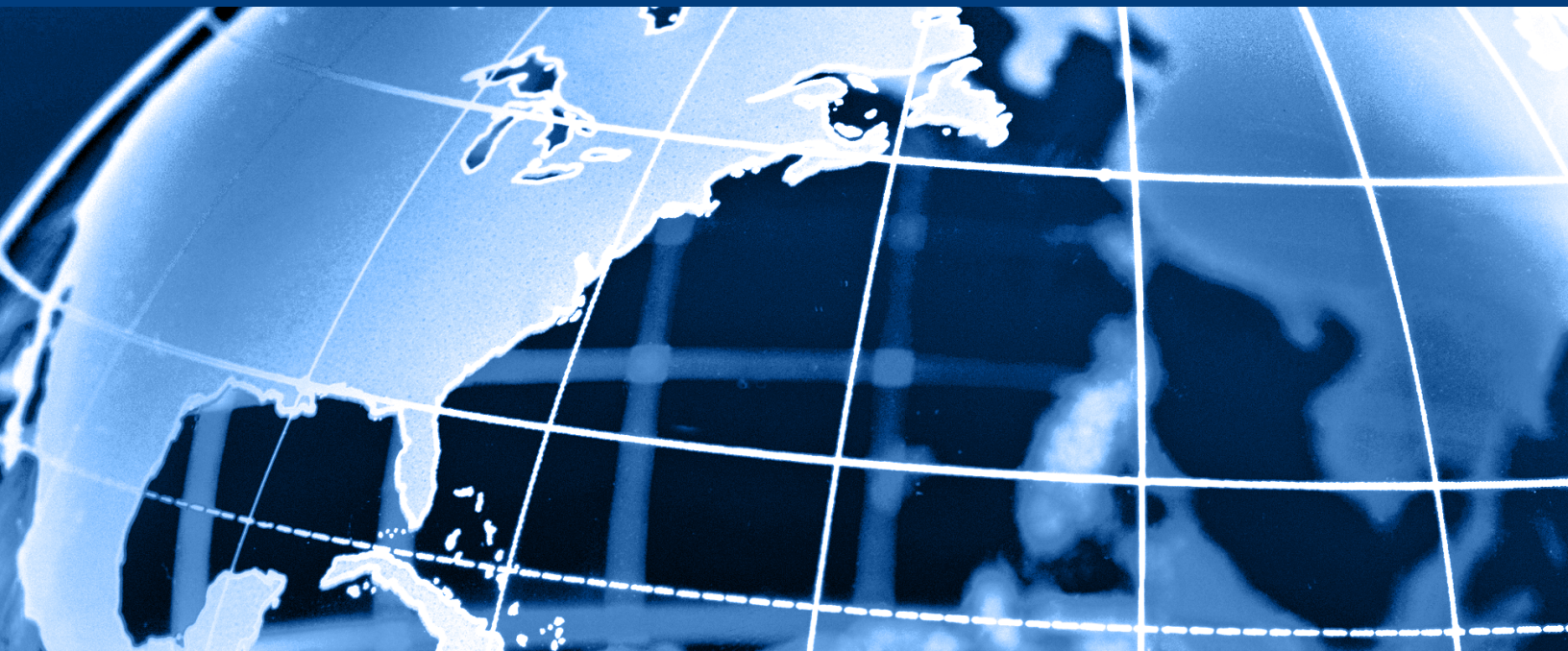


IMPLEMENTATION OF THE CONCLUSIONS AND RECOMMENDATIONS  
FOR FOLLOW-ON ACTIONS  
ADOPTED AT THE 2010 NPT REVIEW CONFERENCE  
DISARMAMENT ACTIONS 1-22  
MONITORING REPORT



Gaukhar Mukhatzhanova

Research assistance: Himayu Shiotani, Steven Anderle, Luejit Tinpanga, and Jessica Bufford

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**Monitoring Report**

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Research assistance: Himayu Shiotani, Steven Anderle, Luejit Tinpanga, and Jessica Bufford  
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April 2012



**Monterey Institute  
of International Studies**  
*A Graduate School of Middlebury College*

## **JAMES MARTIN CENTER FOR NONPROLIFERATION STUDIES**

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# INTRODUCTION

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The Eighth Review Conference (RevCon) of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) concluded on May 28, 2010 with the adoption by consensus of Conclusions and Recommendations for Follow-on Actions, which contain 64 action items across the three pillars of the NPT: nuclear disarmament, nonproliferation, and peaceful uses of nuclear energy. An additional set of recommendations contained in the final document pertains to the implementation of the 1995 Resolution on the establishment of a zone free of weapons of mass destruction (WMD) in the Middle East. While the adoption of the “action plan” was widely and deservedly regarded as a success, its long-term impact will depend on the implementation by the NPT member states.

