous, since existing efforts on implementing the Action Plan or fulfilling the decades-old agenda of the so-called “step by step” approach have been so unsuccessful.

It is positive that the global stockpile of nuclear warheads continues to decrease, although the majority of reductions have been achieved through dismantlement of non-operational warheads or warheads in storage. Ongoing reductions by the United States and Russia under the New Strategic Arms Reduction Treaty have been a welcome contribution to the implementation of the Action Plan. However, while US President Obama has indicated that his administration is interested in working together with Russia on further reductions, issues such as tactical nuclear weapons in Europe and the development of missile “defence” systems continue to block any progress on further negotiated reductions by the two main nuclear weapon possessing states.

Another concrete development is the convening of a group of governmental experts to discuss elements of a treaty banning the production of fissile materials. In April 2014, 25 states will meet to make recommendations on elements of a treaty. However, while the GGE can certainly contribute to a better understanding of positions on fissile material negotiations, it’s worth noting that the group will not report back to the General Assembly until October 2015. It will therefore fall short of implementing the Action Plan’s call to start negotiations when governments meet at the 2015 Review Conference.

Nuclear non-proliferation

Although 23 items (actions 23 to 46) deal with nuclear non-proliferation, they are neither particularly strong nor very concrete. They mainly ask states parties to “stay the course”. As a result, this report shows that out of the 23 action points related to non-proliferation, three are red (relating to the lack of universalization and export controls), nine are yellow, and twelve are green. Based on this assessment, there has been more success in implementing the actions in the area of non-proliferation than disarmament.

In 2013, some developments stood out in particular for non-proliferation efforts.

A very positive development has been the negotiations between Iran and the E3/EU+3 successfully lead to the agreement of a “Joint Plan of Action” (JPA), in which Iran committed to not enrich uranium over 5%, to convert its entire stockpile of uranium enriched up to 20%, to not build new facilities for enrichment of uranium, to suspend construction-related activities of a heavy water reactor in Arak, and to allow for enhanced monitoring by the International Atomic Energy Agency (IAEA). The E3/EU+3 will suspend some of the nuclear-related sanctions initiated by the UN Security Council, European Union, and the United States, as well as establish a financial channel for humanitarian trade for Iran's domestic needs. In January 2014, the IAEA reported that Iran was implementing its commitments under the JPA, and the EU and the US government have started to lift some of their sanctions. The two sides now have started a six-month period of negotiations to reach a final and comprehensive agreement.

While not all issues of concern have been resolved, the agreement shows an improvement in relations between Iran and the E3/EU+3 and it is a welcome change from the hard rhetoric and blame games from previous years. It remains to be seen whether or not the agreement will have enough of an impact on those that consistently raise non-proliferation concerns as a stumbling block for implementing the NPT’s disarmament obligations.

Unfortunately, one of the most concerning developments of proliferation in 2013 was a third nuclear test by the Democratic People’s
Republic of Korea (DPRK) on 12 February 2013. The Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO) detected the test and measured it to be 5.0 in magnitude, around twice as large as the DPRK’s 2009 test (4.52) and considerably larger than the 2006 test (4.1). The location was indicated to be the same as the two previous tests by the DPRK.

Slowly, the adherence to the IAEA’s additional protocol is growing amongst states parties. By February 2014, 21 of the remaining 90 states parties without an additional protocol in place at the 2010 Review Conference have had it enter into force.

Nuclear energy

The third part of the Action Plan consists of 18 action items related to the peaceful use of nuclear energy, each with varying grades of quantifiable elements.

The most serious development since the adoption of the Action Plan has been the Fukushima nuclear disaster, which put the issue of nuclear safety at the centre of this section of the Action Plan. The number of initiatives around the safety of nuclear energy is impressive, but still some key challenges remain. While acknowledging the crucial role of international institutions and mechanisms to ensure safety, some states parties have been wary about allowing them a greater role. These states have emphasized the responsibility and role of national agencies to ensure nuclear safety.

For example, applying in a more constraining way the principle of peer reviews is opposed by several states, which emphasize the responsibility and role of national agencies to ensure nuclear safety. Although some progress has been made, it is unlikely that the Convention on Nuclear Safety (CNS) and other related international instruments will achieve near-universal adherence before the 2015 NPT Review Conference.

According to the research in this report, while the “right” to develop nuclear energy for peaceful purposes and to have the ability to participate in nuclear technology exchange programmes has been well established and reinforced, its implementation among NPT states parties remains uneven. In addition, the issue of safeguards, safety, and security have become critical elements in the peaceful use of nuclear energy. Consequently, the Action Plan items related to this pillar have achieved the most progress with one red light, six yellow lights, and 11 green lights.

Middle East

One of the most significant challenges to the NPT is the continued tension around failure to implement the 1995 resolution on the Middle East and to uphold the decision from 2010 to convene a conference in 2012 on a weapons of mass destruction (WMD) free zone in the region.

As reported last year, in December 2012 it became clear that the conference set for 2012 would be “postponed” and no new date was set. “We cannot continue to attend meetings and agree on outcomes that do not get implemented, yet to be expected to abide by the concessions we gave for this outcome,” said the Egyptian delegation before it walked out of the meeting.

This was the first walkout in the NPT’s history and the issue of a WMD free zone in the Middle East might be the most serious challenge to the NPT in this review cycle. The inability to hold a meeting on this topic could reduce the confidence of many Middle Eastern states that remaining in the NPT is in their interests and has created a sense of mistrust and frustration that will only continue to escalate if progress is not made on this issue.

Humanitarian impact of nuclear weapons

However, while the NPT currently suffers from perhaps its most serious crisis of credibility in its history, the discourse around nuclear weapons is finally changing. Even in the NPT context, nuclear weapons are starting to be viewed and described as dangerous and unacceptable weapons. The 2010 NPT Review Conference expressed “deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons.” Since then, these consequences have increasingly become a focal point for discussion and proposed action on nuclear weapons.

In March 2013, the government of Norway hosted a conference on the Humanitarian Impact of Nuclear Weapons. Mexico hosted a follow-up meeting in February 2014, and the Austrian government announced that it will hold a third meeting before the end of 2014. The two conferences held on this topic have increased the understanding amongst the international community of what nuclear weapons are, and what the impact would be if they were used—either by intent or by accident. The evidence presented by UN agencies, academics, former military officials, and civil society organizations has clearly revealed that the continued possession and deployment of nuclear weapons is a reckless and unsanctionable gamble with the future of humanity and the planet.
In addition to these conferences, governments are also increasingly raising the issue of humanitarian impacts in traditional forums dealing with nuclear weapons.

16 governments delivered a joint statement at the 2012 NPT Preparatory Committee highlighting the catastrophic humanitarian consequences of nuclear weapons and calling on all states to intensify their efforts to outlaw and eliminate these weapons. 35 governments echoed this call at the 2012 General Assembly First Committee session, while 80 countries at the 2013 NPT Preparatory Committee expressed dismay with the “unacceptable harm caused by the immense, uncontrollable destructive capability and indiscriminate nature of these weapons.” At the 2013 First Committee session, the statement had reached 125 signatures.

Rather than being divisive, as argued by some nuclear-armed states, the humanitarian initiative has provided the basis for a new momentum on nuclear disarmament. It has involved new types of actors, such as the Red Cross and Red Crescent Movement, the United Nations Office for Coordination of Humanitarian Affairs, the United Nations Development Programme, and a new generation of civil society campaigners.

The discussion around the humanitarian impact of nuclear weapons has grown into the most positive development around nuclear weapons in many years, and should be fully supported by all states parties to the NPT.

**Conclusion**

It has been four years since the Action Plan was adopted and the NPT is under more pressure than ever. Despite positive developments concerning negotiated agreements around Iran’s nuclear programme and the humanitarian discourse contributing to positive momentum, lack of implementation of disarmament commitments and the failure to uphold agreements around the Middle East is seriously threatening the confidence placed in the NPT by almost all states in the world.

It is rather unlikely that the 2010 NPT Action Plan will be considered adequately implemented by the 2015 Review Conference. It is therefore time for all governments to start addressing some difficult questionson how this can be achieved at the 2015 Review Conference and how to resolve some of the key challenges generated by the existence and possession of nuclear weapons.

There is an urgent need to achieve the goals and objectives of the NPT, such as prevention of the use of nuclear weapons, stopping the nuclear arms race, ceasing the manufacture of nuclear weapons, eliminating existing arsenals, and easing international tensions and strengthening trust between states. Negotiating a treaty banning nuclear weapons could be instrumental in this regard.

A ban on nuclear weapons could address these principles by providing a clear legal rejection of nuclear weapons, in line with the obligations of article VI. Such a legal standard would stigmatize the continued possession of nuclear weapons, thereby creating incentives for deeper and faster reductions and the elimination of nuclear weapons, as well as reduce the risk of proliferation.

During the conference in Nayarit, Mexico, the vast majority of 146 governments present demanded concrete political and legal action against nuclear weapons. In addition, more governments than ever called specifically for a treaty banning nuclear weapons. This is a very encouraging development, as a ban on nuclear weapons has the potential to prevent the NPT’s collapse.
Summary of Implementation of Actions

Action 1:
All States parties commit to pursue policies that are fully compatible with the Treaty and the objective of achieving a world without nuclear weapons.

The continued reliance on nuclear weapons in security doctrines and policies and the on-going modernization plans of all nuclear weapon states (NWS) are neither compatible with the NPT’s letter nor spirit. If this action is to be implemented, modernization of nuclear weapons, delivery systems, and related facilities must stop and the NWS and those involved in nuclear-armed alliances must significantly reduce the role of nuclear weapons in their respective security doctrines and policies.

Action 2:
All States parties commit to apply the principles of irreversibility, verifiability and transparency in relation to the implementation of their treaty obligations.

For the reductions of nuclear arsenals that have taken place since the adoption of the NPT Action Plan, NWS are failing to adequately apply the principles of irreversibility, verifiability, and transparency. The inspection scheme under the New Strategic Arms Reduction Treaty (New START) between Russia and the United States is a step in the right direction of transparency and verification. However, the fact that non-deployed warheads are not covered by New START shows that the principle of irreversibility is not adequately addressed. The new counting rules for warheads also undermine transparency. Aside from the reductions through the New START, any additional lowering by Russia, US, and the UK overall stockpiles of nuclear weapons has not been accompanied by any verification mechanism. This action can therefore not be considered implemented.

Action 3:
In implementing the unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenal, the nuclear-weapon States commit to undertake further efforts to reduce and ultimately eliminate all types of nuclear weapons, deployed and non-deployed, including through unilateral, bilateral, regional and multilateral measures.

The overall global stockpile of nuclear weapons is decreasing. However, it is important to note that qualitative and quantitative disarmament are equally important to achieve a world free of nuclear weapons. The research in this publication shows that the majority of reductions have been of non-operational warheads and warheads in storage. Meanwhile, qualitative disarmament has as of yet not been addressed adequately and the modernization plans of the NWS undermine the minimal reductions undertaken. In addition, progress on “all types of nuclear weapons” has not been seen, since tactical nuclear weapons have still not been addressed. Therefore, this action cannot be considered implemented.
Action 4:
The Russian Federation and the United States of America commit to seek the early entry into force and full implementation of the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms and are encouraged to continue discussions on follow-on measures in order to achieve deeper reductions in their nuclear arsenals.

The ratification and implementation of New START by both the United States and Russia means that the first part of action 4 is being implemented. Recent statements by President Obama suggest that his administration could be interested in pursuing follow-on measures for further reductions, but discussions with Russia have yet to materialize due to Russian concerns about tactical nuclear weapons and missile “defence” plans of the United States and NATO. This action cannot be viewed as fully implemented yet, as it remains to be seen whether future discussions will be held.

Action 5:
The nuclear-weapon States commit to accelerate concrete progress on the steps leading to nuclear disarmament, contained in the Final Document of the 2000 Review Conference, in a way that promotes international stability, peace and undiminished and increased security. To that end, they are called upon to promptly engage with a view to, inter alia:
(a) Rapidly moving towards an overall reduction in the global stockpile of all types of nuclear weapons, as identified in action 3;
(b) Address the question of all nuclear weapons regardless of their type or their location as an integral part of the general nuclear disarmament process;
(c) To further diminish the role and significance of nuclear weapons in all military and security concepts, doctrines and policies;
(d) Discuss policies that could prevent the use of nuclear weapons and eventually lead to their elimination, lessen the danger of nuclear war and contribute to the non-proliferation and disarmament of nuclear weapons;
(e) Consider the legitimate interest of non-nuclear-weapon States in further reducing the operational status of nuclear weapons systems in ways that promote international stability and security;
(f) Reduce the risk of accidental use of nuclear weapons; and
(g) Further enhance transparency and increase mutual confidence.

The nuclear arsenals of four out of five of the NWS continue to decrease, while one has been recorded to have a slight increase of its arsenal. Though reductions are taking place at a different speed in each NWS, this is a positive development and means that action 5(a) is currently being implemented by the majority of the NWS, though not “rapidly” as the action demands. However, the research in this publication has shown that most reductions are done through dismantlement of non-operational warheads and warheads in storage. In addition, modernization and qualitative improvement of nuclear arsenals, reluctance by NWS and others to endorse progressive UN General Assembly (UNGA) resolutions on nuclear disarmament, lack of progress on removing or reducing non-strategic nuclear weapons, the outspoken intention to continue to rely on nuclear weapons for “security” for decades to come, the reluctance to decrease operational readiness, failure to address risks of accidental use, the opposition to begin preparatory discussions on a nuclear weapons convention or a framework of mutually reinforcing instruments, and the lack of progress within the Conference on Disarmament mean that the obligations in this important action cannot be considered to be implemented. While the NWS have met on a few occasions since the adoption of the action Plan, the nature and scope of their discussions are either not reported on or have focused on items outside the scope of this action, such as a dictionary of nuclear terms or standard reporting forms.

Action 6:
All States agree that the Conference on Disarmament should immediately establish a subsidiary body to deal with nuclear disarmament, within the context of an agreed, comprehensive and balanced programme of work.

Attempts to establish a subsidiary body to deal with nuclear disarmament through a programme of work in the Conference on Disarmament have repeatedly failed. While the opposition to the most recent proposals comes from a non-NPT state, the reluctance of some states parties to the NPT to come up with new and creative solutions has prevented this action from being implemented. The UN General Assembly in 2012 established an open-ended working group to “develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons”, which to met 14–24 May, 27 June, and 19–30 August 2013. Additionally a high-level meeting of the UNGA on nuclear disarmament was held 26 September 2013. Furthermore, in 2013 the CD established an Informal Working Group to agree on a programme of work for the Conference, but failed to do so in the time allocated to it. In March 2014, the group was re-established, whether it will be successful for the 2014 session remains to be seen. While all these initiatives were welcomed by the great majority of states, they have not yet lead to the establishment of a subsidiary body on nuclear disarmament in the Conference on Disarmament.
Action 7:
All States agree that the Conference on Disarmament should, within the context of an agreed, comprehensive and balanced programme of work, immediately begin discussion of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons, to discuss substantively, without limitation, with a view to elaborating recommendations dealing with all aspects of this issue, not excluding an internationally legally binding instrument. The Review Conference invites the Secretary-General of the United Nations to convene a high-level meeting in September 2010 in support of the work of the Conference on Disarmament.

No progress has been made on a global instrument on negative security assurances (NSAs) as mandated by action 7. While the most recent proposal for a programme of work in the Conference on Disarmament was opposed only by a non-NPT state, NPT states parties have not made adequate efforts to come up with alternative and creative solutions. While the high-level meeting on the work of the CD did take place in September 2010 and a follow-up meeting of the UN General Assembly was held in July 2011, these meetings had no concrete results on starting discussions on negative security assurances or any other topic on the CD’s agenda. An Informal Working Group of the CD was established in 2013 to agree on a programme of work for the conference, but has not yet achieved concrete results.

Action 8:
All nuclear-weapon States commit to fully respect their existing commitment with regard to security assurances. Those nuclear-weapon States that have not yet done so are encouraged to extend security assurances to non-nuclear-weapons States parties to the Treaty.

There has not been much progress on the issue of NSAs since the adoption of the 2010 NPT Action Plan. Both the US and UK have made recent changes in the language of their nuclear postures concerning this issue, but China is still the only nuclear weapon state that has made a pledge to not use nuclear weapons against non-nuclear weapon stats (NNWS) without any conditions or reservations. The US and UK have a policy not to use nuclear weapons against NPT NNWS that are in compliance with “non-proliferation obligations,” which is an undefined concept. France, UK, US, and Russia still abstain on the annual UNGA resolution “Conclusion of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons”.

Action 9:
The establishment of further nuclear-weapon-free-zones, where appropriate, on the basis of arrangements freely arrived at among States of the region concerned, and in accordance with the 1999 Guidelines of the United Nations Disarmament Commission, is encouraged. All concerned States are encouraged to ratify the nuclear-weapon-free zone treaties and their relevant protocols, and to constructively consult and cooperate to bring about the entry into force of the relevant legally binding protocols of all such nuclear-weapon-free zones treaties, which include negative security assurances. The concerned States are encouraged to review any related reservation.

Since the adoption of the 2010 NPT Action Plan, Russia has ratified protocols I and II to the Pelindaba Treaty. The US submitted the protocols of the Pelindaba and Rarotonga treaties for approval of ratification to its Senate in 2011, but the Senate has yet to take formal action on this. Since 2010, seven African states have ratified the Pelindaba Treaty, leaving 15 African states that have not yet ratified. Consultations between the members of the Bangkok Treaty and the NWS looked promising in 2012, but have since then stalled and no formal progress have been made on ratification of the protocols. While Russia and China have expressed support for the Semipalatinsk Treaty, France, the United Kingdom, and United States oppose article 12 of the Treaty. However, consultations to discuss outstanding difficulties were launched during the 2013 NPT Preparatory Committee in Geneva. In September 2012 all NWS signed parallel declarations regarding Mongolia’s nuclear-weapon-free status. The progress made on the establishment of a zone free of nuclear weapons and other weapons of mass destruction in the Middle East, such as appointing a facilitator and agreeing on a venue, is overshadowed by the postponement of the conference initially planned for December 2012. Finally, no modifications of any reservations by NWS to any of the protocols of NWFZ treaties have taken place. Despite some positive steps, states parties need to make additional efforts in order to fully implement this action.
Action 10:

All nuclear-weapon States undertake to ratify the Comprehensive Nuclear-Test-Ban Treaty with all expediency, noting that positive decisions by nuclear-weapon States would have the beneficial impact towards the ratification of that Treaty, and that nuclear-weapon States have the special responsibility to encourage Annex 2 countries, in particular those which have not acceded to the Treaty on the Non-Proliferation of Nuclear Weapons and continue to operate unsafeguarded nuclear facilities, to sign and ratify.

There are 31 parties of the NPT, including four Annex II countries—China, Egypt, Iran, and the United States—that have not yet signed or ratified the CTBT. However, China and the United States have a special responsibility under this action as they are the only NWS under the NPT that have not yet ratified the Treaty. Both states have made clear their intention to ratify the CTBT since the NPT Review Conference in 2010, but have not laid out any concrete timetable for when this will happen.

Action 11:

Pending the entry into force of the Comprehensive Nuclear-test-Ban treaty, all States commit to refrain from nuclear-weapon test explosions or any other nuclear explosions, the use of new nuclear weapons technologies and from any action that would defeat the object and purpose of that Treaty, and all existing moratoriums on nuclear-weapon test explosions should be maintained.

Action 12:

All States that have ratified the Comprehensive Nuclear-Test-Ban Treaty recognize the contribution of the conference on facilitating the entry into force of that Treaty and of the measures adopted by consensus at the Sixty Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-test-Ban Treaty, held in September 2009, and commit to report at the 2011 Conference on progress made towards the urgent entry into force of that Treaty.

Action 13:

All States that have ratified the Comprehensive Nuclear-Test-Ban Treaty undertake to promote the entry into force and implementation of that Treaty at the national, regional and global levels.

Action 14:

The Preparatory Commission for the Comprehensive Nuclear-Test- Ban Treaty Organization is to be encouraged to fully develop the verification regime for the Comprehensive Nuclear-Test-Ban Treaty, including early completion and provisional operationalization of the international monitoring system in accordance with the mandate of the Preparatory Commission, which should, upon entry into force of that Treaty, serve as an effective, reliable, participatory and non-discriminatory verification system with global reach, and provide assurance of compliance with that Treaty.

Many states parties participated in the CTBT Ministerial Meetings in September 2010 and 2012 as well as the Article XIV Conferences in September 2011 and 2013, and repeatedly called for the prompt entry into force of the CTBT. Furthermore, during the 2013 CTBT Article XIV Conference, a Group of Eminent Persons was created to support and complement efforts for the CTBT’s entry into force as well as international efforts to that end. It is not clear to what extent states promoted the entry into force of this instrument in their bilateral relations with the outstanding annex II states, though official statements and documents indicate that states are currently complying with these actions. The monitoring system of the CTBT continues to be developed by the Preparatory Commission to the CTBTO and therefore action 14 is also complied with.
Action 15:
All States agree that the Conference on Disarmament should, within the context of an agreed, comprehensive and balanced programme of work, immediately begin negotiation of a treaty banning the production of fissile material for use in nuclear weapons or other nuclear explosive devices in accordance with the report of the Special Coordinator of 1995 (CD/1299) and the mandate contained therein. Also in this respect, the Review Conference invites the Secretary-General of the United Nations to convene a high-level meeting in September 2010 in support of the work of the Conference on Disarmament.

Not much progress has been made on negotiations of a treaty banning fissile materials for use in nuclear weapons in the CD. While the most recent proposals for a programme of work in the CD have been opposed only by a non-NPT state, NPT states parties have not made adequate efforts to come up with alternative and creative solutions. The high-level meeting on the CD’s revitalization took place in September 2010 and a follow-up meeting of the UN General Assembly was held July 2011, without having a great effect on discussions within the CD. However, in 2012 at the UNGA adopted a resolution establishing a Group of Governmental Experts (GGE) to make recommendations on possible elements of such a treaty. The GGE, consisting of 25 states, will meet in 2014 and 2015. In preparation, the UNSG sought the views of member states on this issue and collected them in a report to the 68th session of the UNGA. While this is a positive step, it does not fulfill the requirements set out by the action, to begin negotiations on such an instrument within the CD.

Action 16:
The nuclear-weapon States are encouraged to commit to declare, as appropriate, to the International Atomic Energy Agency (IAEA) all fissile material designated by each of them as no longer required for military purposes and to place such material as soon as practicable under IAEA or other relevant international verification and arrangements for the disposition of such material for peaceful purposes, to ensure that such material remains permanently outside military programmes.

Action 17:
In the context of action 16, all States are encouraged to support the development of appropriate legally binding verification arrangements, within the context of IAEA, to ensure the irreversible removal of fissile material designated by each nuclear-weapon State as no longer required for military purposes.

No significant changes after the adoption of the 2010 NPT Action Plan have taken place. Three out of the five NWS have declared excess fissile material for military use, although IAEA involvement has been limited. The remaining stockpile of HEU in both Russia and the US exceeds their military requirements and both countries could declare more HEU as excess to national security requirements. No developments of any legally-binding verification arrangements as described in action 17 have taken place, and therefore states are not considered to have implemented this action.

Action 18:
All States that have not yet done so are encouraged to initiate a process towards the dismantling or conversion for peaceful uses of facilities for the production of fissile material for use in nuclear weapons or other nuclear explosive devices.

Since a moratorium on production of fissile material for weapons purposes has been announced by four of the five NWS, most production facilities have been dismantled. While not publicly declaring such a moratorium, China is also believed to have stopped production of fissile material for weapons purposes and to have closed or converted such facilities, but it should announce this publicly. This action is considered being as complied with, but it needs to be noted that no specific steps have been taken since the 2010 NPT Action Plan.

Action 19:
All States agree on the importance of supporting cooperation among Governments, the United Nations, other international and regional organizations and civil society aimed at increasing confidence, improving transparency and developing efficient verification capabilities related to nuclear disarmament.

The UK-Norway-VERTIC initiative is the only significant project related to cooperation on these issues although some countries are reportedly developing new projects on similar issues. More efforts are needed to fully implement this action.
Action 20:
States parties should submit regular reports, within the framework of the strengthened review process for the Treaty, on the implementation of the present action plan, as well as of article VI, paragraph 4 (c), of the 1995 decision entitled “Principles and objectives for nuclear non-proliferation and disarmament”, and the practical steps agreed to in the Final Document of the 2000 Review Conference, and recalling the advisory opinion of the International Court of Justice of 8 July 1996.

The national reporting system under the NPT had a low level of participation in the lead-up to the 2010 NPT Review Conference. More than halfway through the 2015 Review cycle, only seven countries have submitted reports. Significant progress needs to be made during the upcoming Preparatory Committee and Review Conference if this action is to be implemented.

Action 21:
As a confidence-building measure, all the nuclear-weapon States are encouraged to agree as soon as possible on a standard reporting form and to determine appropriate reporting intervals for the purpose of voluntarily providing standard information without prejudice to national security. The Secretary-General of the United Nations is invited to establish a publicly accessible repository, which shall include the information provided by the nuclear-weapon States.

The NWS are reported to have discussed a standard reporting form at their meetings, and the Non-Proliferation and Disarmament Initiative (NPDI) sought to contribute to this objective by making a concrete proposal. However, there have been no official comments from the NWS on the NPDI proposal, and no similar proposal has been put forward by the NWS. The NWS should agree on and present a standard reporting form as a first step in order to fulfil this action. The United Nations has created an online repository for reports from the NWS, which remains empty at the time of printing of this report. In its 2013 report, the International Panel on Fissile Material has proposed measures to increase transparency of nuclear warhead and fissile material stocks.

Action 22:
All States are encouraged to implement the recommendations contained in the report of the Secretary-General of the United Nations (A/57/124) regarding the United Nations study on disarmament and non-proliferation education, in order to advance the goals of the Treaty in support of achieving a world without nuclear weapons.

Reporting on implementation of the UN Secretary-General’s recommendations on disarmament education has been poor, with only nine states submitting information for the 2012 update of the Secretary-General’s report. In order for this action to be implemented, NPT states parties must significantly improve their disarmament education efforts.

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.

By examining the concrete events that have taken place since the adoption of the 2010 NPT Action Plan, it is possible to conclude that states parties are not exerting all efforts in order to reach this goal. While some have made statements on the topic, many consistently avoid calling out the names of the non-members of the NPT. Furthermore, the increased nuclear cooperation with India and Pakistan 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 two states as well as with Israel. Also, the voting results in the UN General Assembly concerning resolutions calling for universalization of the NPT have not significantly changed since the conclusion of the Action Plan. The recent nuclear test by the DPRK signals a negative development that moves the country even further away from once again adhering to the Treaty, and the end of diplomatic efforts through the six-party talks makes significant progress on this in the near future rather unlikely.

Action 24:
The Conference re-endorse 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.

Only ten countries have not yet implemented a comprehensive safeguards agreement (CSA) with the IAEA, and most of those countries do not carry out any noteworthy civilian nuclear activities. Therefore, the call in this action can be considered implemented.
**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.

This action calls specifically on the states parties that had not brought into force a CSA by May 2010 to do so. Since that date, eight out of eighteen countries have done so. No progress by the remaining ten countries has been noted. Thus while some progress in implementing this action item has been achieved, further efforts by the remaining ten countries will need to be carried out if this action is to be fully complied with by 2015.

**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.

These two actions are complicated to evaluate since the phrases “non-proliferation obligations” and “non-compliance” are open for interpretation. The view on what constitutes mandatory obligations and thereby compliance with such obligations differs quite significantly. “Non-proliferation obligations” is not a legally-defined term, whereas the safeguards agreements of each country are very specific. Furthermore, it can be argued that the term “respective legal obligations” in action 27 also includes those obligations arising from UNSC resolutions. The IAEA Board of Governors has reported that Iran, Syria, and the DPRK are currently not complying with certain obligations. All parties need to implement their non-proliferation obligations to the fullest extent. However, the three above-mentioned states do not agree that they are in violation of any of their legal obligations. Additionally, DPRK has withdrawn from the NPT and has no agreements with the IAEA. Iran is in compliance with its CSA obligations (though not the (voluntary) implementation of the additional protocol).

The joint plan of action agreed upon in November 2013 between Iran and the E3/EU+3 is a significant positive step towards resolving remaining issues in this regard. While it is not yet possible to conclude that this action therefore is fulfilled, successful implementation of the joint action plan and a permanent agreement between Iran and the E3/EU+3 will contribute positively to any evaluation of the NPT action plan in 2015. The current situation in Syria does not allow for the implementation of any safeguards agreement. However, it is imperative that the concerned states implement their legal obligations in good faith and exercise flexibility and transparency in their cooperation with the IAEA. Depending on the reading of action 27 and the respective developments, this action could be considered as not complied with by several states or only partly complied with.

**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.

Currently, 122 states have additional protocols in force, an increase of 21 states since May 2010. This is a positive development, but 68 member states of the NPT have still not brought into force an additional protocol. While the discussion around the ratification of the additional protocol has lost intensity due to the development of a “state-level approach” to safeguards, this action needs to see more progress if it is to be considered implemented by 2015.

**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.

One of the priorities of the IAEA is to facilitate and assist states parties on progress on CSAs and additional protocols. Several initiatives to further facilitate the entry into force and universalization of CSAs and additional protocols by the IAEA have taken place and the progress on adherence to such instruments shows that this action is currently being implemented.
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.

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 implemented.

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.

Since the adoption of the action Plan, 13 states parties have amended their small quantities protocols (SQP). In addition, three new SQPs have entered into force, two new SQP have been signed, and the IAEA Board of Governors has approved one. However, a large number of SQPs from before 2005 remain and therefore this action will require further efforts by these states in order to be implemented fully.

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.

There has been some significant progress in this area, through new IAEA, multilateral, and national initiatives on optimizing the IAEA safeguards system. 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 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.

There has been modest progress reported on actions 33 and 34 dealing with the IAEA and safeguards. However, the actions do not call for a specific increase of activities, but rather for continued support and to "further develop" activities. The work of the IAEA in this area appears to be moving forward and to be of a predictable nature, and therefore these actions seem to be implemented.
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.