Tracking the implementation of the action plan and assessing progress, however, is not an entirely straightforward task considering the number of action items, the range of activities they cover, challenges associated with obtaining reliable information, and the degree of specialized knowledge required. However, it is important for all NPT member states to have access to information that would allow them to monitor implementation and judge whether progress is or is not being made. With this in mind, the James Martin Center for Nonproliferation Studies (CNS) launched a project tracking the implementation of the 2010 Action Plan and providing regular assessments to all interested parties. This report is the first of such regular assessments and covers the first 22 action items – on nuclear disarmament.

The decision to focus on the disarmament pillar was affected by considerations of methodology and scope. Most of the actions in the disarmament section are subject to implementation by the five nuclear-weapon states (NWS), with only several items also pertaining to non-nuclear-weapon states (NNWS). Most actions in the nonproliferation and peaceful uses sections, on the other hand, can and/or should be implemented by all or most states parties. The scope of a study assessing the progress on the first pillar, therefore, was narrower, more focused, and ultimately, more feasible – at least for the first monitoring report.

The second consideration was the challenges posed by developing an adequate methodology for monitoring and assessment. A review of the entire action plan revealed that the disarmament section was significantly more “actionable” than others (except the Middle East) due to its formulation. Indeed, only the disarmament section of the Conclusions and Recommendations was initially conceived as an action plan. The first draft recommendations tabled by the chair of the 2009 Preparatory Committee meeting called for the adoption of a disarmament action plan by the 2010 RevCon,<sup>1</sup> and the chair of Subsidiary Body 1 on disarmament, Ambassador Alexander Marschik, from the beginning formulated the draft SB 1 report as an action plan. Citing the need for a balance between the pillars of the treaty, several states, including France and Russia, argued that there should be action plans for nonproliferation and peaceful uses as well, which led to efforts to “retrofit” the language negotiated in Main Committees II and III and SB 3 into an action-plan format. Although in the disarmament section itself some actions are broad, or formulated as “encouragements” rather than clear-cut commitments, the language in the other two sections suffers from vagueness to a

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<sup>1</sup> For a discussion, see Miles Pomper, “Report from the NPT Preparatory Committee 2009,” CNS Feature Story, May 26, 2009, [http://cns.miis.edu/stories/090526\\_npt\\_report.htm](http://cns.miis.edu/stories/090526_npt_report.htm).

much greater extent. CNS decided, therefore, to first concentrate on developing an assessment methodology for the disarmament action plan, with a view that subsequent reviews may also cover nonproliferation and peaceful use pillars.

## Methodology

To track implementation and assess progress, CNS developed a set of indicators of progress/success.<sup>2</sup> For the majority of action items, indicators are formulated as positive statements about measures being undertaken. For example, for Action 16 on fissile material declarations and disposition, one of the indicators is, “*States submit declarations/reports to the IAEA on stocks of fissile material declared as no longer needed for military purposes.*” Positive responses to an essentially true/false (yes/no) question about the above statement would indicate progress in implementing Action 16. This format allows for short summary assessments – such as “yes, action implemented,” “no action,” “progress,” etc. – on the basis of more detailed information on specific states’ activities.

Employing such indicators helps to break down the broader action items into more “digestible” parts, especially in cases where an item encompasses different kinds of activities and measures. Action 2, for example, commits states to “apply the principles of irreversibility, verifiability and transparency” in implementing the treaty, and CNS has formulated separate indicators for each of the principles. Irreversibility is thus covered by tracking states’ warhead dismantlement and fissile material disposition activities, and transparency through states’ declarations on their arsenals and reductions implemented. Action 4 on New START is another example, where – assigning separate indicators to different aspects of the action item – it was possible to recognize both significant progress in ratification and implementation of the treaty, as well as lack of movement on negotiating a follow-on agreement.