This action 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. In order to fully comply with this action, all states with nuclear cooperation agreements with states 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. As this is not the case, in particular in nuclear energy cooperation agreements with India and Pakistan, this action cannot be considered implemented.

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 36 is simply an encouragement and will be dependent on the state involved. The research in this study has shown that many countries have developed national export controls based on multilaterally negotiated guidelines, and therefore this action is considered implemented.

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.

The implementation of this action depends on how one interprets safeguards obligations. As the action only refers to "IAEA safeguards obligations," it could be interpreted as meaning that the limited safeguards agreement on certain specified nuclear facilities in states not party to the NPT would be enough to implement this action. With such an interpretation, one could argue that the action is being implemented. If one interprets "IAEA safeguards obligations" as meaning the comprehensive safeguards agreement and additional protocol, then nuclear exports to countries outside the NPT and to countries without an additional protocol in place means that this action is not being implemented.

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.

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 parties can participate in nuclear energy exchanges. The statement by the G8 from 2011 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 complying with the obligations under action 38 and 39 of the 2010 NPT Action Plan, but that disagreement on the implementation of these commitments is based on the interpretation of certain wording in the Action Plan and the NPT itself.
Action 40:
The Conference encourages all States to maintain the highest possible standards of security and physical protection of nuclear materials and facilities.

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”. If such an interpretation is made, a clear majority of states parties are complying with this action. Since it was launched in April 2010, the Nuclear Security Summit process as well as the 2013 IAEA Nuclear Security Conference reinforced Action 40.

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.

As the IAEA recommendation does not entail a legal commitment and does not require signature and ratification of member states, it is difficult to assess compliance levels. However, nothing indicates that states parties are not continuing to promote and work on physical protection of nuclear materials so therefore the action is considered implemented.

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.

Adherence to this convention and its amendments is improving, but a significant number of countries still remain outside. Therefore, additional progress by those states remaining outside is needed in order to fully implement this action.

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.

A clear majority of NPT states parties have expressed support for this Code and many of those have explicitly supported all aspects of the supplementary Guidance on the Import and Export of Radioactive Sources. At the same time, adherence has not increased significantly since May 2010. Therefore, additional efforts are needed to fully implement this action.

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.

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 implementation of the NPT Action Plan. The cooperation between governments, organizations, and some non-governmental actors is significant and therefore states parties are currently implementing this action.
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.

Since May 2010, the Convention has 23 new parties. While this is a positive step in the right direction, there are still 52 states that have signed but not yet ratified the Convention. Further progress on adherence to this convention is needed in order to fully implement the action by 2015.

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.

There has been modest progress reported on action 46, dealing with the activities of the IAEA. As the action does not call for specific increases of activities, but rather for member states to assist and broaden support for the IAEA, this action seems to be implemented.

Action 47:
Respect each country’s choices and decisions in the field of peaceful uses of nuclear energy without jeopardizing its policies or international cooperation agreements and arrangements for peaceful uses of nuclear energy and its fuel cycle policies.

Action 48:
Undertake to facilitate, and reaffirm the right of States parties to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy.

The research shows that 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. Despite the Fukushima accident, most states 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 concluded that states parties are currently complying with the obligations under these actions, but it is essential to note that disagreement on the implementation of these commitments can exist due to differences in interpretation of certain wording of the Action Plan and the NPT itself.

Action 49:
Cooperate with other States parties or international organizations in the further development of nuclear energy for peaceful purposes, with due consideration for the needs of the developing areas of the world.

Nuclear energy continues to be a source of extensive international cooperation. The earthquake and tsunami in Japan and the following disaster at the Fukushima nuclear power plant have given pause to some negotiations and some states are reconsidering their continued use or development of nuclear power, but most states continue to expand their nuclear options. The number of technical cooperation initiatives through the IAEA continues to rise and so does bilateral cooperation among states. Immediate connection to the NPT Action Plan, however, is difficult to ascertain, since no significant increase in training or cooperation activities since May 2010 can be detected. IAEA Technical Cooperation Programmes (TCP) and regional cooperation under the umbrella of the respective regional division of the TCP mostly focus on the training of personnel and the education of experts. Bilateral cooperation among states also includes the training of personnel but mainly focuses on the exchange of nuclear technology and expertise. States are therefore considered to be in compliance with action 49.
**Action 50:**

Give preferential treatment to the non-nuclear-weapon States parties to the Treaty, taking the needs of developing countries, in particular, into account.

While some have argued that through sharing of best practices and technical cooperation agreements of the IAEA, NPT states parties with developing nuclear energy programmes are indeed given preferential treatment, the extent of cooperation with states outside the NPT gives cause to question whether this action is being implemented. The scope of cooperation of NPT states parties with nuclear weapon-possessors not party to the NPT, especially the increased cooperation with India since the Nuclear Suppliers Group (NSG) exception was granted, shows that the line between states not party to the NPT and NNWS parties to the NPT is diminishing. Such a development has inevitably raised concerns about the compliance with this action and will continue be a source of significant disagreement at future NPT conferences, especially since the United States has formally introduced the issue of the India's membership in the NSG.

**Action 51:**

Facilitate transfers of nuclear technology and international cooperation among States parties in conformity with articles I, II, III, and IV of the Treaty, and eliminate in this regard any undue constraints inconsistent with the Treaty.

While there continues to be some reluctance to share technology in the field of enrichment and processing of nuclear material, nuclear energy cooperation amongst NPT states parties is significant and continues to expand. The earthquake and tsunami in Japan and the following disaster at the Fukushima nuclear power plant have given pause to some negotiations and some states are reconsidering their continued use or development of nuclear power, but most states continue to expand their nuclear options. Differences in interpretation of the NPT and its articles can lead to different conclusions on the implementation of this action, but our research has not found anything concrete that would indicate that this action is not currently being implemented.

**Action 52:**

Continue efforts, within IAEA, to enhance the effectiveness and efficiency of its technical cooperation programme.

**Action 53:**

Strengthen the IAEA technical cooperation programme in assisting developing States parties in the peaceful uses of nuclear energy.

The technical cooperation programmes between states parties and the IAEA are continuing to be developed and implemented and new ones are initiated constantly. Progress on action 52 and 53 is significant and is therefore considered implemented.

**Action 54:**

Make every effort and to take practical steps to ensure that IAEA resources for technical cooperation activities are sufficient, assured and predictable.

For the timeframe of 2010–2015, the IAEA Board of Governors increased by over five million dollars the estimated target figure for the Technical Cooperation Fund. If states parties continue to pledge and pay at the same rate as they did in 2009, the funding for the technical cooperation programme should increase from its 2009 levels. Based on the target figures, action 54 is considered complied with by the IAEA member states as a group.
Action 55:
Encourage all States in a position to do so to make additional contributions to the initiative designed to raise 100 million dollars over the next five years as extra budgetary contributions to IAEA activities, while welcoming the contributions already pledged by countries and groups of countries in support of IAEA activities.

Action 55 encourages states to make additional contributions to the initiative designed to raise 100 million dollars. So far, the United States has contributed $31 million. Several other countries have announced that they either will or are considering contributing to this initiative, but recently no figures have been made public. In order to fully implement action 55, states would need to increase their publicly pledged donations and deliver what was pledged. Since the technical cooperation is a statutory task of the Agency, the debate on diminishing the importance of extrabudgetary funding by introducing the Technical Cooperation Fund in the IAEA regular budget has become more intense since 2010.

Action 56:
Encourage national, bilateral and international efforts to train the necessary skilled workforce needed to develop peaceful uses of nuclear energy.

The action does not require any increase in activities; it mainly calls upon states to encourage training programmes. No decrease of training programmes has been found, and therefore this action is considered implemented.

Action 57:
Ensure that, when developing nuclear energy, including nuclear power, the use of nuclear energy must be accompanied by commitments to and ongoing implementation of safeguards as well as appropriate and effective levels of safety and security, consistent with States' national legislation and respective international obligations.

The Fukushima disaster has raised significant concerns around the world about the safety of nuclear energy and has highlighted that existing nuclear power plants are not always accompanied by “appropriate and effective” levels of safety. Fukushima has led to renewed focus on nuclear safety, and states are engaging in additional efforts to improve nuclear safety. While not without criticism and reservations, the adopted IAEA action plan on nuclear safety is a positive step. Additionally during the meeting of the Convention on Nuclear Safety in August 2012 a working group on nuclear safety was created to discuss measures to strengthen nuclear safety. While these worldwide efforts are a step in the right direction, there is a reluctance to adopt more legally-binding measures. More concrete measures and improvements in nuclear safety need to be implemented. The significance of this action is evolving and therefore needs to be implemented more strictly.

Action 58:
Continue to discuss further, in a non-discriminatory and transparent manner under the auspices of IAEA or regional forums, the development of multilateral approaches to the nuclear fuel cycle, including the possibilities of creating mechanisms for assurance of nuclear fuel supply, as well as possible schemes dealing with the back-end of the fuel cycle without affecting rights under the Treaty and without prejudice to national fuel cycle policies, while tackling the technical, legal and economic complexities surrounding these issues, including, in this regard, the requirement of IAEA full scope safeguards.

The decision to establish a new nuclear fuel bank under the auspices of the IAEA is one of the most significant developments since the Action Plan was adopted in May 2010. The decision was made in the IAEA, and therefore is compatible with the requirement of the action. The financial and rhetorical support from several states shows a continued commitment to this action. The Fukushima accident does not appear to have had any significant impact on the debate on multilateral approaches to the nuclear fuel cycle.

Action 59:
Consider becoming party, if they have not yet done so, to the Convention on Nuclear Safety, the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the International Convention for the Suppression of Acts of Nuclear Terrorism, the Convention on the Physical Protection of Nuclear Material, and to ratify its amendment so that it may enter into force at an early date.
The conventions on nuclear safety and security, as well as civil liability in case of nuclear accident, are growing in importance since the Fukushima disaster. The conventions in action 59 have seen some modest progress in signatures and ratifications, but it is far from any significant achievement to increase adherence. Even though the action only obliges states to “consider” becoming parties to these conventions, states need to make further efforts in order to implement action 59.

- **Action 60:**
  Promote the sharing of best practices in the area of nuclear safety and security, including through dialogue with the nuclear industry and the private sector, as appropriate.

  This action does not require any increase of activities; it mainly calls upon states to promote sharing of best practices. However, new initiatives for sharing of best practices have taken place and therefore it is considered being implemented.

- **Action 61:**
  Encourage States concerned, on a voluntary basis, to further minimize highly enriched uranium in civilian stocks and use, where technically and economically feasible.

  The global amount of highly-enriched uranium (HEU) has decreased from 2009 to 2013, indicating that some progress has been made. Many states have since May 2010 made significant progress in removing their entire stockpiles of HEU. Despite the voluntary nature of this action, more efforts to reduce HEU should be made in order to fully implement this action. States should also consider measures to increase transparency in the field of fissile material, in order to facilitate additional reductions in the future. Unfortunately, there has been no significant discussion on whether the security and transparency concerning such material really is best served by transferring it to an NWS or whether other mechanisms, such as within the framework of the IAEA should be developed.

- **Action 62:**
  Transport radioactive materials consistent with relevant international standards of safety, security and environmental protection, and to continue communication between shipping and coastal States for the purpose of confidence-building and addressing concerns regarding transport safety, security and emergency preparedness.

  No significant changes can be mentioned in connection with the transport of radioactive material. Several IAEA initiatives continue to take place and international standards for transport and communications seem to be complied with. The concerns expressed by the Caribbean Community (CARICOM) show that more communication and confidence-building measures are needed to address this issue, but the action is considered to be implemented.

- **Action 63:**
  Put in force a civil nuclear liability regime by becoming party to relevant international instruments or adopting suitable national legislation, based upon the principles established by the main pertinent international instruments.

  With regards to international civil liability regimes, only limited progress has been achieved. As the action includes a concrete commitment that states parties “shall” put such civil liability regimes in place, it cannot be considered fully implemented.

- **Action 64:**
  The Conference calls upon all States to abide by the decision adopted by consensus at the IAEA General Conference on 18 September 2009 on prohibition of armed attack or threat of attack against nuclear installations, during operation or under construction.

  No attack against a nuclear installation has been reported since the adoption of the NPT Action Plan. However, concrete threats of attacks on Iranian nuclear facilities have been made by Israel while the US has publicly stated that “all options are on the table”. This raises concerns with regard to the implementation of this action.
“The Conference expresses its deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons and reaffirms the need for all States at all times to comply with applicable international law, including international humanitarian law.”.

While the 2010 NPT action plan has 64 specific actions, it is part of a bigger framework of the entire outcome document of the 2010 Review Conference. Implementation of the action plan therefore needs to be considered in the light of the outcome document as a whole.

One of the most significant achievements of the 2010 outcome document was the specific acknowledgement of the catastrophic humanitarian consequences that any use of nuclear weapons would cause. The review section of outcome document referred to “deep concern at the continued risk for humanity represented by the possibility that these weapons could be used and the catastrophic humanitarian consequences that would result from the use of nuclear weapons.” In the section on the “Conclusion and recommendations for follow-on actions” for nuclear disarmament, the document also reaffirmed “the need for all States at all times to comply with applicable international law, including international humanitarian law.”

Since the 2010 Review Conference, attention to the humanitarian consequences of nuclear weapons has garnered an increasingly prominent place in multilateral nuclear disarmament discussions. Support for this dimension of the conversation has radically increased among governments, international organisations, and civil society representatives. It has become the dominant theme of any discussion around nuclear weapons and will likely continue to be one of the main topics of the 2015 Review Conference.

**Governmental conferences**

In March 2013, the Norwegian government hosted a conference on the Humanitarian Impact of Nuclear Weapons attended by 127 states, many international organisations, and civil society representatives. The conference brought states and others together to discuss and acknowledge the devastating effects that would be caused by the use of nuclear weapons to human health, the environment, economies, development, infrastructure, and more. The Chair’s summary concluded that there is no possibility of an adequate national or international response to such a catastrophe; and that this fundamental challenge to human and planetary survival must be addressed through preventative measures.

The five nuclear weapon states (NWS) of the NPT did not participate in this conference. They delivered a joint demarche in the weeks before, announcing that they “remain concerned that the Oslo Conference will divert discussions away from practical steps to create conditions for further nuclear weapons reductions.”
Even though the nuclear-armed states NWS dismissed the conference in Oslo as “distracting” or as detrimental to existing “plans,” many participants viewed the Oslo conference as one of the most relevant meetings on nuclear weapons held at the intergovernmental level in many years. The Chair’s summary reflected the increasing global concern regarding the effects of nuclear weapons detonations and recognized that this is an issue of fundamental significance to us all.

A follow up conference to continue the discussions on that topic was held in Nayarit, Mexico, on 13–14 February 2014, where 146 governments, and numerous international organisations and civil society attended. The focus was on further discussions around the long-term effects of nuclear weapons, including public global health consequences, displacements of people, as well as the impact on transports, communications, and economic development. It also included a discussion on existing risks with current stockpiles of nuclear weapons. International organisations and research institutes like the World Health Organisation, United Nations Development Programme, International Office for Migration, Chatham House, and United Nations Institute for Disarmament Research delivered presentations at the conference.

The Chair’s summary concluded that the discussion in Nayarit should lead to the commitment of states and civil society to reach new international standards and norms, through a legally binding instrument, and that a diplomatic process conducive to this goal should be initiated.

As with Oslo before it, the conference in Nayarit exposed nuclear weapons as dangerous and destructive. The evidence presented by UN agencies, academics, former military officials, and civil society organizations clearly revealed that the continued possession and deployment of nuclear weapons is a reckless and unsanctionable gamble with the future of humanity and the planet.

The five NWS of the NPT did not participate in the conference in Nayarit, although no joint demarche was issued this time. None of the five states issued any official reason for not attending.

On the 13th February 2014, the Foreign Minister of Austria announced that he would organise a third conference on this topic in Vienna before the end of the year. At the conference in Nayarit, the announcement by Austria was welcomed by the majority of all delegations taking the floor.
Multilateral discussions
Since the adoption of the 2010 Outcome Document, the humanitarian discourse on nuclear weapons has been consolidated in a number of joint statements.

During the 2012 NPT Preparatory Committee (PrepCom) in Vienna, 16 governments delivered a Joint Statement on the Humanitarian Impact of Nuclear Weapons. The statement highlights the catastrophic humanitarian consequences of any use of nuclear weapons and calls for efforts to outlaw and eliminate nuclear weapons. Six months later, at the 2012 General Assembly’s First Committee, a similar statement was delivered and signed by 35 states.

Governments supporting the Joint Humanitarian Statement
At the 2013 NPT PrepCom in Geneva, a similar statement was drafted by the group of 16 states, and the South African delegation delivered it on behalf of 80 states. Later that year during the 2013 General Assembly First Committee more states joined a statement drafted by the same group of 16 states and delivered by New Zealand. This time, the statement was delivered on behalf of 125 states.

In addition to these joint humanitarian statements, many additional individual states and groups of states such as the New Agenda Coalition, the Non-Aligned Movement, and the Non-Proliferation and Disarmament Initiative (NPDI) have raised concerns about the humanitarian impact of nuclear weapons at the 2013 NPT PrepCom in Geneva, during the high-level meeting on nuclear disarmament in September 2013, or at the 2013 First Committee of the General Assembly in New York. In addition, the eighth NPDI Ministerial Meeting will take place in April 2014 in Hiroshima and the discussions will focus on the catastrophic humanitarian consequences of the use of nuclear weapons.

The Chair’s summaries of the 2012 and the 2013 NPT PrepCom include references to this increased attention to the catastrophic humanitarian consequences of any use of nuclear weapons during the meetings. In the Chair’s summary from the 2013 NPT PrepCom, references to the Oslo conference, its conclusions, and the follow-up conference in Mexico are also included.

During the meetings of the Open-Ended Working Group (OEWG) to “develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons,” the humanitarian impact of nuclear weapons was put forward as “a cross-cutting issue that affects all elements of the disarmament agenda.”

Similarly, many of the resolutions introduced to the 2013 First Committee of the General Assembly include references to the humanitarian consequences of any use of nuclear weapons. This rapid increase of attention indicates a growing concern among states about the humanitarian impact of nuclear weapons. It also reflects the change to a more humanitarian-focused discourse among governments in multilateral disarmament and arms control fora.

International organisations
Not only governments, but also many international organisations are pursuing this topic.

In 2011, the Red Cross/Red Crescent movement, supported by the International Committee of the Red Cross (ICRC), adopted a resolution which stated that the movement “finds it difficult to envisage how any use of nuclear weapons could be compatible with the rules of international humanitarian law, in particular the rules of distinction, precaution and proportionality,” and urges states to abolish nuclear weapons. In November 2013, a follow-up resolution was adopted, containing a four-year action plan towards the...
prohibition and elimination of nuclear weapons. The resolution outlines activities for every section of the global Red Cross and Red Crescent movement to take in support of its implementation at national, regional and international levels.24

At the Conference on the humanitarian impact of nuclear weapons in Oslo, international organisations such as the International Committee of the Red Cross, World Food Programme, United Nations Development Programme (UNDP), and the United Nations Office for Coordination of Humanitarian Affairs (OCHA), delivered presentations on the humanitarian impact of nuclear weapons and their respective roles as responders in the event of a detonation. They all acknowledged that effective assistance to the victims of a nuclear weapon detonation is not currently available and that it would be difficult to imagine how such assistance could be developed in the future.

UN Secretary General Ban Ki-moon has recognised and repeatedly highlighted the growing understanding and concern with the humanitarian consequences of any use of nuclear weapons.25 He asserted that as long as nuclear weapons exist, “so, too will the risks of use and proliferations.”26 Similarly, the UN High Representative for Disarmament Affairs, Ms. Angela Kane, has welcomed the growing public awareness about humanitarian impacts as “one of the most encouraging signs of progress [in the global debate on nuclear disarmament].”27

Research institutes
The United Nations Institute for Disarmament Research (UNIDIR) has engaged in a research project on the humanitarian impact of nuclear weapons since 2011.28 As a part of this project, UNIDIR is currently undertaking a study on the challenges to UN emergency preparedness and humanitarian coordination and response in the event of nuclear weapon detonations. This study is being conducted in cooperation with OCHA and the UNDP.

Many other research institutes are focusing on the humanitarian impact of nuclear weapons, such as the International Law and Policy Institute in Oslo and Chatham House in London. Many others are pursuing research projects on the topic and/or have released reports and organized workshops on the matter.

Other conferences and meetings
Aside from multilateral events and processes, the humanitarian impact of nuclear weapons has also become a central feature of the agenda of key regular meetings on nuclear disarmament, such as the Carnegie International Nuclear Policy Conference, the EU Non-Proliferation Conference, and the Wilton Park “Towards the 2015 NPT Review Conference” meeting.30

In March 2013 the Inter Parliamentary Union (IPU) agreed to focus on “Towards a Nuclear-Weapons-Free World: The Contribution of Parliaments” during its 130th Assembly in 2014 in Baku, Azerbaijan.29 During the 129th Assembly in Geneva in October 2013, the IPU held a panel discussion on the issue in preparation for the 2014 meeting.

Reactions from nuclear weapon states
The five NPT NWS jointly issued a demarche in the weeks before the Oslo conference announcing their concern that that the conference would “divert discussions away from practical steps to create conditions for further nuclear weapons reductions.”31 The five states did not attend conference in Mexico, but did not issue any official reasons why this time.

Internal documents from the United Kingdom, requested through the Freedom of Information Act regarding the participation in Oslo, show that the UK government felt “that the focus and format of the conference will not lend itself to the UK setting out our narrative and key messages around our forward leaning approach to multilateral disarmament.”32

At the high-level meeting on nuclear disarmament in New York on 26 September 2013, France, United Kingdom, and the United States delivered a joint statement saying, “We fully understand the serious consequences of nuclear weapon use and will continue to give the highest priority to avoiding such a contingency … and while we are encouraged by the increased energy and enthusiasm around the nuclear disarmament debate, we regret that this energy is being directed toward initiatives such as this High-Level Meeting, the humanitarian consequences campaign, the Open-Ended Working Group and the push for a Nuclear Weapons Convention.”33 At the UN General Assembly’s First Committee, Russia argued that the humanitarian discourse “turns a difficult issue into public diplomacy” and is not in line with “true needs and priorities”.34

The statements and reactions from the NWS demonstrates their determination to keep discussions about nuclear weapons within frameworks over which they can effectively exert a veto and where only nuclear-armed states are considered to be central actors.
Conclusion

Since 2010, the discourse has changed significantly around nuclear weapons and the humanitarian concerns with the use of nuclear weapons have grown to become one of the most central points. A clear majority of states are recognizing the horrific impacts of a nuclear detonation and believe that these impacts must be to be central to international thinking and action around these weapons.

The concern about what would happen if a nuclear bomb were detonated might not be new in itself, but making it a starting point for discussions on how nuclear weapons are dealt with and as the impetus for their elimination is rather new. The humanitarian dimension will be one of the dominating topics at the NPT 2015 Review Conference and will inform both the debates and the decisions taken.

Endnotes:

2 Ivi, p. 12.
3 Ivi, p. 19.


10 Austria, Chile, Costa Rica, Denmark, Holy See, Egypt, Indonesia, Ireland, Malaysia, Mexico, New Zealand, Nigeria, Norway, Philippines, South Africa and Switzerland.

11 Joint Statement on the humanitarian dimension of nuclear disarmament to the 2012 NPT Preparatory Committee, delivered by Switzerland on behalf of 16 states on 2 May 2012.

12 New states: Algeria, Argentina, Bangladesh, Belarus, Brazil, Colombia, Ecuador, Iceland, Kazakhstan, Liechtenstein, Malta, Marshall Islands, Peru, Samoa, Sierra Leone, Swaziland, Thailand, Uruguay and Zambia.

13 Joint Statement on the humanitarian dimension of nuclear disarmament to the 2013 NPT Preparatory Committee, delivered by South Africa on behalf of 80 states on 24 April 2013.

14 New states: Bosnia and Herzegovina, Botswana, Burkina Faso, Cambodia, Côte d’Ivoire, Cyprus, Cuba, Djibouti, El Salvador, Ethiopia, Ghana, Georgia, Grenada, Guatemala, Honduras, Iran, Jamaica, Jordan, Kenya, Kuwait, Lebanon, Lesotho, Luxembourg, Maldives, Mauritius, Morocco, Mozambique, Namibia, Nepal, Nicaragua, Niger, Palau, Panama, Papua New Guinea, Paraguay, Qatar, Serbia, Singapore, Solomon Islands, Tanzania, Togo, Tonga, Trinidad and Tobago, Tunisia, Uganda, Ukraine, Yemen.

15 Joint Statement on the humanitarian consequences of nuclear weapons to the UNGA First Committee, delivered by New Zealand on behalf of 125 states on 20 October 2013.

16 New states: Afghanistan, Angola, Antigua and Barbuda, Bahamas, Bahrain, Barbados, Belize, Benin, Bolivia, Cameroon, Cape Verde, Central African Republic, Congo, DR Congo, Dominican Republic, Equatorial Guinea, Eritrea, Fiji, Gabon, Guinea, Guinea Bissau, Haiti, Iraq, Japan, Kiribati, Lao PDR, Liberia, Libya, Macedonia, Madagascar, Malawi, Mali, Mongolia, Montenegro, Myanmar, Nauru, Rwanda, San Marino, Senegal, Seychelles, South Sudan, Suriname, Timor-Leste, Tuvalu, United Arab Emirates, Vanuatu and Viet Nam.

17 Statement on behalf of the Non-Proliferation and Disarmament Initiative to the High Level Meeting on Nuclear Disarmament, delivered by the Netherlands on 26 September 2013.


19 NPT/CONF.2015/PCI.II/CRP.2, par. 12.

20 UN Document A/AC.281/2, Report of the Open-ended Working Group to develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons.

21 For example: A/C.1/68/L.6/Rev.1, Follow-up to the 2013 high-level meeting of the General Assembly on nuclear disarmament; A/C.1/68/L.18, Towards a nuclear-weapon-free world: accelerating the implementation of nuclear disarmament commitments; A/C.1/68/L.26, Follow-up to the advisory opinion of the International Court of Justice on the legality of the threat or use of nuclear weapons; A/C.1/68/L.34, Taking forward multilateral nuclear disarmament negotiations; A/C.1/68/L.43, United action towards the total elimination of nuclear weapons.

22 NPT/CONF.2015/PCI.II/CRP.49, Chair’s factual summary.


24 Ibid.


26 Statement to the High-Level Meeting of the General Assembly on Nuclear disarmament, delivered by the UN Secretary General Ban Ki-Moon on 26 September 2013.


32 Documents suggest UK boycott of key nuclear weapons meeting was driven by P5 partners. Source: Article 36, 4 June 2013, http://www.article36.org/nuclear-weapons/documents-suggest-uk-boycott-of-key-nuclear-weapons-meeting-was-driven-by-p5-partners/ (retrieved 2014-02-21).


34 Statement to the UN General Assembly First Committee, delivered by Russian Federation on 8 October 2013.
Disarmament and arms reduction efforts

**Action 1:**
All States parties commit to pursue policies that are fully compatible with the Treaty and the objective of achieving a world without nuclear weapons.

**Action 3:**
Action 3: In implementing the unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenal, the nuclear-weapon States commit to undertake further efforts to reduce and ultimately eliminate all types of nuclear weapons, deployed and non-deployed, including through unilateral, bilateral, regional and multilateral measures.

**Action 4:**
The Russian Federation and the United States of America commit to seek the early entry into force and full implementation of the Treaty on Measures for the Further reduction and Limitation of Strategic Offensive Arms and are encouraged to continue discussions on follow-on measures in order to achieve deeper reductions in their nuclear arsenals.

**Action 5:**
The nuclear-weapon States commit to accelerate concrete progress on the steps leading to nuclear disarmament, contained in the Final Document of the 2000 Review Conference, in a way that promotes international stability, peace and undiminished and increased security. To that end, they are called upon to promptly engage with a view to, inter alia:
(a) Rapidly moving towards an overall reduction in the global stockpile of all types of nuclear weapons, as identified in action 3;
(b) Address the question of all nuclear weapons regardless of their type or their location as an integral part of the general nuclear disarmament process;
(c) To further diminish the role and significance of nuclear weapons in all military and security concepts, doctrines and policies;
(d) Discuss policies that could prevent the use of nuclear weapons and eventually lead to their elimination, lessen the danger of nuclear war and contribute to the non-proliferation and disarmament of nuclear weapons;
(e) Consider the legitimate interest of non-nuclear-weapon States in further reducing the operational status of nuclear weapons systems in ways that promote international stability and security;
(f) Reduce the risk of accidental use of nuclear weapons; and

**Action 6:**
All States agree that the Conference on Disarmament should immediately establish a subsidiary body to deal with nuclear disarmament, within the context of an agreed, comprehensive and balanced programme of work.
Status of world nuclear forces

The Federation of American Scientists (FAS) regularly publishes a global nuclear weapon inventory based on available information. According to these figures, the total numbers of nuclear weapons are decreasing due to Russian and US reductions of Cold War arsenals. However, all nuclear weapon states (NWS), as well as other non-NPT nuclear possessor states, continue to either produce new or modernize current nuclear weapon systems. In addition, all NWS insist that nuclear weapons are essential for their national security.

The numbers in this table also include intact warheads that are awaiting dismantlement. In November 2013, FAS estimated that warheads non-deployed were around 180 for China, 2,700 for Russia, 2,500 for the US, and 65 for the UK.

China

There are various estimates on the size of China’s nuclear arsenal. According to FAS, China has a total stockpile of around 250 nuclear warheads, most of them in storage. Under the guideline of China’s no first use doctrine and the principle of a “lean and effective” nuclear force, the main goal of China’s nuclear modernization, initiated in the 1980s, is reported to aim at securing a limited and reliable second-strike nuclear force to deter a nuclear attack. China’s current modernization efforts are aimed at qualitative improvement, rather than mere quantitative increase as has been the case during the past three decades. Specifically, China’s efforts are mainly aimed at increasing the survivability of its nuclear force by replacing older, liquid-fuelled missiles with solid-fuelled, mobile ballistic missiles, constructing underground tunnels that can act as missile bases and expanding its sea-based deterrent.