Indicators form a framework conducive to a dynamic review: for each action item, the focus is on tracking the measures implemented during a particular reporting period. Over time, this should allow one to observe change, be it positive or negative, from year to year, rather than report repeatedly on earlier actions. That said, the present report includes more background information than might at first appear necessary, but it serves to establish a baseline for future reviews, provides context, and recognizes measures that were implemented prior to the 2010 Review Conference.

In conducting assessments and evaluations, there is a natural tendency to strive to quantify results and to assign numeric values or grades to performance. Such an approach, however, did not appear feasible in the case of the 2010 Action Plan. While one could, conceivably, come up with a formula to give scores or letter grades to individual states (or actions), it was judged more appropriate to provide qualitative assessments. The types of short assessments are:

- \* **yes/no:** in cases where specific steps are taken/not taken, such as ratification of treaties, adoption of a reporting form, convening of a conference, establishment of an ad hoc body at the Conference on Disarmament, etc.;
- \* **degrees of progress** (limited, significant, no progress, etc.): in cases where the indicator does not presuppose a yes/no answer, or such answer was insufficient;

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<sup>2</sup> Indicator in this sense is a sign of change, or reflection of a situation.

- \* **action completed prior to 2010:** this is a special category, indicating that some states had already implemented measures required by certain action items prior to the adoption of the 2010 Action Plan (e.g., joining relevant nuclear-weapon-free zones (NWFZ), ratification of relevant NWFZ protocols, etc.)
- \* **red flags** (🚩): this type of assessment is used to flag contentious issues (where states' actions might be subject to very different interpretations by different observers) or areas of potentially greater concern, should certain observed developments or trends continue in the same vein.

Finally, it is necessary to note that evaluation of progress in general is complicated by the near-absence of specific targets and deadlines in the Action Plan. While Action 3, for example, calls for deep reductions in nuclear arsenals, there is no guidance on what (that is, what number of warheads or systems, or percentage of arsenal) would fall into the category of “deep reductions.” It is also not evident if all of the action items, or only some (and then, unclear which ones), are expected to be implemented by the 2015 RevCon – or by some other date, for that matter. NWS are supposed to report on the implementation of Action 5 in particular to the third PrepCom session in 2014, and the 2015 RevCon would then “take stock and consider the next steps,” but how much is really expected to be accomplished by then is up to different states to interpret for themselves.

Such ambiguity in targets and deadlines is not surprising, but does point to potential problems that are likely to arise further in the review cycle, as the NPT members attempt to assess progress. It is clear that expectations and ideas on just what constitutes “sufficient” (not to mention significant) progress will vary, and inability to cope with such differences would risk derailing the review of Action Plan implementation altogether.

## Brief Overview of Findings

Our initial assessment of implementation indicates that the overall progress since 2010 has been very limited, which is perhaps not surprising considering the early stage of the new NPT review cycle. Implementation has been uneven across different NWS and action items, but so were the starting points – in 2010, the United States was already more advanced in its level of transparency than other NWS; China had provided unilateral unconditional negative security assurances to NNWS; France had dismantled its facilities for producing fissile material for weapons, and so on.

We find that most of the measures implemented during the reporting period were, in fact, initiated or planned before the adoption of the Action Plan, whereas actions that require a significant change in behavior or revision of policies for the most part saw little or no progress in implementation (e.g., states that had not previously declared fissile material in excess of defense needs did not do so during the reporting period; states that had not provided information on their arsenal numbers or warheads dismantlement have not revised these policies since the 2010 RevCon).

The most significant progress was observed on Action 4 on New START: the treaty entered into force, and Russia and the United States successfully began its implementation. At the same time, the two countries have not been successful in overcoming their disagreements and making much headway on follow-on measures. Modest progress was made on Action 3 on reductions in arsenals: in addition to US-Russian bilateral reductions under the New START, the United Kingdom

announced the decision to unilaterally reduce its overall arsenal to no more than 180 warheads. There were also positive developments on Action 9, with Russia ratifying the protocols to the Treaties of Rarotonga and Pelindaba (albeit the latter with reservations), and the five NWS settling their long-standing disagreement with ASEAN over the provisions of the Southeast Asian Nuclear-Weapon-Free Zone (NWFZ) treaty.

Another welcome development is the engagement of the five NWS on verification issues, which appears as one of the most promising areas for progress in the near future. At the same time, consultations among the nuclear-weapon states, as called for in Action 5, are overall falling short of the expectations of the NNWS. So far, the NWS were able to report only the establishment of a working group on terminology, and due to the confidentiality of consultations, it is unclear to what extent other issues listed in Action 5 have been addressed.

A particularly important area that saw virtually no progress during the reporting period is the reduction of the role of nuclear weapons in military and security concepts (Action 5c, also covered under Action 1), which presumably should provide the overall context for the implementation of other concrete steps. The 2010 UK Strategic Defence and Security Review did signal a somewhat reduced role for nuclear weapons in the country's doctrine, but at the same time the UK is still considering the replacement of Trident, which would preserve its "independent deterrent" and project national reliance on nuclear weapons for decades ahead. There were signs of potential progress in the United States, where the new military strategy released in early 2012 does not exclude the possibility that the U.S. "deterrence goals can be achieved with a smaller nuclear force," which would allow a reduction of the role of nuclear weapons in the U.S. security strategy (please see Action 1). China's 2010 defense white paper reiterated the policy of no-first-use of nuclear weapons and stated that China would continue to "limit its nuclear capabilities to the minimum level required for national security." No new doctrinal documents were adopted during the reporting period in France and Russia, nor was there any indication that those states were working on further reducing their reliance on nuclear weapons. Furthermore, statements by President-elect Vladimir Putin in February 2012 suggest that Russia might even consider *strengthening* its "strategic deterrent," though it is not clear what this would entail. These statements have not been translated into policy, however, and in the report we flag this as a potentially problematic area.

In terms of other red flags, the report notes the ongoing modernization of arsenals in the NWS with respect to extended ranges of delivery systems, increased "effectiveness" of weapons, and extension of their lifetime – thus signaling continued, long-term reliance on nuclear weapons. Planned or ongoing nuclear cooperation with NPT outlier India is flagged as a problematic area in the context of implementing NWFZ treaties, particularly the Treaties of Central Asia, Pelindaba, and Rarotonga, as all three prohibit the supply of nuclear material and technologies to states without the IAEA comprehensive nuclear safeguards (and Additional Protocol in the case of Central Asia). Finally, the complete lack of state reporting on the implementation of disarmament and nonproliferation education recommendations (Action 22) since the July 2010 report of the Secretary-General is also a red flag, as promotion of such education has long-term implications for further disarmament and nonproliferation efforts.

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## **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.**

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The formulation of Action 1 is broad, and the assessment of which policies are “fully” compatible with the Treaty and which are less so is not methodologically straightforward. There will inevitably be different interpretations of compatibility among various states parties and observers, particularly in the already contested areas such as nuclear disarmament, implementation of safeguards, and exercise of Article IV rights. The action refers to the Treaty as a whole, but is placed in the Nuclear Disarmament section and specifically mentions the objective of a nuclear-weapon-free world. With this in mind, the present monitoring report will review implementation of this action in the context of nuclear disarmament with a focus on the policies and activities of the five nuclear-weapon states.

### ***Indicator 1.1. States’ actions are consistent with the NPT provisions and objective of nuclear disarmament***

Policies that are judged as compatible with the Treaty in this regard include measures on reducing the role of nuclear weapons in national security doctrines, reductions in arsenals, efforts towards negotiating and concluding multilateral disarmament agreement(s), and a ban on nuclear testing. Conversely, activities that are incompatible with the Treaty (specifically Article VI and the preamble) include the build-up of arsenals, production of fissile material for weapons purposes, nuclear testing, more aggressive nuclear postures expanding the role of nuclear weapons (stipulating more scenarios of their potential use), and lack of commitment to achieving a world without nuclear weapons. All of the above areas also receive greater attention under specific action items.