Quantitative
In April 2013, China published a new white paper that gives an overview of China’s military strategy and arms control policy. As in previous defence papers and other official documents the white paper does not reveal any basic information on the size of China’s current nuclear capability or nuclear arsenal. However it does mention that a strategic task of its modernisation efforts is to build a strong defence and powerful armed forces.

According to information provided by the British American Security Information Council (BASIC), in 2011 China was reported to be phasing out its older missiles, DF-3A and the DF-4, and replacing them with new DF-21 medium range missiles, approximately 55–60 of which are nuclear capable. In addition, China has deployed four other nuclear-capable ballistic missiles, the DF-5A, DF-31, DF-31A, and JL-2. These developments in missile capability will both increase the range and sophistication of land-based systems and nuclear-powered ballistic missile submarines. Estimates in November 2013, published in an article of the Bulletin of Atomic Scientists, indicate that China has about 148 land-based nuclear ballistic missiles that can carry one warhead each. China also has additional warheads for their submarine launched ballistic missiles (SLBMs) as well as bombs for air delivery. The warheads are thought to be stored in another location than the missiles and many of the strategic nuclear warheads are intended only for regional use.

Unlike the other nuclear weapon states, which are maintaining their current arsenal levels or are slowly decreasing, China is believed to be slowly increasing the size of its nuclear weapons arsenal. China has prioritized land-based ballistic and cruise missile programmes and according to the US Department of Defense (DoD) assessment, China has the leading programme in the world. The 2013 DoD report also states that China may be developing intercontinental ballistic missiles (ICBM) with multiple independently targetable re-entry vehicles (MIRV) capability, as well as other technologies to counter other countries’ ballistic missile defence systems, such as decoys, chaff, jamming, thermal shielding, and anti-satellite weapons.
China has also been reported to be replacing its first generation ballistic nuclear missile-carrying submarines. In March 2011 two SSBNs were seen at Xiaopingdao submarine base and satellite pictures taken by the Pentagon indicated that China has already launched three Jin-class SSBNs and have more under construction. In actual numbers the currently active three Jin-classed SSBNs could carry 36 missiles (12 each), which is an increase from the maximum of 12 SLBMs that the old Xia-class submarine could carry. However, according to FAS they do not yet carry missiles. Up to five of this kind may enter service before China will proceed to the next generation of submarines over the next decade.

**Qualitative:**
China’s white paper from April 2013 states, “Following the principle of building a lean and effective force, the PLASAF [People’s Liberation Army Second Artillery Force] is striving to push forward its informationization transform, relying on scientific and technological progress to boost independent innovations in weaponry and equipment, modernizing current equipment selectively by applying mature technology, enhancing the safety, reliability and effectiveness of its missiles, improving its force structure of having both nuclear and conventional missiles, strengthening its rapid reaction, effective penetration, precision strike, damage infliction, protection and survivability capabilities.”

Some analysts have argued that China is currently modernizing its sea-based strategic force in order to secure a second-strike force. The 2011 White Paper states that “the PLA Navy (PLAN) endeavours to accelerate the modernization of its integrated combat forces, enhances its capabilities in strategic deterrence and counterattack, and develops its capabilities in conducting operations in distant waters and in countering non-traditional security threats.” In the 2013 White Paper the focus of PLAN’s accelerated modernization efforts are the forces for comprehensive offshore operations, the development of advanced submarines, destroyers and frigates, and the improvement of integrated electronic and information systems. Furthermore, it repeats the endeavours stated in the 2011 White Paper.

**Security doctrines and policies**
China reaffirmed its no first use and negative security assurance policy in the 2011 white paper. However, in the 2013 white paper that was not the case. The paper does explain that should China come under nuclear threat, alert levels will be increased, and should it come under nuclear attack, a counterattack will be launched. As a result, shortly after the whitepaper was released a debate arose whether this meant China was turning away from its no first use policy, as it did not specifically rule out other uses. However, China reaffirmed its commitment to the policy of no first use in a statement delivered during the 2013 NPT PrepCom. Thus, China has not reduced the role of nuclear weapons nor can a change in China’s security doctrine be reported.
France

France has both a sea- and air-based nuclear capability and has announced a total nuclear stockpile of about 300 weapons. 240 of the 300 warheads are for deployment on the four French nuclear submarines. In its latest white paper of April 2013, the French government reaffirmed its position that “nuclear deterrence” is a means of protecting France’s vital interests. France is also in the process of modernizing its nuclear forces.

Quantitative:
In 2010 the Le Triomphant-class SSBNs submarines were completed. However, France is still in the process of modernising its four nuclear submarines. From the last estimates made on France’s nuclear capacity, 80% of France’s 300 nuclear warheads are for delivery on three ballistic missiles submarines and the remaining warheads are on cruise missiles for delivery by land- and sea-based strike aircraft. The French stockpile is expected to decrease to around 290 warheads within the next few years. France has stated that it has no additional nuclear reserves, although FAS estimates that it does have a small inventory of spare warheads.

Qualitative:
The new Le Triomphant submarines are a modernization of France’s sea-based nuclear deterrent and will ensure that it can maintain its capability until the 2030s. The new submarines are quieter and the M45 missiles are gradually being replaced with longer-range M-51 missiles. The M-51s will be modified, starting in 2015, to the Tête nucléaire océanique. In addition to modernizing its submarine-based nuclear forces, France is also introducing a new and more capable delivery platform to its nuclear air force that is both aircrafts and missiles. This modernization is expected to result in a quantitative reduction of nuclear-capable aircrafts. France is also introducing a new nuclear warhead to its air-based nuclear deterrent (Tête nucléaire aéroportée) as it is to its sea-launched ballistic missiles. Estimates on French nuclear spending vary from $4.6–6 billion per year. Deficit cuts announced by the French government would only limitedly affect the spending on nuclear weapons.

Security doctrines and policies
The French government says it relies on its nuclear capacity to protect the country’s “independence and strategic autonomy” as well as to defend its “vital interests,” which former French President Sarkozy described as “identity and our existence as a nation-state, as well as our capacity to freely exercise our sovereignty.” The French government argues that nuclear weapons protect its territory from a potential attack and deter aggressions against France by another state. France has not adopted a no first use policy and President Hollande said its nuclear force will protect France against all threats and allow it to “play a strong role on the world stage.”

In April 2013 France released a new white paper, which mainly confirmed the positions, outlined in the previous one from 2008. Deterrence is one of the three main priorities, along with protection and intervention, identified in the paper. Deterrence is also listed as part of a global approach consisting of five strategic functions (knowledge and anticipation, protection, prevention, deterrence, and intervention) to ensure national security in the coming years. Nuclear deterrence is defined as a strictly defensive protection from aggressions by another state against France’s vital interests and, thus, the “ultimate guarantee” for the country’s sovereignty. However, vital interests are not specifically defined in the white paper. This suggests that the use of nuclear weapons is necessarily not limited to the sole purpose of deterrence. Thus, France has not reduced the role of nuclear weapons in its security doctrine.

France

Size of nuclear arsenal: 300.
Arsenal reductions: None.
Role of nuclear weapons in security doctrines: Unchanged.
Alert status: no change, many weapons remain on high-alert.
Risk reduction: No information available on new risk reduction efforts.
Russia

Russia is estimated to have a total stockpile of 8,500 nuclear warheads, of which about 4,000 are awaiting dismantlement. 4 Russia is also engaging in an extensive modernization of its strategic forces, as part of a broader rearmament programme focusing on various military systems in 2011–2020. During that time about 10% of the total funds allocated for rearmament, around 1.9 trillion rubles, will be spent on the modernization of nuclear weapon systems. 45

Quantitative

Russia has been retiring some delivery systems, such as old ICBMs, even before the New Strategic Arms Reduction Treaty (START) entered into force. Most of the systems date back to the time of the Soviet Union, therefore the retirement is mainly due to the fact that their life expectancy has been reached. It has been retiring old missile systems—SS-25, SS-19, and SS-18—and replacing them with newer Topol-M and RS-24 Yars ICBMs, deployed in silo or in road-mobile launchers. Old missiles, however, still account for the majority of deployed ICBMs and ICBM warheads. In total Russia has about 300 deployed ICBMs with over 1,000 warheads. These include about 100 SS-25s, 40 SS-19s and around 50 SS-18 that together carry about 750 warheads. As for the newer ICBMs, as of January 2014 Russia is estimated to have 78 Topol-M and 33 RS-24 Yars missiles that could carry about 210 warheads. 46

Due to the retirement of older categories of ICBMs over the last few years, Russian numbers for these categories are already below the limits set by New START. Data exchange under New START indicates that Russia has, as of 1 September 2013, 1,400 warheads deployed on 473 strategic delivery vehicles (the total number of deployed and non-deployed launchers of ICBMs, SLBMs and heavy bombers was 900) 47. This means that since New START’s entry into force on 5 February 2011, Russia has decreased its nuclear deployed delivery vehicles by 48, and its deployed warheads by 137 warheads. 48 The total number of deployed and non-deployed launchers increased by 29 as a result of the development of a new strategic missile submarine. 49 Russia is currently under the allowed New START limits of 700 deployed missiles and bombers and 1,550 deployed strategic warheads. As Russia is modernizing its strategic forces, the number of deployed delivery vehicles and warheads will most likely grow, though it will stay within the treaty limits. 50

According to one estimate, Russia is dismantling about 200–300 warheads annually, with another 200 or so warheads being dismantled but then replaced with remanufactured warheads. 51 When US President Obama pledged during his State of the Union speech on 12 February 2013 to “engage Russia to seek further reductions in our nuclear arsenals,” 52 the Russian Foreign Ministry responded that it was ready to study such proposals carefully. 53 Similar calls made during President Obama’s speech in Berlin on 19 June 2013 were met with the same hesitation. 54 The Russian administration has raised concerns with the status of non-nuclear weapons, such as the NATO missile defence system and the US conventional arsenal, in that connection. Additionally, it suggested including other NWS in the process of arms reduction agreements. 55

Qualitative

President Putin announced in November 2013 that Russia should replace its Soviet-built arsenals with modern weapons to counter new evolving threats. 56 Under this process, Russia will allocate $772 billion to a broader military rearmament, which will include 400 new ICBMs and eight SSBNs. 57

Future modernization and upgrading of the ICBMs focuses on deployment of multiple-warhead RS-24 Yars missiles. These ICBMs will replace the currently deployed Topol (SS-25) and UR-100NUTTH (SS-19) missiles. Being a multiple-warhead missile, RS-24 allows Russia to keep the number of deployed warheads at a relatively high level without the need to produce a large number of missiles. 58 This process is expected to be completed in 2020. 59 Russia is also working on other ICBM projects. For example, in 2011, the government made a decision to begin development of a new multiple-warhead liquid-fuel ICBM. This new missile is supposed to be ready for

Russian Federation

Size of nuclear arsenal: 8,500.
Arsenal reductions: Reduction of around 5,000 warheads, mostly non-deployed.
Role of nuclear weapons in security doctrines: Unchanged.
Alert status: No change, many weapons remain on high-alert.
Risk reduction: No information available on new risk reduction efforts.
Russia has also been testing a new solid-propellant ICBM, known as Rubezh. Russia is also upgrading its SSBN fleet with a planned construction of eight new submarines of Project 955 Borey class, carrying 16 Bulava missiles. In September 2013 the first Borey submarine joined the Russian Navy. Two submarines are expected to begin service in 2014. Russia is working on an overhaul of its current strategic bomber fleet and is also reported to have started preliminary work on a new-generation strategic bomber.

Russia's modernization plans demonstrate that it is determined to maintain its strategic nuclear forces and to preserve parity with the United States in the number of warheads. Arms control and disarmament efforts could change these plans and result in a smaller force, but it is likely that most of the reductions would be done by reducing the number of deployed warheads rather than by eliminating strategic delivery vehicles.

Security doctrines and policies

Russia's position on nuclear weapons is directly linked to a number of security concerns, such as US ballistic “missile defence,” US advantage in terms of conventional weapon systems, NATO expansion, and, in the long run, China's position in the region. The last Russian military doctrine published was released in February 2010 and states, “The Russian Federation reserves the right to utilize nuclear weapons in response to the utilization of nuclear and other types of weapons of mass destruction against it and (or) its allies, and also in the event of aggression against the Russian Federation involving the use of conventional weapons when the very existence of the state is under threat.” At the same time as the 2010 military doctrine was released, the Russian president approved the “Principles of State Nuclear deterrence Policy to 2020,” but this document has not been released to the public. In February 2012 the Chief of the Russian General Staff, Nikolai Makarov, said that Russia would use nuclear weapons in response to any imminent threat to its national security. Furthermore, he indicated that Russia's nuclear “deterrent” is the cornerstone of “strategic stability” and Russia is in the course of modernizing the country's nuclear triad.
United Kingdom

The United Kingdom reportedly has a total nuclear weapons stockpile of about 225 warheads, of which not more than 160 are believed to be operational. In its 2010 Strategic Defence and Security Review, the United Kingdom declared that the UK "can meet the minimum requirement of an effective and credible level of deterrence with a smaller nuclear weapons capability." However the UK government also announced that it could not dismiss the possibility that a major direct nuclear threat to the UK might re-emerge. Its plan is to retain a “minimum requirement nuclear deterrent out until the 2060s.”

Quantitative:
In contrast to the other NWS, the United Kingdom only operates a single nuclear weapon delivery system: four Vanguard submarines armed with Trident missiles. Until 2010 each of the Vanguard class submarines carried between 12 and 14 operational Trident II D5 missiles and a maximum of 48 warheads. The UK Ministry of Defence is reducing these “over the next few years” to eight missiles and a maximum of 40 warheads per submarine. The decision to deploy 40 warheads on eight missiles will require an increase in warheads per missiles, from three to five.

Currently the UK maintains some operational warheads in reserve, in addition to those on submarines. In 2010 there were “fewer than 160” operationally available warheads, which is 16 more than the maximum number that could be carried on three armed submarines. Over the next few years the total number of operationally available warheads will be reduced to “no more than 120,” which is the same as the new maximum number for three armed submarines.

Qualitative
In May 2011, the UK government decided to move forward with the preparatory work for renewal of its Trident submarine fleet. The "Initial Gate Parliamentary Report" stated that the UK would move forward into the “Assessment Phase,” where the design will be finalized and preparation for the main build will take place. In 2016, the government will sign the main construction contracts and also decide whether "continuous at sea deterrence can be delivered by three or four boats.”

On 22 May 2012 the UK Ministry of Defence announced the award of a contract to BAE Systems, Babcock and Rolls Royce worth £350 million for the design of successor submarines. The key contract, worth £328 million, was awarded to BAE Systems. On 18 June 2012 the Secretary of State for Defence informed the House of Commons that his Ministry had signed a contract with Rolls-Royce Engineering over approximately £1.1 billion for an 11-year programme of work at its nuclear reactor core facility in Raynesway, Derby. The site regeneration will cost about £500 million, the remaining £600 million will sustain reactor core production at the facility until March 2023 including the production of reactor cores for the Astute class and the next generation nuclear deterrent successor SSBN submarines if approved.

If the Trident renewal programme is approved, the delivery of the first submarines will take place in 2028. The former British Secretary of State for Defence, Dr. Liam Fox, said that the new submarine “will incorporate the latest safety technologies and ensure our future nuclear-armed submarines have the performance required to deliver our minimum credible deterrent out until the 2060s.”

Because of financial constrains, the UK’s decision on Trident renewal has been put off until after the next election in 2015. Despite the fact that no formal decision has been made on the outcome of the project for new submarines, the Ministry of Defence is already spending £2 billion on new nuclear weapons plans. The plans include a £734 million facility for...
dismantling and assembling of warheads, a 634 million plant that will handle enriched uranium and a £231 million high explosive factory. Other similar facilities are being built as part of the Atomic Weapon Establishment development plan for 2005-2015 and the cost of two more are being kept secret for commercial reasons. The new spending has caused some debate in the UK on how crucial military spending decisions can be pushed through parliament without a proper parliamentary procedure.81

In December 2012 the UK Ministry of Defence published the first progress report on the successor nuclear submarine programme as a follow-up report on the “Initial Gate Parliamentary Report”. The report gives a superficial summary of the above-mentioned developments and does not include the £1 billion pounds per year expenditure on Aldermaston.82 The 2013 Update to Parliament of “The UK’s Future Nuclear Deterrent” in a similar fashion lays out the developments since the last report and lists additional financial commitments the UK government entered into, both for the submarine itself as well as for the warheads, missiles, and infrastructure.83

In July 2013 the Cabinet Office of the UK Government released a “Trident Alternatives Review,” which looked at “credible” alternatives to a submarine-based deterrent and the effect of any such alternatives on the credibility of the nuclear deterrent.84 However, it did not consider the option of not replacing its trident system.85

Security doctrines and policies

While stating in the 2010 Strategic Defence and Security Review that the UK should retain a “credible, continuous and effective minimum nuclear deterrent,”86 the government also restated that the UK makes it clear that it will only use their weapons in extreme circumstances of self-defence, including the defence of its NATO allies. The 2010 review also stated that the United Kingdom would retain and renew its independent nuclear deterrent—“the United Kingdom’s ultimate insurance policy in this age of uncertainty.”87

The “minimum nuclear deterrent” policy announced in 2010 was previously mentioned in the 1998 Defence Review and its 2003 update. The 1998 Review stated: “We will retain our nuclear deterrent with fewer warheads to meet our twin challenges of minimum credible deterrence backed by a firm commitment to arms control.”88 Furthermore the 1998 Review states that the UK will “not use nuclear weapons against a non-nuclear weapon state not in material breach of its nuclear non-proliferation obligations, unless it attacks us, our Allies or a state to which we have a security commitment, in association or alliance with a nuclear weapon state.”89 Although the concept of a “minimum nuclear deterrent” is not new for a UK security policy, the language in the 2010 Strategic Defence and Security Review is stronger in language than previous reviews.
United States

As of December 2013, the United States is reported to have a total nuclear weapons stockpile of 7,700 warheads, of which about 3,000 warheads are awaiting dismantlement. On 8 April 2010, President Obama and President Medvedev signed the New Strategic Arms Reduction Treaty (New START). Under this treaty the US has until February 2018 to reduce its nuclear capacity from 1,950 to 1,550 deployed nuclear warheads and limit its deployed missiles, strategic launchers and heavy bombers to 800.

Quantitative:

In accordance with the obligations under New START, in 2011 the US was reportedly planning to maintain up to 420 land-based ICBMs, each equipped with one warhead each, 240 SLBMs with multiple warheads each, deployed on a fleet of 12-14 SSBNs, and finally 60 heavy bombers, long-range B-2s and B-52s, with capability to deliver gravity bombs or cruise missiles. In accordance with the US' plans for its land-based ICBM force, this means that many of the warheads attached to the ICBMs today will be removed from the missiles. The removed warheads will not necessarily be destroyed, but kept in storage.

The Arms Control Association estimates that the current US nuclear delivery systems will remain operational for another 20–30 years. As of 1 September 2013, the United States deployed 1,688 warheads on 809 strategic delivery vehicles and 1,015 deployed and non-deployed launchers. This is a reduction of 112 warheads, 73 delivery vehicles, and 109 deployed and non-deployed launchers since 5 February 2011. By adding the numbers of warheads not covered by New START, the United States possesses around 7,700 warheads. The administration has been reported to be “making preparations for the next round of nuclear reductions.” On 19 June 2013 President Obama announced in Berlin that his administration would, together with its NATO allies, seek “bold reductions in US and Russian tactical nuclear weapons in Europe.” As during the State of the Union address on 12 February 2013, no numbers were mentioned in the Berlin speech, but White House officials at the time of the State of the Union were quoted to be considering cuts that would take the US arsenal to just above 1,000 deployed nuclear weapons. The Russian government is reportedly ready to study such proposals carefully, though continues to express, certain scepticism towards about further bilateral reductions prevails. This is mainly due to Russian concerns with US development and deployment of non-nuclear weapons and "missile defence" systems.

Qualitative:

While reductions under New START are taking place, in 2010 Secretary of Defense Robert Gates and Admiral Mike Mullen stated: “Over the next decade, the United States will invest well over $100 billion in nuclear delivery systems to sustain existing capabilities and modernize some strategic systems. US nuclear weapons will also undergo extensive life extension programmes in the coming years to ensure their safety, security, and effectiveness.”

The ratification of New START by the US Senate included a 10-year plan to maintain US nuclear warheads supporting infrastructure. The plan called for $80 billion over ten years to spend on activities for the National Nuclear Security Administration, and $100 billion in spending on maintaining and modernizing US nuclear delivery systems. According to a report by the Congressional Research Service, the US is currently modernising its Minuteman ICBMs (and is considering follow-on options), is developing new submarines and has begun a plan for the development of a new strategic bomber. In July 2012 increased costs for the B61 life extension project were announced, from $4 billion to $11 billion, with production delayed until at least 2020. The project consolidates the existing B61-3, B61-4, B61-7, and B61-10 to one upgraded model of the B61-4, the B61-12. FAS estimates that about 400 B61-12s are planned, resulting in $28 million per bomb including the cost of tail kit, one of the costliest elements of the modernisation of the B61 and intended to increase accuracy of the new B61. In January 2014, US Air Force Chief of Staff, General Norton Schwartz, confirmed that the modernized B61 will have improved military capabilities to attack targets with greater accuracy and less radioactive fallout. Since the 2010 NPR pledged that nuclear weapon life extension programmes “will not support new military missions or provide for new military capabilities,” this confirmation violates the NPR pledge and contradicts US and NATO goals of reducing the role of nuclear weapons.
Other US nuclear warheads are also undergoing modernisation and so-called life extension programmes. They are set to be replaced by new warheads and bombs as part of the so-called “3+2” stockpile plan. Estimates based on the latest Stockpile Stewardship and Management Plan of 2014 put the cost for this enterprise at $275 billion over the next 25 years.111

These financial commitments in light of budgetary difficulties face more and more doubts from all sides.112 The 3+2 plan is widely considered to be off the table. Modernization of some related facilities are facing budgetary challenges, while plans for others have been scrapped entirely.113 Over the past years, several reports and studies on the cost of the US nuclear programme and possible options for savings have been published.114 In December 2013 the Congressional Budget Office (CBO) published a report assessing the projected costs of the US nuclear forces for the 2014–2023 timeframe.115 According to CBO estimates the US will spend $152 billion on maintaining current generation of systems and $89 to modernise or replace those systems. However, as most modernisation efforts are still in the initial phase, annual costs are expected to increase over that time period.116

**Security doctrines and policies**

The US 2010 Nuclear Posture Review (NPR) states that the US will keep relying on its nuclear weapons as an important part of its national security and will also do this for the foreseeable future.117 In spite of this, the NPR states that “improvements” in US conventional weapon forces together with major improvements in “missile defence” has enabled the US to rely less on nuclear weapon without jeopardizing its “deterrence” capacity.118 The NPR also states that with the changing security climate the US will “better align” its nuclear polices, so it can better deal with other priorities such as preventing nuclear terrorism and nuclear proliferation. It acknowledges that nuclear weapons are not adequate to address today’s main security threats, such as terrorism and other countries seeking nuclear weapons.119 Furthermore the NPR specifically addresses the reduction of the role of nuclear weapons in the US national security strategy.120

The 2002 NPR was not publicly released due to classification considerations. The foreword submitted to Congress on 31 December 2001 states that the NPR “puts in motion a major change in our approach to the role of nuclear offensive forces in our deterrent strategy and presents the blueprint for transforming our strategic posture.”121 Since no other information is publicly available it is difficult to compare the two NPRs. However, the 2010 NPR does introduce some new elements, in particular by stating that the fundamental yet not sole purpose of nuclear forces is to deter a nuclear attack.

The same day of President Obama’s speech in Berlin, the US administration published a report on its employment strategy of nuclear weapons outlining President Obama’s new guidance on this issue.122 Among other things, the US reaffirmed that “as long as nuclear weapons exist,” it will maintain a “safe, secure and effective arsenal for its protection and that of its allies.” The new guidance also highlights that all plans must “be consistent with the fundamental principles of the Law of Armed Conflict,” including the principles of distinction and proportionality.123 Accordingly, the US will, for example, not intentionally target civilian populations or civilian objects. Additionally, the Department of Defense is directed to “strengthen non-nuclear capabilities and reduce the role of nuclear weapons in deterring non-nuclear attacks”124 as well as examining options for reducing the role of “Launch Under Attack” in US planning, “while retaining the ability to Launch Under Attack if directed.”125 In the same vein, the new guidance reiterates “the intention to work towards” making deterrence of nuclear attacks the sole purpose of US nuclear weapons over time.126

**De-alerting and risk reduction**

With regard to reductions of the operational status of nuclear weapons systems, not much progress has been recorded since May 2010. According to the latest estimates, the US and Russia have about 1800 strategic nuclear warheads on high alert on both land- and sea-based ballistic missiles.127 France and the UK keep 80 and 48 of their weapons on their missile submarines fully operational. These weapons are on a lower readiness level than the US and Russian weapons.128 China, as part of its no first use policy, does not have its nuclear weapons fully operational.

Reducing the alert level could be a way to significantly reduce the risk of an accidental use of nuclear weapons. In 2013, some reports about security and safety breaches within the US nuclear forces appeared, causing concern within the international community about the risk of accidents.129 Officials from both the US Navy and US Air Force have been released from duty; ICBM launch officers had violated security rules, and nuclear missile officers have allegedly cheated on test of their knowledge of the launch systems.130 As a response to these developments, US Defense Minister Chuck Hagel has ordered a review of US military’s nuclear weapons mission.131 In the UK, 44 officers of the Ministry of Defence Police working at the Atomic Weapons Establishment (AWE) in Burghfield are currently subject to a “police misconduct investigation.”132

**United States**

- **Size of nuclear arsenal:** 7,700.
- **Arsenal reductions:** Reduction of around 2,800 warheads, mostly non-deployed.
- **Role of nuclear weapons in security doctrines:** Unchanged.
- **Alert status:** no change, many weapons remain on high-alert.
- **Risk reduction:** Several reports about security and safety problems at nuclear missile bases. No information available on new risk reduction efforts.
The investigation involves allegations of officers failing to complete their duties correctly. For the other NWS of the NPT, no or very limited information is available on such security or safety breaches.

Non-nuclear weapon states have addressed the issue of risk reduction through not only during disarmament meetings at the United Nations, but also outside the established fora: during the second conference on the Humanitarian Impact of Nuclear Weapons, held 13–14 February 2014 in Nayarit, Mexico, one working session focused on “The risk of a nuclear blast and other effects of a nuclear weapon detonation.” The evidence presented in this segment demonstrated the mere existence of nuclear weapons generates great risk. Additionally, some presentations explored the many instances where an accidental nuclear detonation had only narrowly been averted.

New START


By 2 January 2014 the United States and the Russian Federation have conducted 5866 notifications under the Treaty since its entry into force in February 2011. The notifications track the movement and changes in the status of treaty-covered systems, for example if a heavy bomber were to be out of its home territory for more than 24 hours. This is the first time that the two countries have exchanged data on re-entry vehicle loadings. The two countries are also required to exchange a comprehensive database, every six months, of exactly where weapons systems are located if they are undergoing maintenance or have been retired.

Six sessions of the Bilateral Consultative Commission under New START took place in Geneva on 28 March–8 April 2011, 19 October–2 November 2011, 24 January–7 February 2012, 11–21 September 2012, 6–19 February 2013, and 11–21 November 2013. During these consultations, the United States and Russia discussed a number of practical issues related to the implementation of the Treaty. During the third session of consultations the United States and Russia agreed on the sharing of telemetric information and other issues relating to ICBMs and SLBMs. The number of launches of ICBMs and SLBMs was agreed upon during the fifth meeting in February 2013.

However, New START has some problematic aspects. Among other things the aggregate numbers do not cover thousands of additional warheads, such as non-deployed and non-strategic warheads. Furthermore dual-capable bombers are counted as both one delivery vehicle and one warhead. Each bomber is also counted as only carrying one warhead, which means that “[a] force of 60 bombers loaded at their maximum capacity of 1,136 bombs and cruise missiles would only count as 60 weapons.”

The New START verification regime is, in comparison to START I, less intrusive and burdensome. This is largely because the New START ceilings and limitations are relatively simple. Furthermore the Treaty does not include the Russian Federation’s estimated 2,000 and the United States’ 200 tactical nuclear weapons in Europe.

The issue of missile “defence” has further complicated discussions on follow-on measures in relation to New START. The 2010 NATO decision to push ahead with the alliance’s missile “defence” project has created tension between Russia and NATO-members. On 24 November 2011 Russia announced that it “reserves the right to discontinue further disarmament and arms control measures,” such as withdrawal from New START and deployment of new nuclear weapons if the US progresses with its anti-missile plans in Europe without Russian cooperation. In its latest Deterrence and Defence Posture Review from May 2012, NATO stated that its “missile defence is not oriented against Russia nor does it have the capability to undermine Russia’s strategic deterrent.” US Defense Secretary Chuck Hagel repeated this position in December 2013. That month Russia had deployed a missile system closer to Lithuania and Poland. The US is on schedule to deploy 24 interceptors and one radar station in Romania by 2015 as part of a “phased adaptive approach” for European missile defence.
Cooperation

France-UK

In November 2010, France and the United Kingdom joined in a collaboration of developing equipment and technologies for the next generation of nuclear submarines. The co-operation is aimed to “sustain their combined industrial base” and “generate savings.” The cooperation also includes a new warhead simulation facility that will open in 2015 and a joint Technology Development Centre in Britain to provide scientific and engineering expertise to support both countries stockpile. In 2013 Defence Minister Philip Dunne confirmed that £21 million have already been spent on a facility at the Atomic Weapons Establishment. The total cost for that specific project has been estimated at £48.7 million.

United Kingdom-United States

Since 1958 the United States and the United Kingdom have been collaborating on the basis of the US-UK Mutual Defence Agreement. The agreement was last renewed in 2004 and extends to 2014. The Agreement enables the US and the UK to exchange classified information with the objective of improving each party’s nuclear weapons design, development, and fabrication capability.

The nuclear warhead deployed on the UK submarines today is partly American made. The UK has also purchased the rights to 58 Tridents missiles out of the existing American pool of missiles.

In December 2006, after an exchange of letters between President Bush and Prime Minister Blair on the renewal/replacement of Trident, a new wave of enhanced collaborations with the US into how to refurbish or replace the UK Trident warhead began. The two countries are also working together to develop the new ballistic-missile submarines. If the renewal goes ahead as planned, the first British vessel is due to enter service in 2024 and the last could still be at sea in 2060. The first new US submarine is scheduled for 2027 and some of the vessels are due to remain in service until 2080.

Successful tests have been carried out in the US on a new warhead firing system to arm Britain’s nuclear missiles, making them more accurate and more capable. Because of the very close collaboration and dependence on US technology for components the UK’s Trident system is very dependent on the US, which could complicate further reductions. In March 2013 Chiefs of Staff of both the UK and US met to discuss the strategic future of the military alliance. What was discussed during that meeting was not revealed to the public; however, the US is reportedly concerned about the UK remaining an able military partner in non-nuclear missions.

“P5 initiatives”

On 30 June–1 July 2011, the five NWS met in Paris for a meeting to discuss nuclear non-proliferation and disarmament for the first time since the adoption of the 2010 NPT Action Plan. The meeting focused on transparency, nuclear doctrines, and verification. Furthermore the NWS approved the establishment of a working group that will pursue work on definitions for key nuclear terms, in order to facilitate future consultations and discussions. They met again in June 2012 in Washington to further discuss above-mentioned issues. In their joint statement after their fourth meeting hosted by Russia in Geneva, Switzerland in the context of the 2013 NPT PrepCom, they announced that further discussions on various topics have been held and that their relevant activities across all three pillars had “advanced.” The NWS plans to continue these discussions “in multiple ways […] with a view to reporting to the 2014 PrepCom” and to hold a fifth meeting in 2014. The Royal United Service Institute has published a report on this so-called process, for which it conducted interviews with officials and experts of NWS and non-nuclear weapons states. The report concludes, among other things, that progress has been too slow to demonstrate many concrete outputs and that the greatest risk of the process was “insufficient ambition to overcome inevitably difficult steps” as well as poor communication that was kept to an unnecessary minimum.

None of these NWS meetings seemed to include any specific proposals or discussions on nuclear doctrines or other issues they are mandated to discuss under action 5 of the 2010 Action Plan. Thus, during the 2011, 2012, and 2013 United Nations General Assembly’s (UNGA) First Committee as well as NPT PrepComs, several delegations voiced concerns over the lack of progress in these meetings.
North Atlantic Treaty Organization (NATO)

The alliance retains around 200 US B61 nuclear weapons on American bases in five NNWS of the NPT. These arrangements have been criticized repeatedly as being not in compliance with the NPT’s non-proliferation obligations.

At NATO’s Lisbon Summit in November 2010, NATO adopted a new Strategic Concept and a Summit Declaration that outline the alliance’s future nuclear policy. In the new concept, titled “Active Engagement, Modern Defence,” NATO for the first time committed itself to “create the conditions for a world without nuclear weapons.” The concept explains that this goal must be pursued “in accordance with the goals of the Nuclear Non-Proliferation Treaty, in a way that promotes international stability, and is based on the principle of undiminished security for all.” At the same time, the Strategic Concept states, “as long as nuclear weapons exist, NATO will remain a nuclear alliance.”

As for a nuclear weapon state in NATO, France has been reluctant to include any forward-looking language on nuclear disarmament in the NATO Strategic Concept. According to the French government, many NATO countries are too focused on disarmament and are losing sight of the “security” angle. France has also been the biggest opponent to the German-led demand for a greater nuclear disarmament effort from NATO.

NATO members conducted a Defence and Deterrence Posture Review (DDPR) in order to define an “appropriate mix” between nuclear and conventional weapons and missile defence needed to uphold Alliance commitments to collective self-defence. The DDPR process was initiated by the 2010 NATO Strategic Review. During the first phase of the DDPR process, ten member states offered suggestions on how to collaborate with Russia on the issue of tactical nuclear weapons (TNW). There are increasing signs from numerous NATO member states that there is greater scepticism towards NATO’s relationship to nuclear weapons, in particular to the current deployed TNW on US NATO bases in Europe. According to IKV Pax Christi’s report on views on TNW by NATO members, 24 of the 28 member states said they would not oppose the removal of the TNW in Europe. Only France, Hungary, and Lithuania are supporting the status quo and Albania expressed no opinion in this matter. France is also the only NATO member that is more pessimistic regarding the pursuit of nuclear disarmament and will therefore only agree to create the “conditions” for this goal.

The terms of reference for the DDPR process were agreed in 2011 and the process was meant to be concluded by the time of the NATO summit in Chicago from 20 to 21 May 2012. However, the meeting with Russia is currently on hold because of the conflict regarding the issue of missile “defence.” The 2012 DDPR concluded that NATO’s nuclear force posture met “the criteria for an effective deterrence and defence posture” and nuclear weapons are declared a “core component” of its overall capabilities. However, it also stated “circumstances in which any use of nuclear weapons might have to be contemplated are extremely remote.”

Regarding negative security assurances the 2012 DDPR acknowledges the unilateral commitments made by the three NWS members to NATO and recognised the conditions each state attached to them, such as the right to self-defence.

Non-strategic nuclear weapons

United States and NATO

In preparation for the NATO summit in 2010, the United States announced that its “non-strategic” or “tactical” nuclear weapons deployed in Europe would not be unilaterally withdrawn. These weapons are as of yet under no international arms control regime. US President Obama stated at the signing ceremony of New START that his administration is interested in further discussions with Russia on reducing both strategic and tactical weapons. He again voiced similar intentions in his speech in Berlin, however, no such discussions have yet taken place.

Furthermore, the US-NATO nuclear capacity is undergoing modernization. The 2010 Nuclear Posture Review announced that the United States would be retiring all nuclear Tomahawk land attack sea-launched cruise missiles, half of which were earmarked for NATO support. However, the NPR also announced plans on making the F-35 Joint Strike Fighter (JSF) aircraft nuclear-capable so that the US can replace the F-15E and F-16. Two states with NATO nuclear strike missions, Italy and the Netherlands, are planning on acquiring JSF aircraft over the next 15 years. Costs for developing the JSF have spiraled out of control. With estimated total present and future programme costs approaching $400 billion, the F-35 is the costliest weapons system ever.

Costs of the B61 modernization programme have also grown far beyond original estimates, from $4 billion to $11 billion, with production delayed until at least 2020. In its 2012 Deterrent and Defense Posture Review (DDPR) NATO declared that “Allies concerned will ensure that all components of NATO’s nuclear deterrent remain safe, secure and effective,” which in this context is seen as a “green light” for the modernisation of the B61s currently also deployed in Europe.

In comparison with the 1999 NATO Strategic Concept document, the 2010 version places less importance on US TNW as an essential military and political link between Europe and North America. However, the new NATO concept makes further reductions in US nuclear weapons...
in Europe conditional on reciprocal actions by Russia. This was not the language used in the 1999 NATO Strategic Concept, in which the US discussed removal without mentioning Russia. 191 Previously, Russia has stated that the US would have to remove all of its TNW from Europe before it would even consider discussions on its own TNW. The argument for this has been that since the breakup of the Soviet Union, Russia took sole responsibility for collecting all USSR nuclear weapons spread out in the former Soviet Union states and Russia has been waiting for the US to do the same with its European TNW. 192 The new 2012 DDPR could not agree on the removal of the non-strategic weapons from Europe and as before tied any further "significant reductions" 193 to reciprocal actions by Russia. 194

In addition to the 200 tactical nuclear weapons in Europe, the United States has also around 560 tactical nuclear weapons in storage on American soil. 195

**Russia**

Official information on the Russian non-strategic nuclear weapons or TNW is rare and to a great deal based on estimations by experts. Russia declared that all operational non-strategic weapons are in central storage. 196

In an article in the Bulletin of the Atomic Scientists more detailed estimations are made. 197 According to these estimates, Russia possesses around 2,000 non-strategic nuclear warheads. Of these, 730 are assigned to non-strategic aircrafts, 700 to naval forces and 100–200 remain for short-range ballistic missiles and 300–400 are assigned to air-defence forces. Additionally, a small force of nuclear-capable ground-launched cruise missiles is retained by Russia for coastal defence. 198

These non-strategic nuclear weapons are believed to be stored in about a dozen different storage facilities. They are located in central and western Russia as well as on the Kola Peninsula relatively close to bases with delivery systems. 199
The UNGA First Committee annually discusses and adopts resolutions on nuclear disarmament issues. The table below shows the changes in support for the most important resolutions since the adoption of the NPT Action Plan in 2010.

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No significant trend away from the usual voting pattern before the adoption of the 2010 NPT Action Plan can be discovered here. The nuclear weapon possessing states continue to vote in a similar way and provide similar explanations of votes as before the adoption of the 2010 NPT Action Plan. Some resolutions have seen a slightly decreased number of no votes, mostly from non-nuclear weapon states. However there is a clear pattern of solidarity to vote in the same way as nuclear weapon possessing states, to the extent possible. In cases where the latter are voting no, a significant number of non-nuclear weapon states is abstaining.

Nuclear disarmament discussions in the Conference on Disarmament (CD)

Since the adoption of the 2010 NPT Action Plan, the CD has not been able to adopt a programme of work. However, there have been some attempts by states to move the issue forward and start negotiations on the substantive issues on the CD’s agenda.

Revitalizing the work of the CD

In 2011 a new resolution, “Revitalizing the work of the Conference on Disarmament and taking forward multilateral disarmament negotiations,” put forward by the Netherlands, South Africa, and Switzerland, was adopted by consensus in 2011. This resolution offers space for continuing the dialogue on breaking the impasse at the CD, though it unfortunately does not contain any mechanisms itself for breaking that impasse.

In addition, in July 2011 at the UNGA plenary meeting on revitalizing multilateral disarmament negotiations, the Secretary-General’s Advisory Board on Disarmament Matters released a report, which contained three recommendations: that the United Nations Secretary-General (UNSG) continue to encourage the CD to achieve a breakthrough; that if a panel of eminent persons be established to consider the stalemate at the CD, the UNSG should ask the panel to make recommendations on ways to revitalize the United Nations disarmament machinery as a whole; and that the UNSG should continue to raise public awareness and encourage civil society and NGOs to offer input on ways to overcome the stalemate at the CD. No such panel of eminent persons has been established yet.

Taking forward multilateral disarmament negotiations

A draft resolution “Taking forward multilateral disarmament negotiations” was put forward during the 2011 session of the UNGA’s First Committee by Austria, Mexico, and Norway but was not submitted to a vote once it became clear that it would not gain enough support from key states. It received criticism from the nuclear weapon possessors and some key NNWS, which argued that it would undermine the CD.

While this was apparently a bridge too far for many states in 2011, “Taking forward multilateral disarmament negotiations”, A/C.1/67/L.46, was tabled by Austria, Mexico, and Norway in 2012 and adopted with a vote of 134–4–34. All NWS voted against the resolution except China, which abstained. The resolution established an open-ended working group (OEWG) to “develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons.” The opposing NWS expressed concern that such new processes as the OEWG might jeopardize the 2010 consensus on the NPT Action Plan.

The OEWG convened in Geneva on 14–24 May, 27 June, and 19–30 August 2013. During the meetings, participants exchanged views on the current situation of nuclear weapons and the role they have in today’s international security. Member states and civil society developed proposals about how these traditional views could be challenged in order to lead to the elimination of nuclear weapons. While the discussed issues and proposed solutions were mostly familiar concepts, the new format integrating civil society and empowering non-nuclear weapon states allowed participants to focus on concrete ways forward. The NWS did not participate in the meetings. On 30 August 2013 the OEWG adopted a report to the UNGA reflecting the discussions held and proposals put forward.

The report summarizes the proposals into six main sections focusing on taking forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons, including approaches; elements; reviewing the role of nuclear weapons in the security context of the twenty-first century; the role of international law; the role of states and other actors; and other practical actions. While the different sections contain quite a bit of overlap and includes many items already agreed upon in the NPT context, it also acknowledges new proposals, such as a prohibition of the possession, stockpiling, development, or transfer of nuclear weapons; the idea of undertaking a study of the evolution of international law relevant to nuclear weapons, including international humanitarian law, human rights law, environmental law, and in the legal realm of the International
Criminal Court; the need to challenge the status and perceived value attached to nuclear weapons; and focusing on the humanitarian impact of nuclear weapons. Furthermore, the report notes that all states have a responsibility to act “in the light of the catastrophic humanitarian consequences of nuclear weapons.” These paragraphs also mention in particular that non-nuclear-weapon states have a role in promoting global nuclear disarmament.

During the 2013 First Committee “Taking forward multilateral disarmament negotiations”, A/C.1/68/L.34, was tabled again and adopted by a vote of 151-4-21 with France, Russia, UK, and US voting no. The resolution had been updated to include the work of the OEWG and a request to the UNSG to seek the views of member states on how to take forward multilateral disarmament negotiations and to submit it to the 69th session of the UNGA. It also called on the UNSG to submit the OEWG report to the CD and Disarmament Commission. However, it did not schedule another meeting for the working group in 2014.

High-level meeting on nuclear disarmament

The resolution “High-level meeting of the General Assembly on nuclear disarmament”, A/C.1/67/L.19, adopted 165-0-5, was submitted by the Non-Aligned Movement. France, Israel, the UK, the US, and Ukraine abstained. The resolution convened a one-day high-level meeting on nuclear disarmament on 26 September 2013. The abstaining NWS questioned the value of holding such a high-level meeting (HLM) and wondered how it would further the goals of implementing the here discussed 2010 NPT Action Plan.

The HLM on nuclear disarmament was held on 26 September 2013. 74 heads of state and government, ministers, and representatives spoke during the meeting and great number of states decided to use this opportunity to condemn the continued existence of nuclear weapons and demand immediate action to ban and eliminate these weapons. All NWS of the NPT participated in the meeting and criticised recent efforts such as the HLM as a distraction from existing processes. In a defensively worded joint statement by France, the United Kingdom, and United States, the three NWS expressed “regret” that some states and civil society have decided to highlight the humanitarian consequences of nuclear weapons: “While we are encouraged by the increased energy and enthusiasm around the nuclear disarmament debate, we regret that this energy is being directed toward initiative such as this High-Level Meeting, the humanitarian consequences campaign, the Open-Ended Working Group, and the push for a Nuclear Weapons Convention.” They argued that energy should instead be directed to existing processes and making progress on the step-by-step agenda. On the other hand, the majority of participating states clearly voiced their frustration with the perpetual lack of progress on nuclear disarmament and expressed their sense of urgency at achieving concrete goals. Several called for a treaty to prohibit nuclear weapons and most countries focused their statements on the humanitarian impact of nuclear weapons and new initiatives to eliminate nuclear weapons such as the OEWG.

During the 2013 UN First Committee the Non-Aligned Movement introduced resolution A/C.1/68/L.6/Rev.1 entitled “Follow-up to the 2013 high-level meeting of the General Assembly on nuclear disarmament,” which was adopted by a vote of 129-28-19. This resolution established 26 September as the “International Day for the Total Elimination of Nuclear Weapons” and scheduled a follow-up meeting no later than 2018 to assess progress made on nuclear disarmament. With regard to the work of the CD, the resolution called for the commencement of negotiations in the CD on a nuclear weapons convention (NWC). Additionally, it requested the UN Secretary-General to seek the views of member states on way to achieve the objective of the total elimination of nuclear weapons, particularly elements of a NWC, and present a report during the sixty-ninth session. The resolution also included a reference to article VI of the NPT in preambular paragraph eleven.

In their explanation of votes, France, UK and US argued that another conference in 2018 “risks weakening commitment among states to securing a successful outcome” of the 2015 review conference. In their view, the resolution’s reference to the NPT was “insufficient, incidental and unbalanced.” They, together with the delegations of the Netherlands and Spain speaking on behalf of 21 and eight states respectively, argued that nuclear disarmament was only one among four issues on the agenda of the CD.

However, Ireland, speaking on behalf of six states that had voted in favour of the resolution, saw the resolution as consistent with the NPT as the only multilateral treaty-based commitment to disarm. The six states remained favourably disposed towards “any set of effective measures to achieve the objective of complete nuclear disarmament and the maintenance of a world without nuclear weapons, regardless of how such measures might be elaborated.” In the same vein, Switzerland pointed out the possible necessity for “building blocks” before a NWC could become reality. Both statements welcomed the opportunity to take stock of developments in 2018.

Informal Working Group of the CD

On 16 August 2013 the CD established an Informal Working Group (IWG) to “to produce a programme of work robust in substance and progressive over time in implementation.” During the 2013 session the IWG met three times to discuss possible elements of a programme of work for the CD based on a ‘Food for thought’ paper that was circulated before the second meeting. The work of the
IWG did not result in a programme of work for 2013. In February 2014, CD member states discussed to re-establish the IWG for the 2014 session. However, the agreement has not been officially adopted by the time this report was finalised.
Transparency, irreversibility and verification

**Action 2:**
All States parties commit to apply the principles of irreversibility, verifiability and transparency in relation to the implementation of their treaty obligations.

**Action 5:**
The nuclear-weapon States commit to accelerate concrete progress on the steps leading to nuclear disarmament, contained in the Final Document of the 2000 Review Conference, in a way that promotes international stability, peace and undiminished and increased security. To that end, they are called upon to promptly engage with a view to, inter alia:
(g) Further enhance transparency and increase mutual confidence.

**Action 19:**
All States agree on the importance of supporting cooperation among Governments, the United Nations, other international and regional organizations and civil society aimed at increasing confidence, improving transparency and developing efficient verification capabilities related to nuclear disarmament.

**Action 20:**
States parties should submit regular reports, within the framework of the strengthened review process for the Treaty, on the implementation of the present action plan, as well as of article VI, paragraph 4 (c), of the 1995 decision entitled “Principles and objectives for nuclear non-proliferation and disarmament”, and the practical steps agreed to in the Final Document of the 2000 Review Conference, and recalling the advisory opinion of the International Court of Justice of 8 July 1996.

**Action 21:**
As a confidence-building measure, all the nuclear-weapon States are encouraged to agree as soon as possible on a standard reporting form and to determine appropriate reporting intervals for the purpose of voluntarily providing standard information without prejudice to national security. The Secretary-General of the United Nations is invited to establish a publicly accessible repository, which shall include the information provided by the nuclear weapon States.

**Irreversibility, verifiability, and transparency of recent reductions**

Treaty obligations for non-proliferation are monitored under the International Atomic Energy Agency (IAEA) safeguards system, but no such international body exists to monitor disarmament efforts under the NPT. Since the adoption of the NPT Action Plan, only three of the five NWS have announced reductions of nuclear arsenals.

Information available on nuclear weapons differs greatly between NWS. A special concern regarding lack of transparency involves warheads that are not covered by any control regime. For example, information on the stockpile of TNW for Russia and United States is not or limitedly available. Further transparency and confidence-building measures from all NWS are limited.
China

China has not reported any reductions since the 2010 NPT Action Plan was adopted. According to a recent article in the Bulletin of the Atomic Scientists, China even is slowly increasing the size of its nuclear weapons arsenal. 247

Further measures

China’s 2013 white paper does not give any official data on China’s nuclear stockpile. China has never released any official data on its nuclear arsenal248 and any discussion of the Chinese inventory is based on estimates made by Western governments and non-governmental organizations.

France

France has not carried out any reductions of nuclear warheads since the adoption of the 2010 NPT Action Plan. But it has been reported that the French stockpile is expected to decrease to around 290 warheads within the next few years.249 No plan for verification of the irreversibility of this reduction has been reported.

Further measures

France has released the total numbers of all their weapons, not just deployed ones, through public speeches and legal documents attached to procurement laws and defence budgets.250 It has also dismantled the fissile material production facilities in Marcoule and Pierrelatte as well as former nuclear testing facilities in a reportedly transparent manner.251

Russian Federation and the United States

The New Strategic Arms Reduction Treaty (START) data exchange, which, under the terms of the Treaty, had to take place within 45 days of its entry into force, indicates that Russia had 1,537 deployed strategic warheads, 521 deployed strategic delivery vehicles, and 865 launchers. The United States had 1,800 deployed strategic warheads, 882 deployed strategic delivery vehicles, and 1,124 launchers. Both countries have seven years to meet the Treaty’s targets. The data are to be updated every six months.252 On-site inspections offer access to additional data on missiles and bombers. When an intercontinental ballistic missile, submarine-launched ballistic missile, or air base is inspected (which may take place up to ten times each year, as noted above), in what the Treaty labels “Type One” inspections, the inspectors will be told and shown where each missile is and told how many warheads are deployed on it.

The verification system for New START has been called “the most intrusive verification system ever implemented for counting nuclear warheads”253 and for the first time includes verification of actual deployed warhead numbers, rather than counting delivery vehicles as carrying a pre-determined number of warheads based on maximum loading.

But, it has also been noted that while the Treaty reduces the legal limit for deployed warheads, it does not impose a reduction in the number of warheads as no limits are set for non-deployed warheads (the Treaty does not require the destruction of non-deployed warheads). Additionally a new counting regulation attributes one weapon to each bomber, rather than the actual number of weapons assigned to them. It has been argued by nuclear experts that such “fake counting rules free up a large pool of warhead spaces under the treaty limit that enable each country to deploy many more warheads than would otherwise be the case.”254

New START lacks any requirements for warheads to actually be dismantled or destroyed. While it does mark a significant departure from the system of counting “attributed” warheads, it is only through the actual dismantlement of warheads and destruction of their fissile material components and delivery vehicles that disarmament can realistically be irreversible.255

Further measures

Public information on Russia’s nuclear weapons is limited. Russia’s strategic nuclear weapons are thought to be on Russian soil, but there is no available information on the numbers or location.256 Also, the availability of information on non-strategic nuclear weapons is limited. However, the US and Russia have, through the entry into force of New START, exchanged information on strategic nuclear weapon delivery systems.257

The United States has released the most detailed information on its nuclear weapons, although it does not reveal deployment locations or exact numbers of total inventory of warheads.258 In May 2010, the United States revealed the total size of its operational nuclear stockpile. In January 2014, the United States released the full aggregate numbers of strategic offensive arms under New START. The data comes from the biannual exchange of data required under New START.259
United Kingdom

The UK government reported in October 2010 that the number of warheads on-board each nuclear submarine will be reduced from 48 to 40, which will reduce the number of operational and available warheads to “no more than 120”. On 9 June 2010 the Foreign Office Minister Alister Burt stated, “We have no plans to establish procedures to allow the international community to verify the UK’s nuclear warhead stockpile.” Furthermore, the UK is currently contemplating modernization of its nuclear weapon system and has already invested significant resources in such programmes.

The United Kingdom together with Norway has conducted research on the verification of warhead dismantlement. This UK-Norway initiative started in 2007 and is monitored by the Verification, Research, Training and Information Centre (VERTIC). The project’s main goal is to investigate the verified dismantlement of nuclear warheads and to formulate recommendations for future work. The UK-Norway process has also inspired new projects currently in development by several countries. In December 2010, the United Kingdom hosted a workshop in London to share experiences with non-nuclear weapons states and in April 2012 the UK hosted a similar meeting to share the outcomes of the research project with the other P5 nuclear weapon states. During 2013, VERTIC published a briefing paper on “Nuclear disarmament verification: the case for multilateralism” and a representative participated in a panel to the OEWG in May.

Further efforts

In May 2010, the United Kingdom announced for the first time the size of its nuclear stockpile, and provided some information of the operational status of warheads. Describing what he called a “more open” policy, Foreign Secretary of State, William Hague said Britain’s total number of nuclear warheads would not exceed 225, including the maximum 160 already declared as “operationally available.”

“P5 confidence-building efforts”

None of the five NWS have published a full account of specific nuclear weapons modernization programmes and their costs. The official statement from the P5 NWS Paris meeting in 2011 indicated that the NWS “continued their previous discussions on the issues of transparency and mutual confidence, including nuclear doctrine and capabilities, and of verification, recognizing such measures are important for establishing a firm foundation for further disarmament efforts.” In their joint statement from June 2012, they informed about their continued discussion on above mentioned topics and added they “will continue their discussions in multiple ways within the P5, with a view to reporting to the 2014 PrepCom, consistent with their commitments under Actions 5, 20, and 21 of the 2010 RevCon final document.” After their meeting in April 2013, they again confirmed this commitment and stressed “the importance of this work, which will increase P5 mutual understanding and facilitate further P5 discussions on nuclear matters.” During the meeting they shared information on their respective experiences in verification and decided to continue such exchanges.

Regular reports under the NPT

Step 12 of the 13 Practical Steps for the implementation of Article VI adopted by the 2000 NPT Review Conference calls for regular reports by all states parties on the implementation of Article VI and paragraph 4 (c) of the 1995 Decision.

In the lead up to the 2010 NPT Review Conference, only 23 out of 189 states parties submitted such national reports. China and Russia were the only two NWS to do so. So far only seven countries have submitted reports to the current review cycle. The reports focus on the implementation of the 2010 outcome document and those of previous Review Conferences, the implementation of article VI of the treaty and the establishment of the zone free of nuclear weapons and other weapons of mass destruction in the Middle East.

Reporting by the nuclear weapons states

While several of the NWS disclose information about their nuclear weapons reductions, each of them has different counting rules on their arsenals, which complicates comparisons.
The issue of reporting was mentioned in the joint NWS statement from their Paris meeting in June 2011. The statement said that the NWS “met with the determination to work together in pursuit of their shared goal of nuclear disarmament under article VI of the NPT, including engagement on the steps outlined in action 5, as well as reporting and other efforts called for in the 2010 Review Conference Action Plan.”277 During their Washington meeting in June 2012, they “continued their previous discussions on the issues of transparency, mutual confidence, and verification, and considered proposals for a standard reporting form.”278 In the joint statement after their fourth meeting in Geneva in April 2013, the NWS reaffirmed their advancement on “discussions of an approach to reporting on their relevant activities” as well as their objective to submit a “glossary of key nuclear terms” to the 2015 NPT RevCon. However, no concrete results can be reported.279 It is unlikely that the group will produce any concrete outcomes before the 2014 reporting deadline set by the Action Plan. A report by the Royal United Services Institute for Defence and Security Studies argues that the lack of progress in the NWS process is due largely to the complex relationships among the NWS, which make some reticent to alter their current policies. Domestic constraints continue to limit what the NWS are willing to do in the course of these discussions, which has “led the group to begin work in those areas considered relatively easy,” note the report authors. They point out that transparency among the NWS remains elusive and that the lack of outcomes and progress has led to skepticism about the utility of the NWS “process.”280

On 22 September 2010, 281 the Non-Proliferation and Disarmament Initiative (NPDI) was formed. 282 In 2011, NPDI developed a draft standard nuclear disarmament reporting form, as promoted by action 21 in the Action Plan. The reporting form has been shared with the five NPT NWS during the P5 meeting in 2011 in Paris but has not received any official response from the five NWS. It was submitted as a working paper to the 2012 NPT PrepCom.283

The United Nations Office for Disarmament Affairs has set up a website to function as a repository of information provided by NWS in accordance with the 2010 NPT Action Plan. Once action is taken by the NWS, the information will be available there.284

The International Panel on Fissile Material (IPFM) has focused on measures to increase transparency of nuclear warhead and fissile material stocks in its latest Global Fissile Material Report from October 2013.285 Among other things, IPFM proposes that NWS could make baseline declarations of the total numbers of nuclear warheads in their possession as of a specific date and commit to subsequent annual updates; they could agree on a shared terminology with regard to nuclear warheads and all related aspects; all non-military fissile material could be placed under IAEA safeguards; and approaches for verifying warhead dismantlement could be developed.286
Nuclear weapon free zones and negative security assurances

**Action 7:**

All States agree that the Conference on Disarmament should, within the context of an agreed, comprehensive and balanced programme of work, immediately begin discussion of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons, to discuss substantively, without limitation, with a view to elaborating recommendations dealing with all aspects of this issue, not excluding an internationally legally binding instrument. The Review Conference invites the Secretary-General of the United Nations to convene a high-level meeting in September 2010 in support of the work of the Conference on Disarmament.

**Action 8:**

All nuclear weapon States commit to fully respect their existing commitment with regard to security assurances. Those nuclear weapon States that have not yet done so are encouraged to extend security assurances to non-nuclear-weapons States parties to the Treaty.

**Action 9:**

The establishment of further nuclear-weapon-free-zones, where appropriate, on the basis of arrangements freely arrived at among States of the region concerned, and in accordance with the 1999 Guidelines of the United Nations Disarmament Commission, is encouraged. All concerned States are encouraged to ratify the nuclear-weapon-free zone treaties and their relevant protocols, and to constructively consult and cooperate to bring about the entry into force of the relevant legally binding protocols of all such nuclear-weapon-free zones treaties, which include negative security assurances. The concerned States are encouraged to review any related reservation.
General negative security assurances

Since May 2010, a number of efforts have been made by some of the NWS on the topic of NSAs. Although the international community is no closer to a legally-binding agreement than before the NPT Review Conference, some NWS have modified their previous assurances.