Warhead refurbishment/stewardship/life extension programs constitute a grey area in the assessment. On the one hand, such programs, along with being necessary for safety, are reflective of nuclear-weapon states’ decisions not to develop, produce and test new, qualitatively different nuclear warheads. At the same time, life extension programs can be interpreted as commitment to nuclear arsenals over the long-term. Another challenge is the modernization of delivery systems. While not producing new types of warheads, these projects ensure extended ranges of delivery vehicles, greater effectiveness and longer service life, which in turn projects the existence of, and reliance on, nuclear weapons for decades ahead.<sup>3</sup>

### **China**

China maintains the policy of minimal nuclear deterrence. China has for decades been considered to have the smallest nuclear arsenal among the five nuclear-weapon states, with an estimated stockpile of about 240 warheads.<sup>4</sup> This may no longer be the case in light of announced reductions in the UK’s nuclear arsenal. All information, however, is based on outside estimates, as China has never officially declared the size of its arsenal in terms of the number and type of warheads and delivery systems, deployed or non-deployed. It has not participated in any verifiable bilateral or multilateral reductions, and has not publicly announced any unilateral reductions in the number of nuclear weapons in its stockpile.

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<sup>3</sup> For a recent and comprehensive study of modernization efforts in nuclear weapon possessor states, please see Ray Acheson, ed., “Assuring Destruction Forever,” *Reaching Critical Will*, March 2012.

<sup>4</sup> “Chinese Nuclear Forces,” in *Armaments, Disarmament and International Security*, Part II: Military Spending and Armaments, 2010, SIPRI 2011 Yearbook, p. 340.

According to US sources, China is developing new nuclear weapon delivery systems, including road-mobile ballistic missiles, submarine-launched ballistic missiles, and nuclear-capable cruise missiles.<sup>5</sup> Some of these will likely replace older systems that will be phased out, but on balance experts argue that China is the only NWS whose arsenal is growing.<sup>6</sup> The PRC is believed to be increasing the portion of warheads it assigns to long-range missiles and, according to US intelligence estimates, "by the mid-2020s, China could 'more than double' the number of warheads" on its long-range missiles.<sup>7</sup> Without disclosure from China, it is difficult to either corroborate or dispute such assertions.

China maintains an official moratorium on nuclear testing since 1996, and does not appear to be developing or producing new nuclear warheads.<sup>8</sup> It has not, however, ratified the Comprehensive Nuclear-Test-Ban Treaty (CTBT). China has not declared a moratorium on the production of fissile material for weapons purposes, but according to the International Panel on Fissile Materials, as of 2011 it was not producing material for nuclear weapons.<sup>9</sup>

China is the only nuclear-weapon state that has an official no-first-use policy and provides unilateral assurances to non-nuclear-weapon states against the use or threat of use of nuclear weapons.

## France

France maintains its total arsenal at a maximum of 300 nuclear warheads, a cap announced in 2008 by President Nicholas Sarkozy. According to a working paper submitted by France to the 2010 NPT Review Conference, the arsenal is "fewer than 300," and France does not keep any nuclear warheads in reserve.<sup>10</sup> After canceling the ground-based leg of its nuclear triad in 1996, France deploys nuclear weapons on submarines (a fleet of four) and aircraft.<sup>11</sup> A new submarine-launched intercontinental ballistic missile "with a much-extended range," M-51, entered into service in 2010. According to The French White Paper on Defense and National Security (*Livre Blanc*), starting in 2015 this missile will be mated with a new warhead, currently under development (based on a "concept validated during the final series of nuclear tests in 1995 (sic)").<sup>12</sup>

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<sup>5</sup> "Military and Security Developments Involving the People's Republic of China 2011," Annual Report to Congress, US Department of Defense, 2011, [http://www.defense.gov/pubs/pdfs/2011\\_cmpr\\_final.pdf](http://www.defense.gov/pubs/pdfs/2011_cmpr_final.pdf); Hans M. Kristensen and Robert S. Norris, "Nuclear Notebook: Chinese Nuclear Forces, 2011," *Bulletin of the Atomic Scientists*, Vol. 67, No. 6 (November/December 2011), pp. 81–87, <http://bos.sagepub.com/content/67/6/81.full.pdf+html>

<sup>6</sup> Kristensen and Norris, "Chinese Nuclear Forces, 2011."