China

China is the only NWS that has a no first use policy. This policy has two parts. Firstly, it means China has declared that it will not use nuclear weapons against any NWS in a first strike and secondly, that it will never use or threaten to use nuclear weapons against any NWS or members of a NWFZ. China holds that while moving towards the complete prohibition of nuclear weapons, all NWS should abandon any nuclear “deterrence” policy based on first use of nuclear weapons as well as make an unequivocal commitment that under no circumstances will they use or threaten to use nuclear weapons against NNWS or NWFZs and negotiate an international legal instrument in this regard. In the meantime, China maintains, NWS should negotiate and conclude a treaty on no first use of nuclear weapons against each other.287

France

France reiterated its NSA policy in line with UN Security Council Resolution 984 in a statement delivered during the 2010 NPT Review Conference, emphasizing “France granted positive and negative security assurances to all NNWS Parties to the NPT, in compliance with their non-proliferation obligations.”288

France has consistently opposed the idea of a no first use pledge and attaches less weight to NSAs than other NWS. It conditions the NSAs it has previously given to NNWS that are party to the NPT by arguing that nuclear retaliation is consistent with the legal right to self-defence as recognised in article 51 of the UN Charter and that the right to self-defence would, in the face of aggression by others, take precedence over any no first use commitments given in peacetime. France also argues that any state not meeting its own non-proliferation commitments, including in relation to chemical and biological weapons, could not expect any NSA to apply to them.289 In its 2013 white paper it confirmed this position and explained that its nuclear force was for strictly protection in defence from aggressions by another state against France's vital interests “wherever it may come from and whatever form it may take.”290

Russia

UNSC resolution 984 remains the basis of Russia's NSAs to NNWS. However, Russia has expressed readiness to move towards the elaboration of global NSAs, provided that they will take into consideration Russian military doctrine and its national security concepts.291

United Kingdom

In October 2010, the UK government released its Strategic Defence and Security Review and stated that it is “now able to give an assurance that the UK will not use or threaten to use nuclear weapons against NNWS parties to the NPT.” It explained, “In giving this assurance, we emphasise the need for universal adherence to and compliance with the NPT, and note that this assurance would not apply to any state in material breach of those non-proliferation obligations. We also note that while there is currently no direct threat to the UK or its vital interests from states developing capabilities in other weapons of mass destruction, for example chemical and biological, we reserve the right to review this assurance if the future threat, development and proliferation of these weapons make it necessary.”292 Previous language in the 1998 Strategic Defence Review stated that the UK will not use nuclear weapons against “a non-nuclear weapon state not in material breach of its nuclear non-proliferation obligations, unless it attacks us, our Allies or a state to which we have a security commitment, in association or alliance with a nuclear weapon state.”293

United States

The 2010 NPR states: “The United States will not use or threaten to use nuclear weapons against NNWS that are party to the NPT and in compliance with their nuclear non-proliferation obligations.”294 The NPR gives no definition of what compliance in this regards means, leaving this statement open to interpretation. The NPR also states that conventional weapons would be used to retaliate against a biological or chemical weapons attack. This is a change from the previous NPR, which stated that nuclear weapons could be used, even if the attack came from a NNWS.295 The 2010 NPR does however also state that if the evaluation and proliferation in biological weapons threat would change, the US reserves the right to adjust its NSA policy accordingly.296 Furthermore, the NPR states that the nuclear weapons may still play a role in deterring conventional, chemical, and biological
weapons from the states listed as not being under the US security assurances. The NPR also indicates that the US will seek to ensure that nuclear weapons would only be used in "extreme circumstances." In the same spirit, in a new guideline published in June 2013 the Department of Defense is directed to "strengthen non-nuclear capabilities and reduce the role of nuclear weapons in deterring non-nuclear attacks."

**NSAs in the UNGA**

During the 2010 session of the UNGA First Committee, resolution A/RES/65/43, "Conclusion of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons," was adopted with a vote of 106-0-56. The same resolution, which is introduced annually by Pakistan, was adopted again during the 2011–2013 sessions with similar votes. On all occasions, France, Russia, the United Kingdom, and the United States all abstained while China voted yes. This voting pattern is the same as before the adoption of the 2010 NPT Action Plan.

**NSAs in the CD**

Although no significant steps towards legally-binding NSAs have been taken, action 7 also calls on the UN Secretary-General to convene a high-level meeting in support of the Conference on Disarmament. In September 2010 he convened such a meeting on "revitalizing the work of the Conference on Disarmament and taking forward multilateral disarmament negotiations."

In July 2011 the UNGA convened a follow-up to this meeting, at the request of 49 member states. The follow-up served as a general debate on revitalizing the work of the CD and to discuss ways to break its longstanding deadlock. The participants discussed issues such as whether or not negotiations should be pursued outside of the CD and if the CD itself should be reformed.

With the resolutions passed in the UNGA First Committee, the issue clearly remains on the agenda. However no progress regarding the development of binding NSAs through the CD can be reported.

Background and recent developments

In accordance with Article 14 of the Pelindaba Treaty, the African region held its First Conference of States Parties to the Treaty on 4 November 2010 at the African Union Headquarters in Addis Abeba, Ethiopia.

Seven countries, Cameroon, Chad, Comoros, Congo, Ghana, Guinea-Bissau, Namibia and Zambia, have ratified the Treaty since the adoption of the NPT Action Plan. As of February 2014, fifteen signatories have yet to ratify the Pelindaba Treaty.

Both Protocol I (NSA) and Protocol II (ban on nuclear testing in the NWFZ) have been signed by all NWS, and ratified by all NWS except the United States. The protocols were handed in to the US Senate in May 2011 for ratification. Protocol III is open for signature by France and Spain, as non-African countries that are "de jure" or "de facto" responsible for territories within the zone. France has signed and ratified Protocol III but Spain has indicated it will not do so, arguing that its current safeguards obligations with EURATOM and IAEA are sufficient.

All NWS, except for China, have attached reservations to Protocol II, reserving the right to use their nuclear arsenals in response to "changes of the international environment".
The Treaty of Tlatelolco
(Nuclear-Weapon-Free-Zone in Latin America and the Caribbean)

Member states: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela.
Background
The Treaty of Tlatelolco\textsuperscript{306} entered into force on 25 April 1969 and, since 23 October 2002 when Cuba deposited its instrument of ratification, all states of Latin America and the Caribbean have signed and ratified the Treaty.\textsuperscript{307} It has two additional protocols. Protocol I involves non-Latin American countries that have territories in the NWFZ. France, the United Kingdom, and the United States have signed and ratified Protocol I. Protocol II deals with the provisions of NSAs. All NWS have ratified Protocol II, albeit with reservations.\textsuperscript{308}
Background and current status

After the Treaty’s entry into force in 1986, the Marshall Islands, Micronesia, and Palau became eligible states for signing this Treaty, but none have yet done so. The Treaty’s Protocol I (which calls on US, UK and France to apply the key provisions of the Treaty in respect to their territories situated within the zone), Protocol II (on negative security assurances), and Protocol III (whereby NWS undertake not to test nuclear weapons in the zone) have been ratified by all NWS except for the United States. President Obama handed in the request for ratification of the three Protocols together with the Pelindaba Treaty protocols to the US senate in May 2011. As of February 2014, these protocols have not been ratified.

Out of the four NWS that have ratified the protocols, France and the United Kingdom have made reservations on Protocol II (NSAs). These reservations are the same they have made for the Pelindaba Treaty.

Member states: Australia, Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu.
The Treaty of Bangkok (Southeast Asia Nuclear-Weapon-Free-Zone)

**Member states:** Brunei Darussalam, Cambodia, Indonesia, Lao People’s Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.

**Background and recent developments**

The Protocol to the Treaty on NSAs has not been signed by any of the NWS.\(^{311}\)

In August 2011, the NWS met with officials from the Association of Southeast Asian Nations (ASEAN) to discuss their ratification of the Protocol to the Treaty. One follow-up meeting was held in October 2011. In November 2011, Thailand’s foreign minister announced that the ASEAN countries together with the NWS had reached an agreement on how to proceed on the region’s NWFZ. On 19 November the White House stated, “All sides have agreed to take the necessary steps to enable the signing of the protocol and its entry into force at the earliest opportunity.” This agreement involves further negotiations on the issue.\(^{312}\)

In July 2012 France, Russia, the United Kingdom and the United States announced they would not be able to sign the treaty during the ASEAN Foreign Minister’s meeting. They had introduced reservations to the SEANWFZ commission too late for the commission to review them before the conference.\(^{313}\) As of February 2014 still no NWS has signed the Protocol to the Treaty.
The Treaty of Semipalatinsk (Central Asia Nuclear-Weapon-Free-Zone)

Member states: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan.

Background and recent developments
The Treaty of Semipalatinsk opened signature in 2006 and entered into force on 21 March 2009. The Protocol to the Treaty has not yet been opened for signature by the NWS. While Russia and China have expressed support for the Treaty, France, the United Kingdom, and United States oppose article 12, which states that the Treaty "does not affect the rights and obligations of the Parties under other international treaties." These countries are concerned that under the Commonwealth of Independent States Collective Security Treaty, Russia could possibly deploy nuclear weapons in Central Asia. During the 2013 NPT PrepCom in Geneva the signatories of the Treaty launched the so-called C5-P5 consultations to resolve this issue and the participants have expressed satisfaction with the pace of engagement of the NWS.

Mongolia
Mongolia declared itself a single state NWFZ on 25 September 1992 and the "Law on of Mongolia on its nuclear-weapon-free status" was adopted by the national parliament on 3 February 2000. Later that year, in October, the five NWS delivered a joint statement in which they reaffirmed their commitment to cooperate with Mongolia in implementing resolution 53/77 entitled "Mongolia's international security and nuclear-weapon-free-status" of 1998. They each had declared their support bilaterally at the time.

On 17 September 2012, Mongolia and China, France, Russia, UK, and US signed parallel declarations regarding Mongolia's nuclear-weapon-free status. The declaration included a reaffirmation of the security assurances made in 2000 and the intent to respect Mongolia's status by not contributing to any act that would violate it.
Comprehensive nuclear-test-ban treaty

- Action 10:
  All nuclear-weapon States undertake to ratify the Comprehensive Nuclear-Test-Ban Treaty with all expediency, noting that positive decisions by nuclear-weapon States would have the beneficial impact towards the ratification of the Treaty, and that nuclear-weapon States have the special responsibility to encourage Annex 2 countries, in particular those which have not acceded to the Treaty on the Non-Proliferation of Nuclear Weapons and continue to operate unsafeguarded nuclear facilities, to sign and ratify.

- Action 11:
  Pending the entry into force of the Comprehensive Nuclear-Test-Ban Treaty, all States commit to refrain from nuclear-weapon test explosions or any other nuclear explosions, the use of new nuclear weapons technologies and from any action that would defeat the object and purpose of that Treaty, and all existing moratoriums on nuclear-weapon test explosions should be maintained.

- Action 12:
  All States that have ratified the Comprehensive Nuclear-Test-Ban Treaty recognize the contribution of the conferences on facilitating the entry into force of that Treaty and of the measures adopted by consensus at the Sixth Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty, held in September 2009, and commit to report at the 2011 Conference on progress made towards the urgent entry into force of that Treaty.

- Action 13:
  All States that have ratified the Comprehensive Nuclear-Test-Ban Treaty undertake to promote the entry into force and implementation of that Treaty at the national, regional and global levels.

- Action 14:
  The Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization is to be encouraged to fully develop the verification regime for the Comprehensive Nuclear-Test-Ban Treaty, including early completion and provisional operationalization of the international monitoring system in accordance with the mandate of the Preparatory Commission, which should, upon entry into force of that Treaty, serve as an effective, reliable, participatory and non-discriminatory verification system with global reach, and provide assurance of compliance with that Treaty.

New developments for the CTBT

The Treaty has been signed by 183 states, and ratified by 161. Since the adoption of the 2010 NPT Action Plan, ten additional states have become parties, including one Annex 2 country, Indonesia.

13 countries have not yet signed the CTBT and 22 countries have signed but not yet ratified it. Formal entry into force of the CTBT requires that a specific group of 44 states listed in Annex 2 of the Treaty ratify it. Eight more ratifications are needed before it can enter into force, including that of four NPT States: China, the Democratic People’s Republic of Korea (DPRK), Egypt, India, Iran, Israel, Pakistan, and the United States.
Specific NWS obligations

United States

In May 2011, the US Under-Secretary of State for Arms Control and International Security said "The Obama Administration is preparing to engage the Senate and the public on an education campaign that we expect will lead to ratification of the CTBT." On 6 December 2011, US President Barack Obama welcomed Indonesia’s ratification and stated, "The United States remains fully committed to pursuing ratification of the Test Ban Treaty and will continue to engage members of the Senate on the importance of this Treaty to U.S. security. America must lead the global effort to prevent proliferation, and adoption and early entry into force of the CTBT is a vital part of that effort."

Since May 2010, the US administration has held informal briefings of Senators and staff on key technical and scientific issues related to the CTBT. However, the change in composition of the US Senate and US House of Representatives following the 2012 elections have made any prompt ratification of the CTBT even more unlikely.
**China**
The 2010 white paper on China’s National Defence stated it has strictly abided by its commitment to a moratorium on nuclear testing. Furthermore it has “actively participated in the work of the Preparatory Commission of the Comprehensive Nuclear Test Ban Treaty Organization, and is steadily preparing for the national implementation of the Treaty.” However, despite the support for the CTBT, the Chinese government has not yet initiated the ratification process. The 2013 white paper does not address nuclear testing.

**Other NPT states**
In addition to the NWS there are two more states parties to the NPT that are Annex II states that have not yet ratified the CTBT: Egypt and Iran.

**Egypt**
In 2009, the Egyptian delegation to the UNGA First Committee stated that it has not ratified the CTBT because doing so “would only result in widening the steep gap in commitments undertaken by States member to the NPT and States outside the Treaty which enjoy unlimited freedom in the nuclear area.” In 2011, the Egyptian delegation made it clear that Egypt would not ratify the Treaty without a change in Israeli policy with regard to nuclear weapons. No change in the Egyptian position has been reported.

**Iran**
At the Fifth Conference on Facilitating the Entry into Force of the CTBT in 2007, Iran outlined a number of negative developments that “have jeopardized the prospects of entry into force of the Treaty” including lack of progress towards nuclear disarmament, upgrading and modernization of existing nuclear weapons, rejection of the CTBT by major NWS, and acknowledgement of the possession of nuclear weapons by Israel. No change in the Iranian position has been reported.

**CTBT Conferences**
Since the 2010 NPT Action Plan was adopted, two Ministerial Meetings of the CTBT (September 2010 and September 2012) and two CTBT Article XIV Conferences (September 2011 and September 2013) were held in New York on the margins of the UNGA. These meetings concluded with joint statements, which reaffirmed the commitment of the parties to the CTBT and called upon the states that had not yet ratified the Treaty to do so.

During the 2013 CTBT Article XIV Conference, a Group of Eminent Persons was launched on 26 September 2013. The Group consists of 17 eminent personalities and international experts and will support and complement efforts for the CTBT’s entry into force as well as international efforts to that end. The Presidents of the Article XIV Conference will also be members of the group.

**Verification**
Pending the entry into force of the Treaty, the Preparatory Commission of the CTBTO is establishing a verification regime to detect nuclear explosions anywhere on the globe. The CTBTO detected a nuclear test explosion in the Democratic People’s Republic of Korea (DPRK) on the morning of 12 February 2013 and could inform its member states with data one hour before the DPRK’s announced its test.

From 28 November to 9 December 2011, over 60 participants including International Monitor Station (IMS) operators, National Data Centre staff, diplomats, academics, and members of civil society attended the Advanced Science Course on the verification technologies of the CTBT. In total, participants from more than 100 different countries followed the event. Furthermore, the CTBTO continues to host various other trainings and workshops on verification related issues.

The CTBTO Preparatory Commission lists several key challenges for the completion of the verification regime. For example, stations intended for India and Pakistan cannot be started until these two countries sign the CTBT.
Fissile material

**Action 15:**
All States agree that the Conference on Disarmament should, within the context of an agreed, comprehensive and balanced programme of work, immediately begin negotiation of a treaty banning the production of fissile material for use in nuclear weapons or other nuclear explosive devices in accordance with the report of the Special Coordinator of 1995 (CD/1299) and the mandate contained therein. Also in this respect, the Review Conference invites the Secretary-General of the United Nations to convene a high-level meeting in September 2010 in support of the work of the Conference on Disarmament.

**Action 16:**
The nuclear-weapon States are encouraged to commit to declare, as appropriate, to the International Atomic Energy Agency (IAEA) all fissile material designated by each of them as no longer required for military purposes and to place such material as soon as practicable under IAEA or other relevant international verification and arrangements for the disposition of such material for peaceful purposes, to ensure that such material remains permanently outside military programmes.

**Action 17:**
In the context of action 16, all States are encouraged to support the development of appropriate legally binding verification arrangements, within the context of IAEA, to ensure the irreversible removal of fissile material designated by each nuclear-weapon State as no longer required for military purposes.

**Action 18:**
All States that have not yet done so are encouraged to initiate a process towards the dismantling or conversion for peaceful uses of facilities for the production of fissile material for use in nuclear weapons or other nuclear explosive devices.

Fissile materials in the Conference on Disarmament (CD)
The stalemate over the adoption of a programme of work in the CD has continued since the adoption of the action plan. As a consequence, only limited work has been undertaken both in the CD and in the margins of the Conference.

In 2011, along with CD plenary discussions on a fissile material cut-off treaty (FMCT), Australia and Japan co-hosted expert-level talks seeking to define key aspects of a treaty, including what would be considered fissile material and what constitutes production of such material. These events were arranged in order to “build confidence about FMCT and momentum towards FMCT negotiations in the CD on the basis of CD/1299 and the mandate contained therein.” Many delegations participated with experts from capitals, but not all CD delegations participated. A report from the discussions was submitted as an official document by the delegation of Japan to feed into the work of the CD.334

In 2012 CD plenary discussions on a FMCT continued.335 On 29–30 May and 28–29 August 2012, Germany and the Netherlands held Scientific Expert meetings on “Technical Issues Related to a Fissile Material Cut-Off Treaty (FMCT),”336 which saw participation of around 45 government, and representatives of the United Nations Office for Disarmament Affairs (UNODA), the International Atomic Energy Agency (IAEA), the European Commission (Euratom), and the United Nations Institute for Disarmament Research (UNIDIR). The meetings looked at some clearly defined important technical issues that negotiators will be faced with when dealing with an FMCT in the future, and a report from the meetings was submitted to the CD. 337

During the CD’s 2013 session, states raised the issue of an FMCT in their plenary discussions. A mandate to establish a working group to address this matter was included in all the draft programmes of work introduced to the conference in 2013.338

Fissile Materials in the UNGA First Committee
At the UNGA First Committee 2012, Canada presented a draft version of A/RES/67/53, “Treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices”. The resolution requests the UNSG to seek the views of Member States on a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices in 2013 and establishes a group of governmental experts (GGE) to meet for two weeks in 2014 and two weeks in 2015 “to make recommendations on possible elements of such a treaty.”339 It will report back to the First Committee in October 2015.
The resolution as a whole was adopted with a vote of 148-1-20.340 Pakistan was the only country voting no, arguing that the proposal to set up a GGE is “ill-advised” as it “adds no value to the substance of the envisaged treaty. It would on the other hand undermine the CD, the sole multilateral disarmament negotiating forum.” The Chinese delegation abstained on the entire resolution since it did not “specify that the CD is the only place where negotiations of an FMCT can take place” and the Russian delegation argued it did not believe that a GGE would contribute to solving the issue that has complicated negotiations of a fissile material, and therefore abstained on the specific paragraph that set up the GGE while supporting the rest of the resolution. The other three nuclear weapon states supported the resolution and the GGE.341

In this context and as requested in paragraph 2 of the resolution, the UN Secretary General sought the views of member states on a treaty banning the production of fissile material for nuclear weapons or other explosive devices and compiled a report to present at the 68th session of the UNGA. In total 37 member states342 and the European Union have submitted their views for this report contained in document A/68/154.343 They address the questions of definitions, verification and the possible role of the IAEA, the scope of the treaty, in particular the inclusion of existing stocks of fissile material, and the significance of the treaty for the nuclear disarmament and non-proliferation agenda.344

At the UNGA First Committee 2013 the resolution has been turned into a draft decision recalling previous resolutions on this matter and welcoming the report by the UN Secretary General discussed on the issue. It was adopted by a vote of 172-1-5.345 Pakistan reiterated its position regarding the commencement on an FMCT and the GGE and voted against. The DPRK, Egypt, Israel, Syria, and Zimbabwe abstained.346

The first meeting will take place in the first two weeks of April 2014 and members of the group are Argentina, Australia, Brazil, Canada, China, Czech Republic, Egypt, Finland, France, Germany, Hungary, India, Italy, Indonesia, Japan, Kazakhstan, Mexico, Netherlands, Nigeria, Republic of Korea, Russian Federation, South Africa, Ukraine, United Kingdom, and United States. The preparations for the meetings of the GGE are ongoing, but not much information has been made public.
Declaration of excess fissile material for military use

Between 1996 and 2002, the Russian Federation, the United States, and the IAEA launched the Trilateral Initiative. This initiative was dedicated to examining the technical, legal, and financial issues associated with IAEA verification of fissile materials determined to be excess to military purposes. Included in the Trilateral Initiative were discussions on a possible legal instrument through the Voluntary Offer Agreements. Since the end of 2002, when the Bush administration made it clear that the US would withdraw its participation, no significant steps have been taken to put the Trilateral Initiative, or any similar agreements, into action. There is no information available concerning this initiative.

In 2000 Russia and the US signed the Plutonium Management and Disposition Agreement (PMDA), which was finalized in 2010. Both states committed to eliminate 34 tonnes of excess weapon-grade plutonium and ensure that the plutonium is irreversibly removed from stockpiles for military use. The agreement also calls on both states to implement monitoring and inspection activities. The US monitors the key stages of the Russian process in the programmes facilities and Russia will conduct visits to the US facilities to ensure that LEU is not diverted from civilian use. The agreement also opens up for IAEA verification once appropriate agreements with the IAEA are concluded, but as of yet the IAEA is not involved in any activities.

The global stockpile of highly enriched uranium (HEU) in 2010 was 1475±125 metric tonnes and 485±10 tonnes separated plutonium. In January 2013, global stocks of HEU had decreased to around 1380±125 tonnes while stockpiles of separated plutonium now are estimated to be 495±10 tonnes, of which about 260 tonnes is the material in civilian custody.

About 98% of the global stockpile of HEU is held by the NWS, the largest being in the United States and the Russian Federation. The stockpile of separated plutonium for weapons continues to increase because of production in Israel, India, and Pakistan. The DPRK appears to have resumed production. The United Kingdom, France, Russia, and Japan have accumulated the largest civilian plutonium stockpiles. The Nuclear Security Summits have on-going efforts to reduce existing levels of HEU and separated plutonium, however these fail to include military stockpile. The global civilian stockpile of separated plutonium now exceeds the military stockpile.

Russia

In 1996 Russia declared 500 tonnes excess HEU as a part of the US-Russian HEU-LEU deal. On 14 November 2013 the last shipment of LEU under this deal left Russia. The remaining HEU in Russia adds up to about 695 ± 120 tonnes. Russia has also declared up to 50 tonnes weapon grade plutonium to be eliminated as excess material. Out of these 50 tonnes, 34 tonnes are included in the Plutonium Management and Disposition Agreement (PMDA). Russia has not yet started building the designated fuel fabrication plan that will eliminate the plutonium; it is estimated that the programme will start in 2018.

United Kingdom

The United Kingdom has an estimated stockpile of 21.2 tonnes of HEU. According to estimates by the International Panel on Fissile Material (IPFM), 0.7 tonnes of this HEU may have been consumed through fission in the UK’s nuclear powered attack submarines and ballistic-missile submarines. The UK has also declared that 1.4 tonnes are for civilian use. In 1998, the UK declared 0.3 tonnes of weapon-grade plutonium and informed that it would, together with 4.1 tonnes of non-weapon grades material, place this under IAEA safeguards. It has not been reported that any such safeguard agreement has been concluded and the UK has not proceeded to eliminate any of this material yet. However, it includes in the annual declaration of civilian material made under the IAEA INFCIRC/549 agreement the 4.4 tonnes of plutonium declared surplus for military requirements. This material has been placed under European Atomic Energy Community (EURATOM) safeguards and is too designated for IAEA safeguarding.
United States

The current estimated HEU stock of the US is 595 tonnes. It has declared more than 370 tonnes of HEU as excess, both in 1996 and 2005. By the end of 2012 approximately 141 tonnes of HEU had been blended down. With an estimated HEU down-blending rate of 3–4 tonnes per year, the down-blending of the remaining HEU already declared excess is planned to take at least until 2050. In June 2012, the US published a declaration of its historical production, consumption and losses to waste of plutonium until 30 September 2009. In this update, the US reports a plutonium stock of 95.4 tonnes. In addition to the declared 49.3 tonnes of plutonium excess to its military necessities, the US has 34 tonnes included in the PMDA. The elimination is estimated to begin in 2025 and it will take 13 years to eliminate the 34 tonnes of plutonium. However, according to the IPFM the programme is facing problems.

China and France

France and China have not declared any military nuclear material as excess.

Dismantling of production facilities for fissile material for military use

Pending the conclusion of an FMCT, most NWS have concluded a unilateral political declaration—a moratorium—on production of fissile material for weapons use. Most production facilities for weapons-grade fissile materials in the five NPT weapon states are therefore shut down and, in some cases, are in the process of being decommissioned. However, this is not verified and very little concrete information is available.

France has invited international experts to visit the dismantling of its former fissile material facilities at Pierrelatte and Marcoule, though this took place before the 2010 NPT Action Plan was adopted. It is the only NWS to extend such an invitation.

Russia ended the production of fissile materials for weapons in 1994. Ten out of Russia’s thirteen plutonium production reactors were shut down by 1992. Of the three remaining facilities, the Zeleznogorsk was the last to be closed down on 15 April 2010.

The Nuclear Decommissioning Authority of the United Kingdom announced in July 2012 the planned closure by 2018 of its THORP reprocessing plant, at Sellafield.

The United States has a number of shutdown reprocessing facilities, including the Nuclear Fuel Services’ West Valley plant near Buffalo, New York; a plant near Morris, Illinois; a PUREX reprocessing plant in Hanford, Washington that was shut down in 1989; the Idaho Chemical Processing Plant; and the Savannah River.

China is the only NWS that has not officially declared a moratorium on HEU and plutonium production for weapons. However, it is believed that China ceased its production of HEU in 1987 and of plutonium by about 1990. All its previous military production facilities are reported to be closed, converted, or being decommissioned.
Disarmament education

**Action 22:**

All States are encouraged to implement the recommendations contained in the report of the Secretary-General of the United Nations (A/57/124) regarding the United Nations study on disarmament and non-proliferation education, in order to advance the goals of the Treaty in support of achieving a world without nuclear weapons.

**UNGA resolutions**

In 2002, the UNGA unanimously adopted 34 recommendations in the UN Study on Disarmament and Non-Proliferation Education (A/57/124). The UN Secretary-General (UNSG) issues a report on the implementation of these recommendations biennially. Unfortunately, not many member states contribute to the report. Only nine member states\(^3\) have contributed to the latest report\(^4\) (A/67/138) released in July 2012.\(^5\) The United Nations Disarmament Affairs has a section on its website for disarmament education.\(^6\)

In October 2010, First Committee adopted two biannual resolutions on disarmament education: “United Nations study on disarmament and non-proliferation education” (A/C.1/65/L.53) and “United Nations Information Programme” (A/C.1/65/L.52). The resolution on the United Nations study on non-proliferation and disarmament education (A/RES/67/47) was adopted without a vote during the UNGA in 2012. While education is not a controversial topic compared to others during the First Committee, implementation of these resolutions is still very limited.

**Japan**

During the 2010 session of the UNGA First Committee, the Japanese delegation highlighted the fact that the outcome document of the 2010 NPT Review Conference included for the first time a reference to the importance of disarmament and non-proliferation education as a useful and effective means to advance the goal of a world without nuclear weapons.\(^7\) Japan and the United Nations University (UNU) submitted a working paper to the 2010 NPT Review Conference that encouraged cooperation between governments and civil society on relevant education initiatives. Japan and UNU indicated they would “initiate dialogue” to this end. Japan announced to the First Committee 2010 that together with the UNU they intend to hold “the Global Forum on Disarmament and Non-proliferation Education” in March 2011 in Japan.\(^8\) Due to the earthquake on 11 March 2011 the forum had to be postponed and was held on 10–11 August 2012 in Nagasaki.\(^9\)

During the final week of First Committee in 2011, Japan hosted a side event where Special Communicators for a World without Nuclear Weapons spoke for the first time in their new role. The Special Communicators status has been thus far given to hibakusha (atomic bomb survivors) in recognition of their work for nuclear disarmament.\(^10\)

Japan has raised the issue in different disarmament fora and encouraged states to implement the recommendations contained in the report of the UN Secretary-General regarding the United Nations study on disarmament and non-proliferation education.\(^11\) NPDI, of which Japan is a member, recognized the importance of disarmament and non-proliferation education as an integral part of their joint work.\(^12\) The group submitted working papers to both the 2012 and 2013 NPT PrepCom on this issue. Australia and Japan submitted a separate one as well as to the 2012 NPT PrepCom.\(^13\)
Endnotes:

1 India, Israel and Pakistan.
3 For example Hui Zhang has estimated the total number of nuclear warheads to be 166. See H. Zhang, ‘China’, in Assuring destruction forever: nuclear weapon modernization around the world, R. Acheson (Ed.), Reaching Critical Will, 2012, p. 20; or H. Zhang, How US restraint can keep China’s nuclear arsenal small, Bulletin of the Atomic Scientists, July 2012, p. 74-79.
4 H. Kristensen & R. Norris, Chinese nuclear forces, 2013, Bulletin of the Atomic Scientists, November 2013, p. 80
6 Ibid.
8 I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States, British American Security Information Council (BASIC), November 2011.
10 I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States, British American Security Information Council (BASIC), November 2011, p. 1.
17 H. Kristensen & R. Norris, Chinese nuclear forces, 2013, Bulletin of the Atomic Scientists, November 2013, p. 84.
18 Ibid., p.83
26 Statement to the 2013 NPT Preparatory Committee, delivered by China on 22 April 2013.
30 Ibid.
33 I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States, British American Security Information Council (BASIC), November 2011.
34 Ibid.
37 I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States, British American Security Information Council (BASIC), November 2011, p. 21.
38 Ibid.


83 Ibid.


87 Ibid.

88 Ibid.

89 Ibid.


94 I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States, British American Security Information Council (BASIC), November 2011, p. 10.

95 Ibid.


97 U.S. Department of State, New START Treaty Aggregate Numbers of Strategic Offensive Arms, 1 January 2014.


101 Remarks by the President Obama at the Brandenburg Gate – Berlin, Germany, The White House Office of the Press Secretary, 19 June 2013; http://www.whitehouse.gov/the-press-office/2013/06/19/remarks-president-obamas-berlin-visit;


104 A. Anischuck, Russia signals nuclear arms cuts will not come easy, Reuters, 19 June 2013.

105 I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States, British American Security Information Council (BASIC), November 2011, p. 11.


First Session of the Bilateral Consultative Commission Under the New START Treaty

For the different presentations please see: http://www.reachingcriticalwill.org/disarmament-fora/others/hinw/nayarit-2014/statements.

See for example the statements delivered to the UNGA First Committee by the De-Alerting Group on 18 October 2013, 17 October 2012, and 13 October 2011.


The Group has also delivered statements to the NPT Preparatory Committees, for example on 3 May 2012.

For the different presentations please see: http://www.reachingcriticalwill.org/disarmament-fora/others/hinw/nayarit-2014/statements.

A. Arbatov, Gambit or Endgame? the New State of Arms Control, Carnegie Moscow Center, March 2011, p. 3.


Source for numbers: US Special Assistant for Public Affairs and Public Diplomacy, Mr. Jamie E. Mannina on 19 February 2013. Since then US has conducted an additional 18 on-site inspections and Russia 19. Current as of 24 February 2013.

T. Collina. New START Hits 1,000 Notifications, Arms Control Today, September 2011.


U.S. Department of State. Fifth Session of the Bilateral Consultative Commission Under the New START Treaty, 19 February 2013 Both sides decided on one launch of an ICBM or SLBM conducted by each party from 1 January – 31 December 2012.


I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States, British American Security Information Council (BASIC), November 2011, p. 10.


Ibid.


194 Ibid.
198 Ibid, pp. 98-100.
200 For further information on these resolutions, please visit Reaching Critical Will's website.
201 Changes in voting behaviour compared to 2009.
202 Azerbaijan, Cyprus, Kazakhstan, and Kyrgyzstan voted yes in 2013.
203 Denmark changed its vote to no.
204 Georgia, Iceland, Montenegro, Norway, Palau, Serbia, Sweden, Former Yugoslav Republic of Macedonia and Togo changed to abstain.
205 Azerbaijan, Kazakhstan and Kyrgyzstan changed their votes into yes.
206 Georgia changed to abstain.
207 Azerbaijan, Kyrgyzstan and Tajikistan voted yes in 2013.
208 Montenegro, New Zealand, and South Africa abstained in 2013.
209 Moldova and Macedonia voted no 2013.
210 Ukraine changed its vote into yes in 2012.
211 South Sudan abstained in 2012.
212 Tonga abstained in 2013.
213 Bhutan voted yes in 2013.
214 Brazil, Ecuador, Egypt, India, Mauritius, Russia, Syria, and Zimbabwe abstained in 2013.
215 Azerbaijan, Colombia, Costa Rica, Haiti, Honduras, Peru voted yes in 2013.
216 Pakistan abstained in 2013.
217 Russia and UK changed their votes to no in 2013.
218 China abstained in 2013.
219 Compared to 2010, Albania, Kyrgyzstan, Serbia and the Former Yugoslav Republic of Macedonia changed their votes to yes in 2012.
220 Russia voted no in 2012.
221 DPRK and Ukraine changed their votes to yes in 2012.
222 Azerbaijan, Kazakhstan, Kyrgyzstan, and Vanuatu voted yes in 2013.
223 Georgia abstained in 2012.
224 China abstained.
225 France, Russia, United Kingdom, United States.
226 Algeria, Bangladesh, Cambodia, Georgia, India, Kazakhstan, Kenya, Kyrgyzstan, Lao P.D.R., Lithuania, Myanmar, Nepal, Pakistan, Poland, Sri Lanka, and Uganda changed their votes to yes in 2013.
227 A/C.1/66/L.39, UNGA First Committee resolution.
228 Ibid.
230 For further information on these resolutions, please visit Reaching Critical Will's website.
232 UN Document A/AC.281/2, *Report of the Open-ended Working Group to develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons*.
236 Resolution contained in UN Document A/C.1/68/L.34, *Taking forward multilateral disarmament negotiations*.
239 Ibid.
241 Statement to the UNGA First Committee on behalf of France, the United Kingdom and the United States, delivered by France in October 2013.
242 Ibid.
243 Statement on behalf of Albania, Australia, Belgium, Canada, Croatia, the Czech Republic, Denmark, Estonia, Finland, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxemburg, Monaco, the Netherlands, Poland, Slovakia and Sweden, delivered by the Netherlands in October 2013; and Statement on behalf of Bulgaria, Cyprus, Greece, Moldova, Portugal, Romania, Slovenia and Spain, delivered by Spain in October 2013.
244 Statement to the UNGA First Committee on behalf of Austria, Ireland, Liechtenstein, Malta, New Zealand, and San Marino, delivered by Ireland in October 2013.
245 Statement to the UNGA First Committee, delivered by Switzerland in October 2013.
The NPT Action Plan Monitoring Report March 2014

D. Cliff, H. Elbanting & A. Persbo, Verification of New START


China’s National Defense in 2010


Ibid.

Ibid.


I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States, BASIC paper, November 2011, p. 9.


Berlin Statement at the Conference on Disarmament, CD/1908, delivered by Foreign Ministers on nuclear disarmament and non-proliferation on 17 May 2011.

Australia, Canada, Chile, Germany, Japan, Mexico, the Netherlands, Poland, Turkey and the United Arab Emirates. In September 2013 Nigeria and the Philippines joined the group.


A summary of all suggestions can be found in the 2013 report on pages 3-6 and a more detailed discussion in chapters 2-7.


Statement at the 2010 Review Conference of the Parties to the Non-Proliferation of Nuclear Weapons, delivered by France on 7 May 2010.

I. Kearns, Beyond the United Kingdom: Trends in the Other Nuclear Armed States”, British American Security Information Council (BASIC), November 2011, p. 21.


293 Ibid.


301 R. Acheson, High-level meeting on revitalizing the CD serves as catalyst for action, CD Report, Reaching Critical Will, September 2010.

302 Cameroon ratified on 11 June 2009, but it was deposit on 28 September 2010.


311 P. Crail & D. Kimball, Nuclear-Water-Free Zones (NWFWZ) at a glance, Arms Control Association.


318 Ibid.

319 Brunei Darussalam, Central African Republic, Chad, Ghana, Guinea, Guinea-Bissau, Guatemala, Indonesia, Iraq and Trinidad and Tobago.

320 Bhutan, Cuba, the Democratic People’s Republic of Korea, Dominica, India, Mauritius, Pakistan, Saudi Arabia, Somalia, South Sudan, Syrian Arab Republic, Tonga, Tuvalu.

321 Angola, China, Comoros, Congo, Egypt, Equatorial Guinea, Gambia, Iran, Israel, Myanmar, Nepal, Nue, Papua New Guinea, Sao Tome and Principe, Solomon Islands, Sri Lanka, Swaziland, Thailand, Timor-Leste, United States, Yemen, Zimbabwe.


327 Statement to the Conference on the Entry into force of the CTBT, delivered by Iran on September 2007.


Ibid.

CD/1948 included a mandate “to begin substantive work towards a treaty banning the production of fissile material” as a “first step” towards nuclear disarmament. Both CD/1952 and CD/1955 included a mandate “to develop proposals on fissile material for nuclear weapons or other nuclear explosive devices,” CD/1955 made reference to the Shannon mandate as contained in document CD/1299 in that context.

Iran, Pakistan and Syria voted against this paragraph and Algeria, Bahrain, Belarus, China, Cuba, Democratic People’s Republic of Korea, Djibouti, Ecuador, Egypt, Iraq, Israel, Kuwait, Lebanon, Libya, Nicaragua, Oman, Qatar, Russian Federation, Saudi Arabia, Sudan, Tunisia, Yemen, and Zimbabwe abstained. Voting Chart of the First Committee on A/C.1/67/L.41/Rev.1, 5 November 2012.

Pakistan voted against the resolution and Algeria, Bahrain, China, Democratic People’s Republic of Korea, Ecuador, Egypt, Iran, Iraq, Israel, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, Yemen, and Zimbabwe abstained. See Voting Chart of the First Committee on A/C.1/67/L.41/Rev.1, 5 November 2012.


Algeria, Australia, Austria, Brazil, Canada, China, Congo, Cuba, Finland, France, Germany, Hungary, India, Indonesia, Iran, Ireland, Italy, Japan, Libya, Mexico, Netherlands, Nigeria, Norway, Pakistan, Peru, Poland, Qatar, Republic of Korea, Serbia, South Africa, Sweden, Switzerland, Syria, Ukraine, United Kingdom, United States, and Uruguay.

Report of the Secretary-General A/68/154, Treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices, 16 July 2013.

Ibid.


M. Gandenberger, Nuclear Weapons, First Committee Monitor, No. 5., November 2012.


P. Podvig, Disposition of Excess Military Nuclear Material, UNIDIR paper, February 2012, p.3.


Ibid, p. 18.


International Panel of Fissile Materials (IPFM), Global Fissile Material report, October 2013, p. 3.


Ibid, p. 10.

Ibid, p.20.


Ibid, p. 60.


Austria, Colombia, Cuba, Italy, Japan, Lebanon, Mexico, New Zealand, Panama.


In July 2010 when the previous report (A/65/160) was released, only five countries - Burkina Faso, Japan, Mexico, Spain and Ukraine - submitted information.

A list of the various activities and resources is available: http://www.un.org/disarmament/education/index.shtml.

B. Fihn, Disarmament education, First Committee Monitor, Reaching Critical Will, October 2010.

The Forum was cancelled due to the earthquake that hit Japan on 11 March 2011.
Endnotes for graphs


Developments regarding a potential Weapons of Mass Destruction Free Zone in the Middle East (MEWMDFZ)

In addition to the 64 point action plan, the 2010 NPT Review Conference outcome document also includes a set of three “practical steps” to implement the 1995 Resolution on the Middle East.

1: The Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution, in consultation with the States of the region, will convene a conference in 2012, to be attended by all States of the Middle East, on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction, on the basis of arrangements freely arrived at by the States of the region, and with the full support and engagement of the nuclear-weapon States. The 2012 Conference shall take as its terms of reference the 1995 Resolution;

2: Appointment by the Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution, in consultation with the States of the region, of a facilitator, with a mandate to support implementation of the 1995 Resolution by conducting consultations with the States of the region in that regard and undertaking preparations for the convening of the 2012 Conference. The facilitator will also assist in implementation of follow-on steps agreed by the participating regional States at the 2012 Conference. The facilitator will report to the 2015 Review Conference and its Preparatory Committee meetings;

3: Designation by the Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution, in consultation with the States of the region, of a host Government for the 2012 Conference;

Facilitator

In October 2011, Finland was designated as the host country for the 2012 Middle East Conference, and the Finnish Undersecretary of State Ambassador Jaakko Laajava was named as the facilitator by the United Nations Secretary-General.

In accordance with the decisions in the 2010 outcome document, the facilitator reported to the 2012\(^1\) and 2013\(^2\) NPT PrepComs on his efforts.

During the 2012 NPT PrepCom, Ambassador Laajava discussed his outreach activities. At the time, not all states of the region had announced their participation and no date had been set for the conference. In conclusion, the facilitator noted that further and intensified efforts were needed from the conveners, the states in the region, but also from the facilitator himself. He indicated that while all states of the region support the goal of the WMDFZ, views differ on how and when it should be created.

During the 2013 NPT PrepCom, the facilitator reported that he had carried out over 300 rounds of discussions with regional and international parties regarding the WMD-free zone.\(^3\) Unfortunately, those consultations had not yet produced any tangible results.

| States in the Middle East not yet parties to the main WMD treaties and regulations |
|-------------------------------|-------------------|
| NPT: Israel.                  | IAEA Additional Protocol: Egypt, Iran, Israel, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Tunisia, and Yemen. |
| CTBT: Egypt, Israel, Iran, Saudi Arabia, and Yemen. |
| CWC: Egypt and Israel.        | BWC: Egypt, Israel, and Syria. |
Since the 2013 NPT PrepCom, the facilitator has organized three multilateral consultations in Glion, Switzerland to prepare for the conference. See below for more information.

**Postponement of conference**

As of 1 March 2014, a conference on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction had not yet been held or announced.

On 23 November 2012 the United States, one of the co-sponsors of the resolution and co-conveners of the conference, announced "the conference cannot be convened because of present conditions in the Middle East and the fact that states in the region have not reached agreement on acceptable conditions for a conference." Shortly after the announcement, the other co-sponsors the UK and Russia delivered similar statements. Both Russia and the UK, as well as UN Secretary General Ban Ki-moon, called for the conference to take place in 2013. During the 2013 NPT PrepCom, Russia expressed disappointment about the postponement of the conference and explained it had never given its consent to postpone it.

On 24 November 2012, the facilitator issued a press release regretting that the conference will not convene in 2012. Finland as the host government remained prepared and the facilitator together with the conveners and the states of the region will continue their efforts to "prepare the ground for the earliest possible convening of a successful conference, to be attended by all states of the region." To that end he proposed multilateral consultations to be held before the 2013 NPT PrepCom, as a step towards holding the actual conference.

The League of Arab States expressed regrets over the postponement of the conference in a statement on 25 November 2012. Mr. Nabil El-Araby, the Secretary-General of the League, stressed "all countries in the region except Israel have expressed their willingness to participate in the conference on schedule in accordance with what was agreed upon." Israel had been hesitant to announce its participation, even after all other states in the region had done so.

**Multilateral consultations after postponement**

The first multilateral consultations, as proposed by the facilitator, took place in Glion, Switzerland from 21-22 October 2013. Delegates from Iran, Israel, and Arab states took part in the meeting as well as representatives of the conveners. Little information has been given of the content of the meeting. Israel described it as a "preparatory session" and "mainly technical".

A second meeting was held 25-26 November 2013 in the same venue in Switzerland. The aim was to agree on the agenda for regional talks. According to reports, however, some key differences remain. While the meeting was closed and no public report was issued, off the record accounts have suggested that one of the central issues during the consultations was to determine the scope of the discussions. Arab states want to continue to focus on nuclear, biological, and conventional weapons and delivery systems. Israel remains determined to focus on the broader context of national security in the Middle East. No representatives of Iran partook in the second meeting; the specific reasons for it remained unclear. However, reports say Iran has not ruled out re-joining consultations at another time.

A third meeting was held in on 3-5 February 2014 at the same venue in Switzerland. At the time of the printing of this publication, no information about this meeting had been made available.

**Reactions in international fora**

The IAEA General Conference adopted the traditional resolution on the implementation of safeguards in the Middle East in 2010, 2011, 2012, and 2013. This resolution 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 in this resolution.

In 2010, the Arab League presented an IAEA General Conference resolution on Israeli nuclear capabilities. The resolution singled out Israel's nuclear programme, but was eventually rejected at the IAEA General Conference. At the 2011 and 2012 IAEA General Conference, the Arab League decided not to table a similar resolution in order to improve the atmosphere in light of the work to convene the 2012 MEWMDFZ Conference. After the postponement of the conference, the Arab League again presented the resolution at the 2013 General Conference but it was not adopted after receiving 51 votes against it and 43 in favour.

At the UN General Assembly First Committee in 2013, several states expressed their disappointment over the lack of progress on the MEWMDFZ. Delegates from the Arab Group, African Group, and Latin America among others expressed the need for setting a new date before the end of the year.
As in previous years, the resolution on “The establishment of a nuclear-weapon-free zone in the region of the Middle East” was adopted without a vote in the 2011 First Committee. Israel stated in its explanation of vote that it “remains committed to a vision in the Middle East developing eventually into a zone free of Chemical, Biological and Nuclear weapons, as well as ballistic missiles.”

The Israeli representative suggested that the process should begin with “modest” confidence-building measures and be followed by “the establishment of peaceful relations, reconciliation, mutual recognition and good neighborliness, and complemented by conventional and non-conventional arms control measures.” A “mutually verifiable” NWFZ could follow “in due course”. In 2012 and 2013 the resolution was again adopted without a vote. In the explanation of vote to the 2013 resolution, Israel expressed its continued commitment to the vision of the Middle East eventually developing into a WMD free zone. The Iranian explanation of vote expressed grave concerns that despite of repeated calls, Israel had not yet acceded to the NPT.

The 2013 NPT PrepCom was held in Geneva from 22 April to 3 May. In the months leading up to the meeting, threats of boycott from the Arab states were circulated, as a protest against the failure to convene the conference on the MEWMDFZ. To demonstrate its disappointment with the continued lack of progress on the implementation of the 1995 resolution, the Egyptian government decided to walk out of the PrepCom after the facilitator had delivered his report. While no other country followed Egypt’s walk out, others expressed frustration over the situation. This frustration was further expressed in a working paper submitted by the League of Arab States.

Other initiatives

In 2011, the IAEA organized a Forum on NWFZs. The discussion focused on how the experiences of existing NWFZs might apply to the development of such a zone in the Middle East. Following the adoption by the Board of Governors (BoG) of a resolution against its nuclear programme on 18 November 2011, Iran decided not to participate in the Forum. The Arab states as well as Israel participated.

The Council of the European Union has sponsored two seminars on “Middle East Security, WMD Non-proliferation and disarmament,” which were organized in Brussels by the EU Non-proliferation Consortium. The first seminar was held in 2011 and the second one was held in 2012.

During the 2013 General Debate of the UNGA, the Egyptian Foreign Minister, Mr. Nabil Fahmy, announced an initiative to support efforts for creating a MEWMDFZ. The initiative consists of three steps: all countries should deposit a letter with the UN Secretary-General stating their support for declaring the Middle East a WMDFZ; countries in the region outside of international conventions on weapons of mass destruction should, before the end of 2013, commit to joining them; and international efforts should be renewed to ensure the conference is swiftly held by Spring 2014. So far, no progress on this initiative has been reported.

Conclusion

The inability to hold a conference on a zone free of weapons of mass destruction in the Middle East is arguably one of the most disappointing developments since the 2010 outcome document was adopted. The states parties to the NPT, and in particular the co-sponsors of the 1995 Middle East resolution—the Russian Federation, the United States, and the United Kingdom—have not managed to implement the agreement made on this issue in 2010.

While three multilateral consultations have taken place since the conference was postponed, no clear results have come out of these. In the meantime, another year has passed. This issue will most certainly continue to be a dominating topic at the coming 2014 NPT PrepCom.

The failure to hold the conference in 2012 as stipulated in the outcome document was a significant set back for implementation of the agreements made in 2010. Failure to hold the conference in the near future will increase already existing doubts about the commitment by key actors relevant to this issue, and potentially weaken the trust in the NPT regime itself.
Endnotes:

7 Ministry of Foreign Affairs of Finland, Helsinki Middle East Conference (2012).
8 Ministry of Foreign Affairs of Finland, Helsinki Middle East Conference (2012).
12 F. Dahl, Iran, Israel take part in Middle East nuclear meeting – diplomats, Reuters, 5 November 2012; http://uk.reuters.com/article/2013/11/05/uk-nuclear-iran-israel-arabs-idUKBRRE9A40P820131105 (retrieved 2014-02-12).
17 Statement by Mr. Nabil Fahmy, Minister of Foreign Affairs of Egypt, to the 68th session of the UN General Assembly, delivered on 28 September 2013.
Universalization

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.

Exert all efforts
Four countries are currently not party to the NPT: the Democratic People’s Republic of Korea (DPRK), India, Israel, and Pakistan.

Democratic People’s Republic of Korea (DPRK)
The DPRK withdrew unilaterally from the nuclear Non-Proliferation Treaty (NPT) in January 2003, arguing that it from that point on was totally free from the International Atomic Energy Agency (IAEA) safeguards. There is still disagreement regarding the legality of the DPRK’s withdrawal from the Treaty.

The six-party talks between the DPRK, the United States, China, Russia, Japan, and the Republic of Korea were last held in December 2008. The DPRK pulled out of the talks shortly before conducting a second nuclear test in April 2009.

The G8 Summit’s declaration from June 2011 urged the DPRK to comply with its 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. Several calls by a large number of states are made repeatedly at the UN Security Council, and at the UN General Assembly’s First Committee each October.

India
India has never joined the NPT. It first tested nuclear weapons 1974 using plutonium obtained from CANDU reactors. It conducted a second round of tests in 1998, which resulted in UN Security Council resolution 1172. This resolution condemned the tests and demanded that both India and Pakistan, which had conducted tests in response, refrain from further nuclear tests. It also prohibited the export to either country of equipment, materials, or technology that could in away assist their nuclear weapons programmes. See the section below on “Actions that can negatively affect universality” for more details.

Pakistan
Pakistan has never joined the NPT. It conducted nuclear weapons tests in 1998 in response to India’s test. This resulted in UN Security Council resolution 1172, which condemned the tests and demanded that both India and Pakistan refrain from further nuclear tests. It also prohibited the export to either country of equipment, materials, or technology that could in away assist their nuclear weapons programmes. See the section below on “Actions that can negatively affect universality” for more details.

Israel
The international community has been aware of Israel’s nuclear weapons programme since the 1970s. Estimates vary on how many nuclear weapons and fissile material Israel possesses.

Efforts regarding Israel’s accession to the NPT are generally considered as part of the 2012 MEWMDFZ Conference. A MEWMDFZ would have significant positive impact for the universalization of the NPT, and therefore this process is relevant to this action. Unfortunately, no conference has been held as of the printing of this publication.

For more information on this issue, see the chapter on the Middle East.
Following the latest nuclear test by the DPRK, several resolutions at the 2013 session of the UN General Assembly's First Committee included more specific language on universalization of the NPT and concerns about the nuclear test. As in previous years, states not parties to the NPT chose to vote against or abstain on any resolutions containing calls for universalization.

### Actions that can negatively affect universality

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. Nuclear export groups, such as the NSG and the Zangger Committee, have reinforced this. These export groups have adopted guidelines that prevent members from exporting nuclear technology to non-states parties to the NPT. Therefore, granting the same “rights” to non-NPT states could negatively affect prospects of the universality of the treaty.

### Trade with non-NPT states parties

The US-India nuclear deal and the resulting NSG exemption waiver for nuclear trade with India were 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.

The agreement has been criticized for the fact that the 45 countries in the NSG have made a decision “on behalf” of the 189 states parties 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, and that the waiver is contrary to UN Security Council resolution 1172.

After the NSG waiver was approved in 2008 and since the adoption of the NPT Action Plan, several deals and cooperation agreements have been concluded between India and other NPT states. Several member states of the NPT, including Argentina, Australia, Canada, France, Kazakhstan, Republic of Korea, Russia, Tanzania, and the United Kingdom, have entered into a civilian nuclear cooperation with India.

Ahead of the NSG annual plenary meeting in the Netherlands on 23 and 24 June 2011 the United States circulated a “food for thought” paper as a follow-up to President Obama's announcement on 1 November 2010 in New Delhi of his support for Indian membership in the NSG. During this meeting, the NSG recommended that its members should “not authorize the transfer of enrichment and reprocessing facilities and equipment and technology” to any country that has not ratified the NPT, does not have a comprehensive safeguard agreement 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.

However, shortly after the NSG meeting, US Secretary of State Clinton stated that "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."
At its plenary in Seattle, 18–22 June 2012, the NSG discussed once more the issue of the 2008 waiver in favour of India as well as—in general terms—the question of a possible NSG membership for India on the basis of a revised US “food for thought” paper and a French paper. NSG states essential agreed that India has become a major player in the nuclear field and a majority of NSG states indicated that India now has to formalize its desire for membership. With regard to the next steps, the NSG Troika (Germany, Hungary, and South Africa) will work with India on a “terms of reference” document.

During the 2013 plenary meeting held in Prague, the NSG members considered “all aspects of the implementation of the 2008 Statement on Civil Nuclear Cooperation with India and discussed the NSG relationship with India.” However, so far there seems to be no consensus in the group on accepting India as a member.

In addition to this, 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 China’s international obligations and under IAEA supervision. In March 2011 China announced it was to sell further nuclear reactors to Pakistan. In December 2013, the Chinese government committed to loan $6.5 billion to finance the Pakistani nuclear power project.

**Permanent seat in the UN Security Council (UNSC)**

The current five permanent seats on the UNSC coincide with the NSW of 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 as well as for nuclear disarmament and non-proliferation.

Previously, the US has opposed India’s bid to become a permanent member on the grounds of nuclear proliferation concerns and because India has not signed the NPT. However, as of 8 November 2010, US President Obama indicated his support for India’s bid.

India was elected a non-permanent member of the UNSC 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 support India’s aim of a permanent seat. For example, Japan, Germany, and Brazil, which have also expressed a desire to become permanent members of the UNSC, all support a joint bid for permanent seats together with India and one or two African states.

**Nuclear Security Summits**

At the Nuclear Security Summit (NSS) in Washington in April 2010 and Seoul in March 2012, representatives of India, Pakistan, and Israel were invited to participate. Neither of the final communiqués included any call upon these countries to join the NPT, nor any reference to the NPT at all. These countries are on the list for participating in the 2014 meeting; whether any calls for joining the NPT will be included this time remains to be seen.
Non-proliferation obligations

**Action 24:**
The Conference re-endorse 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 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 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 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.
Non-proliferation obligations

The actions in this section involve some interpretation difficulties. For example, action 24 calls for the application of the IAEA Comprehensive Safeguards Agreement (CSA) in accordance with the provisions of article III of the NPT. Article III 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.” In this context, 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 (AP), for which some states call. As no agreement has been reached by NPT states parties on the interpretation of safeguards in today's context, this report's analysis is based on the view that the safeguards obligations represent the CSA unless the AP is specifically referenced.

Comprehensive Safeguard Agreements

Action 25 specifically calls upon those 18 NNWS that have not yet entered into force CSAs to proceed in doing so. Since May 2010, new CSAs have entered into force in eight of those 18 states, leaving only 10 countries without these agreements in place. Out of those ten, only five countries, Eritrea, Liberia, Micronesia, Sao Tome and Principe, and Somalia have not yet submitted CSA agreements for the consideration of the IAEA Board of Governors (BoG).

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 CSAs and APs. In every introductory statement to the IAEA BoG he reports on the progress made, the signatory of new agreements, developments in the cases of non-compliance, and the IAEA's role.

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. There are mainly three countries—the DPRK, Iran, and Syria—in which the IAEA says safeguard obligations are not fully complied with.

Democratic People’s Republic of Korea

The DPRK no longer considers itself a party to the NPT and therefore argues that it has no obligations under any safeguards agreement. Since April 2009 the IAEA has not had inspectors in the DPRK and since December 2002 it has not been permitted to implement safeguards.

The IAEA's resolutions GC(55)/RES/13, GC(56)/RES/14 and GC(57)/RES/14, adopted at the 2011, 2012, and 2013 IAEA General Conferences urge the DPRK not to conduct further nuclear tests and to comply with its obligations under the UNSC resolutions. They also call on the DPRK to come into full compliance with the NPT and to cooperate promptly with the IAEA.

The Director General urged the DPRK in his introductory statements to BoG meetings to implement all relevant non-proliferation obligations. He also presented a comprehensive report on the IAEA's previous verification activities in the DPRK in September 2011. In his statement to the BoG on 10 September 2012 the Director General declared that apparently progress has been made in the construction of a light water reactor, yet without access to the site the IAEA could not fully assess the situation. He called on the DPRK to fully comply with its obligations.

In February 2012, the new leader Kim Jong-Un announced a moratorium on nuclear and missile tests as well as on uranium enrichment. In exchange, the US government pledged to provide food aid. This agreement became obsolete following the launch of a rocket in April 2012. In May 2012, the new constitution adopted by the DPRK proclaimed its status as "nuclear-armed nation." On 12 December 2012, the DPRK carried out a new rocket launch. As a response, the UN Security Council adopted a new resolution (UNSCR 2087). Following that development, the DPRK carried out a third nuclear test on 12 February 2013. The Comprehensive
Test-ban Treaty Organisation (CTBTO) detected the test and measured it to be 5.0 in magnitude, around twice as large as their 2009 test (4.52) and considerably larger than the 2006 test (4.1). The location was indicated to be the same as the two previous tests by the DPRK.

In response to the nuclear test of DPRK, the UNSC unanimously adopted resolution 2094 (2013) on 7 March 2013 strongly condemning the test and maintaining sanctions previously imposed along with additional restrictions. Governments further condemned the nuclear test at the 2013 NPT PrepCom and the 2013 UN General Assembly’s First Committee.

In his statement to the BoG in November 2013 the Director General reiterated his concern with the nuclear programme of the DPRK. The IAEA to this point does not have access to the Yongbyon site and can therefore not determine whether the reactor has been re-started. The Director General repeated his previous calls upon the DPRK to comply with its obligations under relevant UN Security Council resolutions and to cooperate promptly with the IAEA by implementing the safeguard agreement as well as resolve all outstanding issues.

Iran

In the case of Iran, the IAEA has not found Iran to be in non-compliance with its NPT obligations and continues to verify the non-diversion of declared nuclear materials and activities at Iran’s nuclear facilities, in accordance with Iran’s CSA. 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.”

Since the 2010 NPT Action Plan, fourteen reports have been produced by the IAEA on Iran, which conclude that the IAEA is “concerned about the possible existence in Iran of past or current undisclosed nuclear-related activities including activities related to the development of a nuclear payload for a missile” and that the IAEA is not in a position to prove the exclusively peaceful nature of Iran’s nuclear programme.

The most prominent IAEA report was the one produced in November 2011, which included a 14-page annex summarizing all of the outstanding issues between the IAEA and Iran. Since the 2010 NPT Action Plan was adopted, the IAEA has held eleven rounds of talks with Iranian officials with the overall objective of resolving all outstanding issues. While these talks did not reach the goal of getting an agreement on a “structured approach to resolving all outstanding issues,” the IAEA and Iran came to an agreement during a meeting in November 2013 to “strengthen their cooperation and dialogue” to that end. In this context the parties adopted a “Framework for Cooperation” containing a set of six initial practical measures to be taken within three months. At the current stage, Iran is implementing those six measures with the IAEA and discussions have started on 21 January 2014 on the second phase of the “Framework for Cooperation.”

Since the 2010 NPT RevCon, three resolutions regarding Iran’s nuclear programme have been adopted: IAEA BoG resolution GOV/2011/69, IAEA BoG resolution GOV/2012/50, and UNSC resolution SC/1929.

On the diplomatic front, the P5+1 or E3/EU+3 —China, France, Russia, the UK, the US, and Germany—have met with Iran on seven occasions since May 2010.

Following a period of intensive diplomacy, the E3/EU+3 and Iran reached an agreement during negotiations in Geneva on 20-24 November 2013. In the “Joint Plan of Action” (JPA), Iran among other things committed itself to not enrich uranium over 5%, to dilute half of its stock of 20% enriched uranium stock to less than 5%, to not build new locations for the enrichment of uranium, to suspend activities at its heavy water reactor in Arak and to allow for enhanced monitoring by the IAEA. In return the E3/EU+3 will among other things suspend some US and EU sanctions against Iran and will refrain from imposing new nuclear-related sanctions by the UNSC, EU, and the US. Furthermore, a financial channel for humanitarian trade for Iran’s domestic needs will be established, using Iranian oil revenues held abroad (US$ 4.2 bio.).
On 20 January 2014, the IAEA reported that Iran was implementing its commitments according to the JPA. As a consequence, the EU and US started to lift some of their unilateral sanctions. The "First Step" of the JPA has now entered into force and the parties have started a six-month period of negotiations to reach a "Final and Comprehensive Solution".

Syria

Since the 2010 NPT RevCon, four reports have been produced by the IAEA. The most significant was presented to the BoG on 24 May 2011, where the Director General came to the conclusion that the destroyed building in DairAlzour "was very likely a nuclear reactor". Following this report, the IAEA BoG 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 DairAlzour 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.

In November 2011 the Director General wrote a letter inviting Syria to address the remaining outstanding issues regarding the full implementation of its safeguard agreement. Syria answered on 20 February 2012 asking for understanding of "the difficult circumstances and the difficult situation that Syria is passing through" and pledging continued cooperation with the IAEA. Later that year the IAEA carried out a physical inventory verification at the Miniature Neutron Source Reactor on 14 June 2012 and continue to monitor different "locations of safeguards relevance." However, the on-going civil war and chemical weapons use and subsequent destruction programme in Syria has resulted in a temporary shift of priorities towards resolving the conflict first.

Assessing and evaluating IAEA safeguards

IAEA initiatives

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.

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. Det er 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.

The IAEA Enhancing Capabilities of the Safeguards Analytical Services project was initiated in 2010. In his introductory statement to the BoG 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 in progress and scheduled to be completed in 2014. The scope of the ECAS project has been extended to include additional activities. Additional costs will be met through extra-budgetary funding. In September 2013 the new Nuclear Material Laboratory was inaugurated and functions from the old laboratory will be transferred over the coming 12 to 16 months.

Relevant decisions of the General Conference

In September 2010, the IAEA General Conference adopted as usual a resolution on "Strengthening the effectiveness and improving the efficiency of the safeguards system and the application of the Model Additional Protocol". Due to procedural questions, the 2011 IAEA General Conference was not able to adopt the resolution on strengthening the IAEA safeguards. However in 2012 the IAEA General Conference again adopted the resolution during its plenary meeting in September. Nonetheless, during the 2012 IAEA General Conference, the debate was very controversial on the "state-level approach" and operational paragraph 21 of the resolution "requests the Secretariat to report to the Board of Governors on the conceptualization and development of the State-level concept for safeguards." This report by the Director General was presented in August 2013 but was met with some criticism and did not meet the expectations of all member states. During the 2013 September BOG and GC meetings, the Secretariat was tasked with submitting a
In addition, the Secretariat listed eight questions raised by Member States and decided to hold technical meetings in early 2014 as a further part of the consultation process.

In 2013 the resolution was again adopted including this time three paragraphs on nuclear disarmament.

**Financial support**

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.

**Technical improvements**

The IAEA continued to work on the IAEA Safeguards Information System and Reengineering Project 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.

Germany has reported on taking steps to facilitate IAEA access to commercially available German satellite imagery. Germany has reported on taking steps to facilitate IAEA access to commercially available German satellite imagery.

In April 2013, as part of the IAEA Nuclear Energy Series, the Agency has published a technical report on the role of “safe-guards by design” of nuclear facilities, which relates to the consideration of safeguards throughout the lifetime of a nuclear facility.

**Other initiatives and organisations**

The European Safeguards R&D Association (ESARDA) held its annual meetings on 16–20 May 2011 in Budapest, on 22–24 May 2012 in Luxembourg, and 28–30 May 2013 in Bruges. Meetings organised by ESARDA together with the Institute of Nuclear Materials Management (INMM) have taken place on 16-20 October 2011 in Aix-en-Provence and on 23–28 September 2012 in Savannah, Georgia (US). The Asia Pacific Safeguards Network held its third plenary meeting in Bangkok from 29–31 October 2012. On 12 November 2013 three ESARDA working groups held a joint meeting on the IAEA state level concept with representatives of the IAEA, EURATOM, the European Commission’s Joint Research Centre, and other interested actors.

After its first report on “Optimizing the IAEA Safeguard System” published in 2011, the Centre for International Security and Arms Control Studies in Paris (CESIM) has, in cooperation with Switzerland, published a second report on December 2012 on “Strengthening cooperation between the IAEA and State or Regional systems of accounting for and control of nuclear material” and held a seminar at the Vienna Centre for Disarmament and Non-Proliferation on the margins of the September 2012 BoG and GC.
Other non-proliferation instruments

**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 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.
**Additional Protocol (AP)**

The Model AP\(^8\) to the IAEA Comprehensive Safeguards Agreement (CSA) requires states to provide the IAEA with information covering all aspects of a states’ nuclear fuel cycle. It also ensures 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.\(^81\)

As of 31 December 2013, 122 states have additional protocols in force.\(^82\) 21 states\(^83\) have signed an AP but have still not put it into force. Two states have been approved by the BOG, but have not signed the AP.\(^84\) Since May 2010, the AP has entered into force for 21 additional states parties.\(^85\)

**Small Quantities Protocol (SQP)**

States with little or no nuclear material may conclude, in addition to the CSA, a protocol “which holds in abeyance the implementation of most of the detailed safeguard procedures of comprehensive safeguards agreements.”\(^86\) In 2005, the IAEA BoG decided to modify the standard text of the SQP\(^87\) 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 to enable it to conduct verification activities in the field.\(^88\) Since May 2010, thirteen states have amended their SQPs,\(^89\) while 47 states still have not yet amended or rescinded their SQP. In addition, two countries have signed a new SQP,\(^90\) two states have rescinded their SQP, and four more SQPs have entered into force.\(^91\)

**Voluntary Offer Agreements**

For the five NWS under the NPT, 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.\(^92\) No changes or amendments to the VOAs have been reported since the 2010 NPT Action Plan was adopted.
Export control and nuclear cooperation

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 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.
Direct or indirect assistance

This action 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. The NPT states parties that have concluded nuclear energy cooperation agreements with non-parties to the NPT (see section on nuclear cooperation with India, Pakistan, and Israel) do not usually provide transparent information on how such nuclear exports do not directly or indirectly assist the development of nuclear weapons.

Export Controls

Action 36 refers to the existing agreed guidelines and understandings. This usually refers to the guidelines of the Nuclear Suppliers Group (NSG) and the Zangger Committee. All member states of these groups are implementing such guidelines in their national legislation concerning nuclear exports. In June 2013 the NSG finalized a review of its trigger and dual-use lists with 28 amendment to keep "pace with advances in technology, market trends and security challenges."

Nuclear cooperation and safeguard agreements

Apart from 12 states, all non-nuclear weapon states parties to the NPT have signed a CSA. The five NWS of the NPT have Voluntary Offer Agreements (VOAs) related to some of their nuclear material and facilities dedicated to peaceful uses of nuclear energy (see previous chapter).

Many nuclear cooperation deals have been concluded in the past year between NPT states parties, none involving the 13 states without a CSA in force. For the majority of those deals, the implementation of IAEA safeguard obligations is an explicit part of the agreement. This shows a wide acceptance of IAEA safeguards as a valid verification tool for the peaceful uses of nuclear energy and proliferation prevention.

States non-parties to the NPT

For states non-parties to 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." Currently the IAEA is implementing these agreements with India, Israel, and Pakistan.

By avoiding defining safeguards obligations, the phrase “brought into force IAEA safeguard obligations” has been interpreted to allow deals with states non-parties to the NPT, since they are implementing the item-specific safeguard agreements on their declared peaceful facilities. Since the adoption of the 2010 NPT Action Plan, several trade agreements between an NPT state and a non-NPT state have been made.

Illicit trade and trafficking of nuclear material

IAEA Instruments

The IAEA has developed several instruments dealing with illicit trade and trafficking of nuclear material:

The IAEA incident and trafficking database (ITDB) records and analyses incidents of illicit trafficking in nuclear and other radioactive material. As of December 2013 the ITDB has 120 states participating in the programme. At the time of going to print with this report, no new incidents were reported in 2013.
EU initiatives

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

- 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.\(^{110}\)
- 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.\(^{111}\)
- In April 2013 the European Commission launched a new European nuclear security-training centre (EUSECTRA) to combat illicit trafficking of nuclear and radioactive materials.\(^{112}\)

EUROPOL and INTERPOL

Since May 2010, Europol has started or completed different projects and initiatives related to illicit trafficking on nuclear and radiological materials to a greater or lesser extent.\(^{113}\) Interpol has also implemented some projects in this field.\(^{114}\)

Newly Independent States (NIS) Nuclear Trafficking Database

The NIS Nuclear Trafficking Database\(^{115}\) is a project of the Nuclear Threat Initiative (NTI), where researchers are compiling information from hundreds of foreign and domestic news sources as well as from field reports. Since the adoption of the 2010 NPT Action Plan, the NIS Nuclear Trafficking Database has reported several incidents.\(^{116}\)

Nuclear cooperation

In the context of the NPT, states have debated whether or not language such as that in 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.

However, 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 UNGA 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, but no detailed examples have been given.

Existing restrictions on the development and trade of nuclear technology

The Nuclear Suppliers Group (NSG) is a consortium of nuclear supplier countries that seeks to contribute to non-proliferation efforts by drawing up guidelines for nuclear-related exports.\(^{117}\)

The Zangger Committee is another group of nuclear supplier states,\(^{118}\) whose 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 not legally-binding.

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.\(^{119}\)

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”.\(^{120}\) What these “international obligations” should consist of is difficult to objectively define without a decision by, for example, an 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 UNSC resolutions and resolutions from the IAEA BoG. Others believe that it should only include the original CSA 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 2010 NPT Action Plan was adopted, developing states have used international fora such as the UNGA 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. Such statements have been made at the UNGA general debate, the UNGA First Committee, the IAEA General Conference, as well as the 2012 and 2013 NPT PrepComs.

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 G8 declared its support for "the exchange, in conformity with the obligations of the NPT, of equipment, materials and scientific and technological information to the peaceful uses of nuclear energy, in particular for developing countries."\textsuperscript{121}
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.

**Action 61:**
Encourage States concerned, on a voluntary basis, to further minimize highly enriched uranium in civilian stocks and use, where technically and economically feasible.

**International Security Standards**
The IAEA has classified the following instruments as fundamental for nuclear security:122
- Convention on the Physical Protection of Nuclear Material (CPPNM);
- International Convention for the Suppression of Acts of Nuclear Terrorism (Nuclear Terrorism Convention);
- UN 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);
- Nuclear Security—Measures to Protect Against Nuclear Terrorism, 2006 GC(50)/13; and
- UN Security Council resolution 1887 (2009), nuclear security and terrorism.
Physical protection of nuclear material
Convention on the Physical Protection of Nuclear Material (CPPNM)

2010

Changes since May 2010: Bahrain (09 June 2010 entry into force), Lao P.D.R. (29 October 2010 entry into force), Lesotho (17 September 2010 entry into force), Malawi (16 January 2013 entry into force), Vietnam (3 Nov 2012 entry into force)

Amendment to Convention on the Physical Protection of Nuclear Material
From 4–8 July 2005, the IAEA held a “CPPNM Amendment Conference” where an amendment to the treaty was adopted. 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. For the amendment to enter into force, two-thirds of the states parties to the Convention have to ratify, accept, or approve the amendment. At the time of the conclusion of the NPT RevCon in May 2010, 36 contracting parties to the CPPNM had ratified the
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Since then, 38 additional countries have ratified or accepted it. However, 76 states are parties to the Convention but have not yet ratified the amendment.

- Parties: 73
- Remaining states needed to bring amendment into force: 31
- States parties to the Convention that have not yet ratified the amendment: 77

United Nations instruments to combat nuclear terrorism

Both the International Convention for the Suppression of Acts of Nuclear Terrorism and the 2006 Measures to Protect Against Nuclear Terrorism focus on the danger of proliferation of nuclear material into the possession of so-called non-state actors.

The UN General Assembly adopted the International Convention for the Suppression of Acts of Nuclear Terrorism on 13 April 2005. It entered into force on 7 July 2007 and currently has 115 signatories and 90 parties. 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.

International Convention for the Suppression of Acts of Nuclear Terrorism

Since May 2010, the Convention has 23 new parties. 52 states have signed the Convention but not yet ratified it.

- Parties: 90
- Signatories: 115

On 28 September 2012, the UN Secretary-General held a high-level meeting on countering nuclear terrorism on the margins of the UN General Assembly. The outcome of the meeting resulted in a Chair’s summary.

United Nations Security Council instruments

UN Security Council (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 and UNSC 1540 on the non-proliferation of weapons of mass destruction was adopted unanimously under Chapter VII of the UN Charter on 28 April 2004.

The UNSC extended the mandate of resolution 1373 (2001) three times until 25 April 2021. In 2010, the 1540 Committee adopted revised procedures to rationalize, improve, and accelerate response to assistance requests and facilitate matchmaking. The UNSC 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.

The UNSC adopted resolution 1977 on 20 April 2011. The resolution is a follow-up to UNSC resolution 1540 (2004). The resolution extends the mandate of the 1540 Committee to monitor efforts to prevent WMD from being acquired by terrorists or other non-state actors for another 10 years.

Through resolution 1540, the UNSC called upon all states to present to the 1540 Committee a first report, not later than six months from the adoption of the resolution, 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 RevCon, several countries have submitted reports and some have made requests for assistance. There has also 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.
In February 2012 a review of the implementation of resolution 1540 in 2011 was transmitted to the UNSC stating an "upward trend in progress made by States in implementing resolution 1540." A report reviewing the implementation of the resolution 1540 in 2012 has noted further progress, however, more efforts are needed to improve e.g. implementation, capacity-building, and cooperation with other organisations.

Handling of radioactive sources

The IAEA Code of Conduct on the Safety and Security of Radioactive Sources was approved by the IAEA BoG in September 2003. While not covering nuclear material addressed in the CPPNM, the Code applies to all other radioactive sources "that may pose a significant risk to individuals, society and the environment." The supplementary Guidance on the Import and Export of Radioactive Sources was approved by the IAEA BoG in September 2004. 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.

119 states have expressed their support for the Code in a letter to the Director General of the IAEA. 58 countries explicitly support all aspects of the supplementary Guidance on the Import and Export of Radioactive Sources. Most states have designated a national point of contact for radioactive sources; however, 14 states have not yet done so. Numerous states have not responded at all to the IAEA self-assessment questionnaire.

Physical Protection Objectives and Fundamental Principles

The "Physical Protection Objectives and Fundamental Principles" are the result of the work of a Working Group appointed by the Informal Open-ended Expert Meeting convened by the Director General of the IAEA from 2001. The group agreed on four objectives and twelve principles to complement the CPPNM and the recommendations contained in INFCIRC/225/Rev.4 (Corrected). Measuring implementation of these objectives and principles is beyond the scope of this report, however, they seem to be included in the work of member states and the IAEA.

INFCIRC/225/Rev.4 (Corrected)

The IAEA recommendations on the physical protection of nuclear material and nuclear facilities (INFCIRC/225/Rev.4) were published in 2005. In 2011 the IAEA published a fifth revised version. 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.

IAEA GC(50)/13 (2006) Nuclear Security—Measures to Protect Against Nuclear Terrorism

IAEA document GC(50)/13 contains the Annual Report by the Director General on "Nuclear Security—Measures to Protect Against Nuclear Terrorism" and the Agency's activities to that end. In an annex to that report the Director General lists fifteen guidelines and documents, which were being prepared for the IAEA "Nuclear Security Series." Since then further publications for that series were prepared by the IAEA. After the adoption of the NPT Action Plan in 2010, the Agency has published six recommendations and guides on Nuclear Security for member states to refer to.

UN Security Council Resolution 1887 (2009)

In September 2009 the UN Security Council adopted resolution 1887 (2009) after a meeting on nuclear non-proliferation and disarmament. The resolution focuses on strengthening existing non-proliferation measures, the reduction of existing weapons stockpiles and the control of fissile material. At the time it was described as an historic agreement, but has since been integrated in the greater nuclear security agenda and not received specific attention.

Other initiatives in the field of nuclear security

Nuclear Security Summit process

Just before the 2010 NPT RevCon, the US hosted the first Nuclear Security Summit (NSS), which resulted in a joint communiqué and a work plan. Work on this plan is taking place at the moment; some recommendations also deal with illicit trafficking of nuclear materials.
The follow-up meeting held in Seoul, Republic of Korea in March 2012 focused on discussing how to strengthen the international nuclear security regime to prevent nuclear terrorism. The final communiqué of the 2012 Summit translates the outcome from the Washington meeting in 2010 into concrete actions and provides measures to prevent nuclear and radiological terrorism.

Some of these actions include: “minimization of highly enriched uranium (HEU); ratification of relevant international agreements on nuclear security such as the amended Convention on Physical Protection of Nuclear Material and International Convention for the Suppression of Acts of Nuclear Terrorism; and the establishment of Centre’s of Excellence to provide relevant training and education.”

The next meeting on 25–25 March 2014 will take place in the Hague, Netherlands. It will build on the work of the previous two summits and address ways to prevent nuclear terrorism by “maintaining effective security of all nuclear and other radioactive materials; reducing the amount of nuclear material in the world; improving the security of nuclear material and radioactive sources; [and] improving international cooperation.”

**Proliferation Security Initiative (PSI)**

This initiative 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 weapons of mass destruction. PSI is an informal arrangement among countries. Since May 2010, PSI has carried out a set of workshops on both regional and bilateral levels and for new members. By 2013, the PSI has grown to include the endorsement of 102 nations. However, a number of countries have expressed opposition to the initiative. A political high-level meeting celebrating the 10-year-anniversary of the PSI was held 27–28 May 2013 in Warsaw. During this meeting steps to further the initiative were agreed upon.

**Global Initiative to Combat Nuclear Terrorism**

The Global Initiative to Combat Nuclear Terrorism (GICNT) is an international partnership of 85 nations and four official observers who are committed to working individually and collectively to implement a set of shared nuclear security principles. Since May 2010, the GICNT has welcomed nine new partner countries and has carried out different activities on a regular basis.

**World Institute for Nuclear Security (WINS)**

The Austrian non-governmental organisation has currently 1615 members in 91 countries. It tries to provide a forum for those individuals accountable for nuclear security to promote and share best security practices. To do that it has published best practices guides as well hosted international workshops and launched the WINS Academy.

**World Customs Organization (WCO)**

The Working Group on Border Management established under the United Nations Counter-Terrorism Implementation Task Force held its inaugural session at WCO headquarters from 11 to 12 January 2011. 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.

**Meetings on nuclear security**

The first International Regulators Conference on Nuclear Security was held on 4–6 December 2012 in Washington, D.C. The conference was hosted by the United States Nuclear Regulatory Commission and was direct result of the 2012 Nuclear Security Summit. Regulators were discussing how to enhance regulatory approaches at civilian facilities and the establishment of the adequate regulatory framework.

UN Secretary-General Ban Ki-moon convened a high-level meeting on counter terrorism in New York on 28 September 2012 with a specific focus on strengthening the legal framework. The session was organised by the Counter-Terrorism Implementation Task Force Office and was attended by 130 states discussing possible ways beyond the UNSC resolution 1540 (2004) and the already existing conventions. Apart from strengthening the legal framework to prevent nuclear terrorism, the meeting’s objective was to enhance capacity-building efforts to assist states in ensuring the effective implementation of their international obligations.

On 1–5 July 2013, the IAEA hosted an International Conference on Nuclear Security. The conference was attended by 125 member states and 21 organisations and discussed “past, present and future of nuclear security world”. It addresses in detail various aspects of nuclear security such as the enhancement of nuclear security regimes, the security of radioactive sources and detection and response architecture. The results of the meeting will also serve as input for the preparation of the IAEA’s next Nuclear Security Plan for 2014–2017. In the Ministerial Declaration released in the context of the conference, member states reaffirmed the primary responsibility of the state with regard to maintaining effective security of all nuclear material under their control, which includes nuclear material used...
for military purposes. Furthermore they encouraged states to make use of the existing assisting mechanism of the IAEA and to join the relevant conventions.\textsuperscript{182} The IAEA has planned many meetings and conferences to address aspects of nuclear security during the year 2014.\textsuperscript{183}

**Highly Enriched Uranium (HEU)**

There have been efforts both on national and international levels to reduce the use of HEU. The global amount of HEU decreased from about 1600±300 metric tonnes in 2009\textsuperscript{184} to 1475±125 metric tonnes in 2010, to 1440±125 tonnes in 2011, and further down to 1380±125 tonnes in 2013.\textsuperscript{185} However, separating civil and military use of HEU is difficult.

According to the International Panel on Fissile Materials (IPFM), 30 countries have at least 1 kilogram of HEU in their civilian stock.\textsuperscript{186}

**Reductions of HEU stockpiles**

Some countries have recently taken measures to reduce their HEU stockpiles.

- **Poland**: In September 2010, 354.8 kg of uranium and 11.2 kg of plutonium was transferred from Poland to Russia. All HEU will be eliminated from Polish territory and the remaining shipments are planned for 2012, and 2015 or 2016.\textsuperscript{187}  
- **Serbia**: In December 2010, the US announced the removal of 13 kg of Russian-origin HEU spent fuel from the Vinca Institute of Nuclear Sciences in Serbia. The shipment is the culmination of an eight-year effort to remove all HEU from Serbia and makes that nation the sixth country to eliminate all of its HEU since April 2009.\textsuperscript{188}  
- **China**: confirmed its MNSR-Shandong reactor, a HEU research reactor, was shutdown in December 2010.\textsuperscript{189}  
- **Ukraine**: At the Seoul 2012 Nuclear Security Summit, Ukraine announced that it has completed the removal of enriched uranium from the country’s territory.\textsuperscript{190}  
- **Czech Republic**, **Mexico**, and **Viet Nam** have converted research reactors using HEU fuel to LEU fuel.\textsuperscript{191}  
- **Between April 2010 and March 2012** the US has down-blended about 10.5 metric tonnes of HEU.\textsuperscript{192}  
- **Kazakhstan** recently eliminated 33 kilograms of HEU at the Institute of Nuclear Physics in Almaty by down-blending the material into low-enriched uranium at the Ulba Metallurgical Plant.\textsuperscript{193}  
- **Belgium**, **France**, the **Netherlands**, and the United States have a joint project to convert the production of medical isotope molybdenum-99 from the use of HEU targets to LEU targets.\textsuperscript{194}  
- **In December 2012** US-origin HEU was successfully returned from Austria. After the removal of this fuel no HEU remains in Austria.\textsuperscript{195}  
- 72.8 kilograms of HEU spent fuel were successfully removed from the Institute of Nuclear Physics in Tashkent, Uzbekistan, in August 2012. No HEU remained at the Institute.\textsuperscript{196} In April 2013 the NNSA announced that it had removed all HEU from the Czech Republic.\textsuperscript{197}  
- **During the International Conference on Nuclear Security in July Vietnam** announced that it had with the support of Russia and the US removed all HEU from Vietnam.\textsuperscript{198}  
- **In November 2013** the US Department of Energy announced that all HEU had successfully been removed from Hungary in a joint effort with Russia and the IAEA.\textsuperscript{199}  

Several other national initiatives to promote reductions of HEU are reported in the national progress reports from the 2012 Nuclear Security Summit.\textsuperscript{200}

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|}
\hline
Year & Global amount of Highly Enriched Uranium (HEU) (in tonnes) & \\
\hline
2009 & 1600 ± 300 & \\
2010 & 1475 ± 125 & \\
2011 & 1440 ± 125 & \\
2013 & 1380 ± 125 & \\
\hline
\end{tabular}
\caption{Global amount of Highly Enriched Uranium (HEU) (in tonnes) by year.}
\end{table}

An IAEA international working group\textsuperscript{201} of commercial experts was launched in August 2010, as a result of the “Consultancy on Conversion Planning for Mo-99 Production Facilities from HEU to LEU.”\textsuperscript{202} Their efforts aim to identify areas of potential multilateral collaboration in support of HEU to LEU conversion at/by the current major producers: NTP, Covidien, AECL/Nordion, and IRE, keeping in mind that processing technology is considered business confidential by all major producers. The group will support the consideration of LEU-based production by future producers such as the facility in Dimitrovgrad, Russia. A technical representative from NIIAR (Russia) participated in the IWG kick-off meeting. Three areas of work were identified during the first
meeting. The Coordinated Research Project (CRP) on Developing Techniques for Small Scale Indigenous Mo-99 Production Using Low Enriched Uranium (LEU) was initiated in 2005. Currently, eight agreement holders and six contract holders are either developing local production capabilities or supporting the development work of others.

Norway and Austria together with the Nuclear Threat Initiative hosted the second International Symposium on the minimisation of HEU on 23–25 January 2012. The meeting was a follow-up to the first symposium in June 2006. It focused on the minimisation of HEU in civilian uses around the world and facilitated a dialogue about different efforts to minimise and eventually eliminate the use of HEU in the civilian sector. Participants reviewed the progress made so far and addressed challenges the possessors of the biggest HEU stocks, the US and Russia are facing in their reduction efforts.
Endnotes:

6 Changes in voting behaviour compared to 2009.
7 Canada voted ‘no’ in 2013.
8 Rwanda changed to abstain in 2013.
9 Bhutan voted ‘yes’ in 2013.
10 Brazil, Ecuador, Egypt, India, Mauritius, Russia, Syria, and Zimbabwe abstained in 2013.
11 Russia and UK changed their votes to ‘no’ in 2013.
12 China abstained in 2013.
13 Voting results from the 2013 session of the UNGA First Committee: http://www.reachingcriticalwill.org/disarmament-fora/unga/2013/resolutions
14 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
15 Argentina, Australia, Canada, France, Kazakhstan, Mongolia, Namibia, Republic of Korea, Russia, Tanzania, United Kingdom. India may also be seeking uranium from various countries in Africa, including Angola, Gabon, Namibia, Niger, Nigeria, Tanzania and Uganda. 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.
22 F. Dahl, India may have to wait to join sensitive nuclear export body, Reuters, 20 June 2013; http://in.reuters.com/article/2013/06/20/nuclear-india-nsg-idINDEE950A0A20130620 (retrieved 2014-02-20).


104 Safeguards agreements in force: INFCIRC/249/Add.1.


106 For further details, please see the chapters on Universality and on nuclear cooperation.


108 IAEA, Incident and Illicit Trafficking Database - Incidents of nuclear and other radioactive material out of regulatory control 2013; http://www-ns.iaea.org/downloads/security/itdb-fact-sheet.pdf. In 2012 the name has been changed from Illicit Trafficking Database to Incident and Trafficking Database.

109 Ibid.


113 Projekt Rutherford assesses the criminal activities related to the illicit trafficking of nuclear and radiological materials; the EU Bomb Data System (EBDS) is intended for sharing intelligence and technical information on explosives, explosive and incendiary devices, and chemical, biological, radiological, nuclear, and explosive (CBRNe)-related incidents; 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.

114 Project Geiger aims at gathering comprehensive data on the illicit traffic in nuclear and radiological materials, analysing the threats, and assisting with international investigations. Additionally INTERPOL is offering training courses on various topics such as counter nuclear smuggling.


118 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. The NPT Action Plan Monitoring Report March 2014

119 At the September 2010 general debate of the UNGA, the Cuban representative argued “the existence of a club of the privileged and the countries of the South denial of the right to a peaceful use of nuclear power should cease.”

120 Statement at the IAEA General Conference, delivered by Australia on 22 September, 2010.


123 Changes since May 2010: Bahrain (09 June 2010 entry into force), Lao P.D.R. (29 October 2010 entry into force), Lesotho (17 September 2010 entry into force), Malawi (16 January 2013 entry into force), Vietnam (3 Nov 2012 entry into force).


126 Ibid.


131 Ibid.


134 Ibid.


Nuclear cooperation

Action 47:
Respect each country’s choices and decisions in the field of peaceful uses of nuclear energy without jeopardizing its policies or international cooperation agreements and arrangements for peaceful uses of nuclear energy and its fuel cycle policies.

Action 48:
Undertake to facilitate, and reaffirm the right of States parties to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy.

Action 49:
Cooperate with other States parties or international organizations in the further development of nuclear energy for peaceful purposes, with due consideration for the needs of the developing areas of the world.

Action 50:
Give preferential treatment to the non-nuclear-weapon States parties to the Treaty, taking the needs of developing countries, in particular, into account.

Action 51:
Facilitate transfers of nuclear technology and international cooperation among States parties in conformity with articles I, II, III, and IV of the Treaty, and eliminate in this regard any undue constraints inconsistent with the Treaty.

Action 60:
Promote the sharing of best practices in the area of nuclear safety and security, including through dialogue with the nuclear industry and the private sector, as appropriate.

Action 52:
Continue efforts, within IAEA, to enhance the effectiveness and efficiency of its technical cooperation programme.

Action 53:
Strengthen the IAEA technical cooperation programme in assisting developing States parties in the peaceful uses of nuclear energy.

Action 54:
Make every effort and to take practical steps to ensure that IAEA resources for technical cooperation activities are sufficient, assured and predictable.

Action 55:
Encourage all States in a position to do so to make additional contributions to the initiative designed to raise 100 million dollars over the next five years as extra budgetary contributions to IAEA activities, while welcoming the contributions already pledged by countries and groups of countries in support of IAEA activities.

Action 56:
Encourage national, bilateral and international efforts to train the necessary skilled workforce needed to develop peaceful uses of nuclear energy.
The right to nuclear energy

Actions 47 and 48 are subject to interpretation of both the wording of the specific actions as well as relevant provisions of the Nuclear Non-Proliferation Treaty (NPT) itself. However, by examining statements at the International Atomic Energy Agency (IAEA) General Conference, IAEA press releases, and IAEA reports and documents, this report has 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’s General Debate and its First Committee as well as the plenary discussions during the 2012 and 2013 NPT PrepComs of the 2015 NPT. Review Conference Some states have raised the issue in international fora and called for equal treatment of NPT states parties trying to pursue nuclear energy, but no detailed examples have been given.

By examining nuclear energy cooperation between states parties, the scope of the technical cooperation programme of the IAEA and other relevant cooperation arrangements for nuclear energy (see next section on nuclear cooperation), we have found no concrete signs that indicate that these actions are not implemented.

Since May 2010, a number of new bilateral agreements were signed between states parties to the NPT,1 showing a continued emphasis on nuclear energy cooperation.

Preferential treatment

Under action 50, we looked at the different nuclear deals with non-nuclear weapon states parties to the NPT and nuclear deals with states non-parties to the NPT. The US-India nuclear deal and the resulting exemption from the Nuclear Suppliers Group (NSG) for nuclear trade with India were concluded well before the 2010 NPT Action Plan was adopted. However, as this was the first time such a deal was concluded with a state non-party to the NPT, it has set a standard for similar deals.

The agreement has been criticized for the fact that the 45 countries in the NSG have made a decision “on behalf” of the 189 states parties of the NPT.2 Objectives have been raised that the NSG was never given the authority to reinterpret the NPT, overturn NPT decisions, or violate existing international standards. When the NSG waiver was approved in 2008, ten additional states joined the US in approving nuclear trade agreements with India. Since the adoption of the 2010 NPT Action Plan, several new deals and cooperation agreements have been concluded between India and other NPT member states.3 In 2013, those that already had made deals earlier have agreed on follow-up deals or followed through on those previous agreements.

Ahead of the NSG annual plenary meeting of June 2011 in Noordwijk, The Netherlands, the United States circulated a “food for thought” paper4 as a follow-up to President Obama’s announcement on 8 November 2010 of his support for Indian membership of the NSG. On 23 and 24 June 2011, the NSG adopted new guidelines that can be interpreted as affecting the exemption of India granted in 2008.5

At a plenary meeting in Seattle in June 2012, the NSG discussed once more the issue of the 2008 waiver in favour of India as well as—in general terms—the question of a possible NSG membership for India on the basis of a revised US “food for thought” paper and a paper from the French government. It has been reported that the NSG agrees that India has become a major player in the nuclear field, and a majority of NSG states have indicated that India now has to formalize its desire for membership. With regard to the next steps, the NSG Troika (Germany, Hungary and South Africa) will work with India on a “terms of reference” document. During its annual plenary meeting held on 13-14 June 2013 in Prague, the NSG revised its “Trigger and Dual-Use” list of controlled exports the group had initiated in 2010. The members of the NSG also 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.”6 As of January 2014, India has not submitted any papers to apply for membership to the NSG. It is said that it will only take that step, when a positive response is certain. However, there does not yet seem to be consensus in the group on this issue and discussions are on-going still.7

In addition to these developments, in June 2010, China planned to provide Pakistan with two new nuclear reactors. In March 2011, China announced it was planning to sell further nuclear reactors to Pakistan.8 In December 2013, the Chinese government committed to loan $6.5 billion to finance the Pakistani nuclear power project.9

Facilitating transfers

Action 51 is subject to interpretation of both the wording of the specific actions as well as relevant provisions of the NPT itself. Examining this action would require a more comprehensive examination of the right to “peaceful uses” 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 is beyond the scope of this report. However, nuclear energy cooperation agreements have increased in numbers and more countries are developing nuclear energy infrastructure.10 During the plenary debate of the 2012 NPT Preparatory Committee the Non-Aligned Movement (NAM) expressed “its deep concern on the continued imposition and/or maintaining of limitations and restrictions on exports to developing countries of nuclear material” and transfer of nuclear technology and international cooperation should be supported and pursued “in good faith and without
During the 2013 NPT PrepCom, the NAM reiterated its concerns and called for the immediate removal of “any restrictions or limitations posed on the peaceful uses of nuclear energy, including restrictions on exports to other States parties of nuclear material, equipment and technology for peaceful purposes.”

Sharing of best practices

There has been some effort to promote the sharing of best practices such as:

- **IAEA Technical Cooperation Programmes INT/0/085**: Sharing best practices for the design and management of technical cooperation projects.
- **IAEA Communication Tool InTouch**: Interactive communication platform to enhance communication between actors. It allows registered users to complete and maintain their professional profile online, and to apply for a fellowship, scientific visit, training course or meeting, or for expert/lecturer assignments.
- **G8 Summit**: The Nuclear Safety and Security Group (NSSG) of the G8 submitted its report in May 2011. The NSSG shared best practices and lessons learned in implementing the International Initiative on 3S-Based Nuclear Energy Infrastructure and identified several key findings on safety, security, and safeguards.
- **Nuclear Security Summit**: In the communiqué of the 2012 Nuclear Security Summit in Seoul participating states commit themselves to work closely with the IAEA to encourage cooperation and to share best practices on the management of radioactive sources as well as provide technical assistance to states upon request.

Cooperation within the IAEA

**IAEA Technical Cooperation programme**

In order to evaluate implementation of “enhancing the effectiveness” and “strengthening” the technical cooperation (TC) programme, we have looked at newly established programmes within the IAEA. In this respect, a significant number of new cooperation programmes and training courses have been initiated and implemented since May 2010. The IAEA has published a medium-term strategy from 2012–2017, which addresses some of the issues dealt with in the action plan such as facilitating access to nuclear power and providing effective technical cooperation.

InTouch, the interactive online communication platform for the IAEA technical cooperation community mentioned above, has been operational since 17 February 2011.

**IAEA funding**

In order to examine the resources of the technical cooperation programme, this report compares the target figure set by the IAEA BoG with the pledged amounts by governments and the rate of attainment of those pledged amounts. However, the IAEA does not release pledged amounts or rate of attainment of individual states—only total numbers—with regard to their contributions to the Agency’s Technical Cooperation Fund (TCF). It is therefore impossible to make an accurate examination of how individual states parties have acted to ensure that IAEA resources for technical cooperation activities are sufficient, assured, and predictable. It is only possible to make an estimated guess based on the target figure set by the IAEA BoG and the likelihood of states meeting this target.

The TCF is currently being financed through voluntary contributions of member states. During the plenary discussion of the IAEA General Conferences, member states such as Switzerland, Liechtenstein, and the Netherlands suggested the IAEA should apply established UN standards, since technical cooperation is its primary and fundamental task and therefore should be funded under the regular budget. Several developing countries underlined the importance of the technical cooperation programme for developing countries and stressed that it should not be politicized in any way.

In its annual resolution on “Strengthening of the Agency’s technical cooperation activities,” the 2010, 2011, 2012, and 2013 IAEA General Conferences stressed the need to work on achieving the goal of sufficient, assured, and predictable resources for the TCF. In order to do so, the resolution suggested, a working group should comprehensively review the nature of the technical cooperation resources and discuss ways of making the TCF sufficient, assured, and predictable. It should also address the relationship between the levels of the overall budget and the TCF. In 2011 the BoG decided that a working group on the regular budget and the TCF target will be established in 2013. Accordingly, during a special session on 31 July 2013 the BoG announced it would establish a “Working Group on Financing the Agency’s Activities” after the September General Conference to work on, among other issues, rendering the resources for the TCF “sufficient, assured and predictable.”
The Peaceful Uses Initiative

At the 2010 NPT RevCon, the US announced that it would supplement support for “peaceful uses” of nuclear energy with $50 million in additional funding over the next five years as part of President Obama’s Peaceful Uses Initiative (PUI). Through the PUI, the US has already supported numerous IAEA projects related to human health, food security, water resource management, and nuclear power infrastructure development.\textsuperscript{33} In a statement during the IAEA Technical Assistance and Cooperation Committee Meeting on 25–27 November 2013, Ambassador Macmanus announced that the US has contributed $31 million to the PUI. Several other IAEA member states have also announced that they would contribute with funds and joined the initiative.\textsuperscript{34}
Nuclear safety

**Action 57:**
Ensure that, when developing nuclear energy, including nuclear power, the use of nuclear energy must be accompanied by commitments to and ongoing implementation of safeguards as well as appropriate and effective levels of safety and security, consistent with States’ national legislation and respective international obligations.

**Action 59:**
Consider becoming party, if they have not yet done so, to the Convention on Nuclear Safety, the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the International Convention for the Suppression of Acts of Nuclear Terrorism, the Convention on the Physical Protection of Nuclear Material, and to ratify its amendment so that it may enter into force at an early date.

**Action 62:**
Transport radioactive materials consistent with relevant international standards of safety, security and environmental protection, and to continue communication between shipping and coastal States for the purpose of confidence-building and addressing concerns regarding transport safety, security and emergency preparedness.

**Action 63:**
Put in force a civil nuclear liability regime by becoming party to relevant international instruments or adopting suitable national legislation, based upon the principles established by the main pertinent international instruments.

**Action 64:**
The Conference calls upon all States to abide by the decision adopted by consensus at the IAEA General Conference on 18 September 2009 on prohibition of armed attack or threat of attack against nuclear installations, during operation or under construction.

Safety Problems
The accident at Japan’s Fukushima Dai-ichi Nuclear Power Station in March 2011 has raised attention and concerns over the safety of nuclear energy facilities worldwide. Though Japan has an advanced nuclear energy industry, this accident highlighted many dysfunctions in the management of the Japanese nuclear programme as demonstrated by information released by the Japanese government itself or by the IAEA. Aside from structural issues such as the design of construction or the cooling systems, the lack of independence of the Japanese Nuclear Safety Commission also posed problems in dealing with the aftermath of the tsunami and earthquake.

Following the accident, the Japanese government suggested actions to be taken to address these safety problems. The suggested actions vary from reassessing the danger posed by earthquakes and tsunamis, redesigning safety structures, and securing the power supply and alternative cooling systems in case of an accident, to the enhancement of training responding to severe accidents. It also suggested that the Japanese Nuclear Safety Commission should separate from Ministry of Economy, Trade and Industry. In June 2012, therefore, the Nuclear Regulation Authority was established.

On 15–17 December 2012, the Japanese Government held a Ministerial Conference on Nuclear Safety in the Fukushima prefecture, in co-sponsorship with the IAEA. The Conference issued a report on lessons learned from the Fukushima accident. Despite these efforts, the clean-up of the nuclear site and its surroundings still presents a great challenge for both the Japanese government as well as the operator of the plant, Tokyo Electric Power. Whether residents will be able to return to the towns in close proximity to the site remain uncertain.

Aside from the Fukushima accident, nuclear safety problems in other countries have been reported, in particular in Canada, France, United States, and United Kingdom.
Incident reporting IAEA - Nuclear Events Web-based System (NEWS)

As part of the IAEA incident-reporting mechanisms the NEWS-database offers a list of events reported by states. The database provides a short summary of the event together with the corresponding International Nuclear and Radiological Event Scale (INES) rating, which rates nuclear and radiological events according to their safety significance and has designated National Officers for reporting and contact purpose. Since May 2010 over 75 reports have been added to the system. However reporting differs from state to state and consistency of INES ratings at the lower level is not given.

EU stress test

As a reaction to the accident at Fukushima, the EU decided to review the safety of all EU nuclear plants on the basis of “comprehensive and transparent risk and safety assessments”. The Western European Nuclear Regulators’ Association of the European Nuclear Safety Regulators Group (ENREG) put forward a proposal on 23 March 2011 for stress tests on European nuclear power plants and on 1 June 2011 operators started reviewing their facilities.

On 4 October 2012 the European Commission released the results of the stress test report. The safety of 132 reactors on 58 sites currently active in Europe was reviewed. The report showed a significant list of deficiencies.

As a response to the European stress tests Greenpeace commissioned a “Critical Review of the EU Stress Test performed on Nuclear Power Plants”. The review discusses important shortcomings of the EU stress tests based on national reports and peer reviews, making an important contribution to a more complete understanding of nuclear power plant safety.

On 13 June 2013 the European Commission announced that legally-binding reviews will take place every six years. Member states will agree on specific topics and a common methodology for the reviews, which will be conducted by multinational teams.

Statements, resolutions, and conferences

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 G8 and the EU adopted a whole chapter on nuclear safety, emphasizing that nuclear safety should be addressed as a top priority on the G8 agenda.

On 7 June 2011, the G20 adopted different measures on strengthening nuclear safety. Those measures were discussed at the IAEA Ministerial Conference on Nuclear Safety that took place on 20–24 June 2011 in Vienna. The elements of the final declaration of the Conference were turned into an Action Plan on Nuclear Safety negotiated by the IAEA member states during the summer 2011. The Action Plan was finally adopted by the IAEA BoG and endorsed by the IAEA General Conference in September 2011.

However, in the Chair’s conclusions on the item related to this issue, it is mentioned that some members expressed the need to address the current global nuclear safety regime through a more ambitious, stringent, and binding action plan. It was also noted by some member states that the action plan should be further developed, reviewed, and updated in the light of the progress made and the concrete results achieved by its implementation.

On 22 September 2011, UN Secretary General Ban Ki-moon organized a high-level meeting (HLM) on Nuclear Safety and Security in New York. However, the meeting did not result in a fruitful debate.

From 27–31 August 2012 states parties to the Convention on Nuclear Safety (CNS) met in Vienna for discussions of long-term safety issues. A second extraordinary meeting was called in light of the Fukushima accident to discuss lessons learned so far as well as review the effectiveness of the provisions of the Convention. The Conference ended by deciding to set up a working group with the task of making proposals to strengthen the CNS. The next regular review meeting will be held 24 March–4 April 2014 and proposals to amend the CNS will be discussed.

From 15–17 December 2012 an International Ministerial Conference on Nuclear Safety was held in Fukushima to discuss lessons learned from the Fukushima Dai-ichi accident. Participants took part in three working sessions dealing with the progress of international efforts aimed at strengthening nuclear safety, including through the implementation of the IAEA action plan of June 2011, as well as of measures to protect people and the environment from ionizing radiation. States were encouraged to utilise the existing IAEA safety standards since the implementation of these instruments and thus prevention of further accidents are the most effective way to strengthen nuclear safety. Additionally the need for communication to the public and coordination among involved organisations after a nuclear or radiological emergency was highlighted.

On 17 September 2013 the European Commission and the IAEA signed a memorandum of understanding on nuclear safety establishing a framework of understanding for cooperation to help improve nuclear safety in Europe. Different forms of cooperation, such as expert peer
reviews, are summarised under this framework to allow both organisations to benefit of the work of the other and help avoid duplication of effort. As in previous years the IAEA held various workshops and trainings addressing different aspects of nuclear safety in 2013.

**Adherence to nuclear safety conventions**

While the commitment in action 59 is relatively weak and only obliges states parties to “consider” becoming a party, this report examines how many states parties to the NPT are not yet party to these treaties and how this has changed since the adoption of the 2010 NPT Action Plan. Since the Fukushima disaster, this action is considered in a new light. Despite its voluntary nature, nuclear safety and security is becoming increasingly important and more attention to these conventions and instruments is essential.

**Convention on Nuclear Safety:**

2010

![Map of Convention on Nuclear Safety in 2010](image1)

2014

![Map of Convention on Nuclear Safety in 2014](image2)
Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency:

- Parties: 111
- Signatories: 68
- Changes since May 2010: Botswana (11 December 2011 entry into force), Lao P.D.R. (9 June 2013 entry into force), Lesotho (17 October 2013), Mauritania (19 October 2011 entry into force), Paraguay (8 March 2013 entry into force), Tajikistan (23 October 2011 entry into force)

Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management:

- Parties: 69
- Signatories: 42
- Changes since May 2010: Albania (27 September 2011 entry into force), Armenia (20 August 2013 entry into force), Bosnia and Herzegovina (31 October 2012 entry into force), Chile (25 December 2011 entry into force), Gabon (28 July 2010 entry into force), Ghana (30 August 2011 entry into force), Indonesia (30 June 2011 entry into force), Kazakhstan (08 July 2010 entry into force), Malta (15 December 2013 entry into force), Mauritania (18 December 2011 entry into force), Mauritius (14 July 2014 entry into force), Montenegro (07 November 2010 entry into force), Republic of Moldova (24 May 2010 entry into force), Oman (26 August 2013 entry into force), Saudi Arabia (18 December 2011 entry into force), Vietnam (7 January 2014 entry into force)

Convention on Early Notification of a Nuclear Accident:

- Parties: 117
- Signatories: 69
- Changes since May 2010: Bahrain (4 June 2011 entry into force), Botswana (11 December 2011 entry into force), Cambodia (5 May 2012 entry into force), Dominican Republic (29 May 2011 entry into force), Georgia (05 November 2010 entry into force), Lao P.D.R. (9 June 2013 entry into force), Lesotho (17 October 2013 entry into force), Mauritania (19 October 2011 entry into force), Paraguay (8 March 2013 entry into force), Tajikistan (1 October 2011 entry into force)

Transportation of radioactive materials

Most transports of radioactive materials occur between the different stages of the nuclear fuel cycle. Usually materials will be transported in solid form and under the existing regulations. The objective of these regulations is the protection of "people and environment from the effects of radiation during the transport of radioactive material."58

The IAEA General Conference adopts annually a resolution on "Measures to Strengthen International Cooperation in Nuclear, Radiation, Transport and Waste Safety". The part of the resolution that focuses on transport of nuclear material, as in previous years, urges states that do not have national regulatory documents governing the transport of radioactive material to adopt and implement such documents expeditiously, and urges all member states to ensure that such regulatory documents are in conformity with the current edition of the IAEA's transport regulations. As usual, the 2010, 2011, 2012, and 2013 IAEA General Conferences adopted the resolution on "Measures to strengthen international cooperation in nuclear, radiation, transport and waste safety".59

A Transport Safety Conference was held on 17–21 October 2011 in Vienna to encourage application of appropriate levels of safety and security during transport. The IAEA Transport Safety Standards Committee continues to meet twice a year and various trainings meetings regarding transport safety took place in 2011, 2012, and 2013.60

During the UN General Assembly General Debate in October 2010, the Caribbean Community (CARICOM) expressed concerns about the continuing "transhipment of nuclear and toxic waste through the Caribbean Sea." It reiterated "strenuous and forceful rejection of the continued use of the Caribbean Sea for the shipment or transhipment of nuclear waste" and called for "a full cessation of this activity in the Caribbean,"61 CARICOM continues to call for states engaged in the transportation of these hazardous materials should enact the necessary domestic legislation to give effect to the provisions of the IAEA Transport Regulations. CARICOM also reiterated its calls for on-going dialogue between shipping states and states in the Caribbean region prior to the transhipment of radioactive materials. In 2011, 2012, and 2013, CARICOM repeated their concerns during the First Committee Plenary Meeting.62
Nuclear Liability

Since 2010, only a few states reported amendments of their nuclear liability legislation.64

During the IAEA General Conference in September 2010, Austria expressed interest in the creation of a global nuclear liability regime, though the conventions under discussion offered less protection for possible victims than the Austrian regulations in place and "the maximum liability amounts laid down in the Paris and Vienna Conventions were inadequate and that the principle of channelling liability claims was unsatisfactory."65 France called upon all states to recognize the importance of universalizing a civil nuclear liability regime.66 The European Union (EU) said it was examining the various legal regimes in the area of nuclear liability within the EU and possible improvements at the European level.67 In that connection the European Commission for Energy has held consultation with the public regarding "Insurance and compensation of damages caused by accidents of nuclear power plants (nuclear liability)". The results of these consultations, however, are not yet publicly available.68

Since national legislation for civil nuclear liability regimes for 189 states parties to the NPT is difficult to access and examine within the scope of this report, we have chosen to look at the main international instruments for civil nuclear liability. With regards to such international civil liability regimes, moderate progress has been achieved.

Adherence to the nuclear liability regimes (changes since May 2010):

• Joint Protocol Relation to the Application of the Vienna Convention and the Paris Convention: United Arab Emirates (entry into force: 29 November 2012)

Attack against nuclear installations

The 2011 IAEA General Conference considered agenda item 24 tabled by Iran and entitled "Prohibition of armed attack or threat of attack against nuclear installations, during operation or under construction". The General Conference adopted GC(XXIX)/RES/444 and GC(XXXIV)/RES/533, which noted that "any armed attack on and threat against nuclear facilities devoted to peaceful purposes constitutes a violation of the principles of the United Nations Charter, international law and the Statute of the Agency." A thorough discussion was held on all aspects of the issue. Member states recognized the importance attached to safety, security, and physical protection of nuclear material and nuclear facilities and, in that regard, expressed their views on the importance they attached to the protection of nuclear installations. They also noted the need to have the Agency involved in early notification and assistance in cases of radioactive release from nuclear installations.

Israel and the US have repeatedly suggested that with regard to preventing Iran from acquiring a nuclear weapon, every option available, including the military option, remained possible. Any such military action would be in violation of international law generally. In particular it would violate UNSC resolution A/RES/36/27 adopted on 13 November 1981, following the Israeli aggression against Iraqi nuclear installations.
Nuclear fuel cycle

Action 62:

Continue to discuss further, in a non-discriminatory and transparent manner under the auspices of IAEA or regional forums, the development of multilateral approaches to the nuclear fuel cycle, including the possibilities of creating mechanisms for assurance of nuclear fuel supply, as well as possible schemes dealing with the back-end of the fuel cycle without affecting rights under the Treaty and without prejudice to national fuel cycle policies, while tackling the technical, legal and economic complexities surrounding these issues, including, in this regard, the requirement of IAEA full scope safeguards.

Low Enrichment Uranium Bank

In 2006, the Nuclear Threat Initiative (NTI), a private US organization, pledged $50 million for an IAEA low-enriched uranium (LEU) bank to secure LEU supplies, on the condition that IAEA member states donate another $100 million and that the IAEA BoG approve the plan. Pledges from the US, the EU, Kuwait, the UAE, and Norway have been contributing to meet the $100 million goal. So far, Kazakhstan is the only country that has declared an interest in hosting the bank. The IAEA and the government of Kazakhstan are discussing the necessary technical matters.

On 27 November 2009, the IAEA BoG approved the initiative of the Russian Federation to establish a reserve of LEU for the supply of LEU to the IAEA for its member states. The fuel bank’s operator, Rosatom, announced on 1 December 2010 that the fuel bank stores 120 tonnes of low-enriched uranium. As of 3 February 2011 the LEU reserve in Angarsk is available to all IAEA member states.

The Ukraine and Armenia have purchased 10% in shares each of the International Uranium Enrichment Centre that hosts the LEU reserve.

On 3 December 2010, the IAEA BoG agreed to establish a nuclear fuel bank, endorsing a long discussed proposal without a dissenting vote from any of the 35 members. This new plan will set up a reserve of LEU under IAEA control.

Nuclear Fuel Assurance

The United Kingdom put forward a proposal during the IAEA BoG meeting in March 2011 aiming to assure the availability of nuclear fuel. It includes provisions that a supplier state promise “not to interrupt the supply of enrichment services (to a recipient state) for non-commercial reasons.” Unlike the IAEA LEU reserve in Angarsk or the planned LEU bank in Kazakhstan, this proposal does not include the stockpiling of fuel. Instead supplier and recipient come to a contractual agreement guaranteeing an uninterrupted supply. The IAEA BoG adopted the proposal on 10 March 2011.
Endnotes:


Additionally the following deals have been made:


Saudi Arabia – Argentina, October 2012: Argentina, Saudi Arabia Discuss Nuclear Cooperation, Global times, 10 October 2012; http://www.globaltimes.cn/content/737438.shtml (retrieved 2014-02-12).


Russia – South Africa, December 2013: A. Rzniuchenko, South Africa to sign civil nuclear energy agreement with Russia, Russia & India Report, 19 December 2013; http://indrus.in/world/2013/12/19/south_africa_to_sign_civil_nuclear_energy_agreement_with_russia_31783.html (retrieved 2014-02-12).

A more detailed list can also be found here: http://www.nei.org/News-Media/News/Contracts (retrieved 2014-02-12).
2 The current member states of the Nuclear Suppliers Groups (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.

3 Argentina, Canada, France, Japan, Korea, Mongolia, Namibia, Republic of Korea, Russia, UK.

4 Nuclear agreements between India and Argentina, Australia, Canada, France, Kazakhstan, Republic of Korea, Russia, Tanzania, UK, US have been reported.


7 For more information on this, see Section on Universalization of the NPT.


9 F. Dahl, India may have to wait to join sensitive nuclear export body, Reuters, 20 June 2013, http://in.reuters.com/article/2013/06/20/nuclear-india-nsg-idINDEE95J0A620130620 (retrieved 2014-02-12).


12 See list of nuclear cooperation deals and IAEA Technical Cooperation programmes below.


22 In June 2010, the BoG recommended the target figure of $86 million for contributions to the Agency’s TCF for 2011. This is an increase of $1 million from the previous year. According to the Technical Cooperation Report for 2011 the pledged amount of the TCF reached 89.3% of the target and the rate of attainment was at 86% by 31 December 2011. In June 2011, the BoG recommended the target figure of $88.75 million for contributions to the Agency’s TCF for 2012. This is an increase of $2.75 million from the previous year. In the Agency’s Annual Report for the TCF noted a 89.3% rate of attainment not including national participation costs, assessed programme costs or miscellaneous income. For 2013 the target figure is fixed at the same amount as 2012, namely $88.75 million. The final report by the IAEA on the pledges against the 2013 TCF will not be released until August/September 2014. For 2014 and 2015 the target figure is fixed at $90.25 million and $91.00 million respectively. The recommended target figure for voluntary contributions to the Agency’s TCF for the year 2013 by the BoG is $88.75 million. The final report by the IAEA on the pledges against the 2013 TCF will not be released until September 2014.

23 IAEA GC(54)/OR.3, IAEA, December 2010.

24 Ibid.

25 IAEA GC(54)/OR.5, IAEA, December 2010.

26 IAEA GC(54)/OR.3, IAEA, December 2010.

27 IAEA GC(54)/OR.2, IAEA, January 2011.

28 IAEA GC(54)/RES/9, IAEA, September 2010.

29 Again during the IAEA General Conference in September 2011, September 2012, and September 2013 a resolution Strengthening of the Agency’s technical cooperation activities was adopted more or less repeating the calls of the previous resolution. Compare IAEA GC(55)/RES/11, IAEA GC(56)/RES/11 and IAEA GC(57)/RES/11.

30 IAEA GC(54)/2, IAEA, August 2011, p. 19.

31 IAEA GOV(2011)37.


34 Australia, Brazil, the Czech Republic, France, Hungary, Indonesia, Ireland, Italy, Japan, Kazakhstan, New Zealand, the Republic of Korea, Sweden, the United Kingdom, and the European Commission.

35 Ibid.
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40 Canada: in March 2011, a leak was discovered at the Pickering Nuclear Generating Station. Demineralised water reached Lake Ontario and even though officials said it caused no risk to the population critics express concerns about the potential nuclear contamination of Lake Ontario in case of a severe accident. The leak has been stopped and the faulty pump replaced.

France: On 12 September an explosion at the nuclear waste plant in Marcoule, France, killed one person and injured four. The cause for the blast was not immediately clear, but no radioactivity has leaked outside the site. Later it was discovered that a furnace used to melting low-level and very low-level metallic radioactive waste had exploded and triggered a fire.

US: the Union of Concerned Scientists (UCS) published a report in March 2011 on the U.S. Nuclear Regulatory Commission (NRC) and nuclear power plant safety in 2010. They report of fourteen so-called near-misses, where security problems, equipment failure, poor maintenance of equipment and poor training of personnel led to incidents that could have had severe consequences. The UCS called for more thorough inspections by the NRC and more responsible approach of the owners of the nuclear plants when dealing with security issues.

UK: the Office of Nuclear Regulation publishes quarterly statements of nuclear in nuclear incidents at nuclear installations and quarterly site reports. It reported of twelve incidents at nuclear installations in Britain in the period from 2010 – 2012. Incidents include unplanned shutdowns, leaks and defective pumps of the cooling system.

For other countries, please see the list in the INES system, http://www-ns.iaea.org/tech-areas/emergency/ines.asp

41 The list of reported events since May 2010 can be accessed on the IAEA’s Information Channel on Nuclear and Radiological Events, http://www-news.iaea.org/EventList.aspx?ps=0&sc=EventDate&ps=100 (retrieved 2014-02-17).


49 The Action Plan consists of 12 actions that aim to strengthen the global nuclear safety framework:

• Undertake safety assessments;
• Strengthen IAEA peer reviews;
• Strengthen emergency preparedness and response;
• Strengthen national regulatory bodies;
• Strengthen operating organizations;
• Review and improve IAEA safety standards;
• Improve the international legal framework;
• Facilitate infrastructure for new nuclear programmes in member states;
• Strengthen and maintain capacity building;
• Ensure protection from ionizing radiation;
• Enhance transparency and effectiveness of communication; and
• Effectively utilize research and development.


54 Ibid.


57 Changes since May 2010: Albania (27 September 2011 entry into force), Bahrain (09 February 2011 entry into force), Bosnia and Herzegovina (16 September 2010 entry into force), Cambodia (4 July 2012 entry into force), Ghana (30 August 2011 entry into force), Kazakhstan (08 June 2010 entry into force), Oman (26 August 2013 entry into force), Paraguay (9 January 2014 accession), Saudi Arabia (16 June 2010 entry into force), Tunisia (20 July 2010 entry into force), Vietnam (15 July 2010 entry into force)

58 Existing international standards for the transport of radioactive materials:

59 IAEA GC(54)/RES/7, Measures to strengthen international cooperation in nuclear, radiation, transport and waste safety, September 2011, http://www.iaea.org/About/Policy/GC/GC54/GC54Resolutions/English/gc54res-7_en.pdf.


66 Ibid.


71 During voting, 8 countries voted against the plan and 3 abstained.


75 During voting, 28 countries supported the plan and 6 abstained. Pakistan was absent. The tally marked a shift from the vote a year earlier on another fuel bank proposal, authorizing Russia to set up a fuel reserve at the Angarsk site in Siberia.


77 Board of Governors Closes March Deliberations, IAEA, 10 March 2010.
Reaching Critical Will is the disarmament programme of the Women’s International League for Peace and Freedom (WILPF). Reaching Critical Will was created in 1999 in order to promote and facilitate engagement of non-governmental actors in UN processes related to disarmament. RCW was designed to increase the quality and quantity of civil society preparation and participation in UN disarmament processes and of NGO interaction with governments and the United Nations; to provide timely and accurate reporting on all relevant conferences and initiatives so that those unable to attend can stay informed, and to maintain a comprehensive online archive of all statements, resolutions, and other primary documents on disarmament. RCW also produces research studies, reports, statements, fact sheets, and other publications on key issues relevant to disarmament, arms control, and militarism.