<sup>7</sup> *Ibid.*, p. 82

<sup>8</sup> Gregory Kulacki, "China's Nuclear Arsenal: Status and Evolution," Union of Concerned Scientists, October 2011, <http://www.ucsusa.org/assets/documents/nwgs/UCS-Chinese-nuclear-modernization.pdf>; Jeffrey Lewis, *The Minimum Means of Reprisal: China's Search for Security in the nuclear Age* (The MIT Press, 2007).

<sup>9</sup> "Global Fissile Material Report 2010. Balancing the Books: Production and Stocks," International Panel on Fissile Materials, December 2010, [http://www.fissilematerials.org/ipfm/site\\_down/gfmr10.pdf](http://www.fissilematerials.org/ipfm/site_down/gfmr10.pdf)

<sup>10</sup> "Nuclear disarmament: France's practical commitment," Working paper submitted by France to the 2010 NPT Review Conference, 14 April 2010, NPT/CONF.2010/WP.33.

<sup>11</sup> As a result of eliminating the ground-based leg, 30 short range Hades mobile missiles were dismantled by 1997, and 18 S3D strategic missiles were dismantled by 1998. The Plateau d'Albion, previously the base for ground-based nuclear forces in France, was also dismantled in 1998. "Dismantling the ground-to-ground component," *What France Has Done*, Booklet published by France TNP, <http://www.francetnp2010.fr/spip.php?article92>; "Dismantling the ground-to-ground component," Working paper submitted by France to the 2010 NPT Review Conference, 12 April 2010, NPT/CONF.2010/WP.35.

<sup>12</sup> *Livre blanc du défense et sécurité nationale (The French White Paper on Defence and National Security)*, 2008, p. 162.

Since 2008, France has not announced any further reductions in its nuclear arsenal. It is not party to any bilateral or plurilateral nuclear arms reduction agreements. France does not produce fissile material for weapons purposes, having dismantled its Marcoule and Pierrelatte facilities by 2008.<sup>13</sup> France is a party to the CTBT and dismantled its nuclear testing center in the Pacific (Centre d'expérimentation du Pacifique) in 1998.

In November 2010, France concluded an agreement with the United Kingdom on a new defense partnership aimed to increase cooperation between the two countries on a number of projects, including shared nuclear warhead research and simulation centers, which would allow them “to test the safety of their nuclear warheads” without conducting actual nuclear explosive tests.<sup>14</sup>

France's current nuclear doctrine is outlined in the 2008 *Livre Blanc* on national defense and security, which describes nuclear deterrence (dissuasion) as the ultimate guarantee of national security and independence.<sup>15</sup> Nuclear deterrence is further described as “strictly defensive” but vaguely defined as to “prevent a state-originated aggression against the vital interests of the country, from whatever direction and in whatever form.”<sup>16</sup> France appears, therefore, to place nuclear weapons at the heart of its national security and does not rule out their use against non-nuclear-weapon states.

## Russia

Russia is believed to possess the largest overall stockpile of nuclear warheads, though this has never been officially confirmed. Latest estimates from the *Bulletin of the Atomic Scientists* placed the size of Russia's arsenal, as of March 2011, at 2,430 strategic and about 2,000 non-strategic warheads, with an estimated total thus about 4,430 warheads, both deployed and in storage. There are also an estimated 5,500 warheads awaiting dismantlement.<sup>17</sup>

Russia, together with the United States, is party to the New START, a treaty which requires the two countries to reduce, by 2018,<sup>18</sup> their deployed warheads to no more than 1550, deployed ICBMs, SLBMs and heavy bombers to no more than 700, and deployed and non-deployed launchers to no more than 800.<sup>19</sup> New START has extensive bilateral verification provisions, but is not subject to verification by any third party.

According to the New START factsheet released by the U.S. Department of State in April 2012, as of March 2012, Russia had 1,492 deployed strategic warheads, down from 1,566 in September 2011 and 1,537 in February 2011. (One must note that these numbers are based on the specific counting rules under the New START, which assign one warhead per bomber, unlike START.) Russia

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<sup>13</sup> “Nuclear disarmament: a concrete step by France. Visit to France's former fissile material production facilities for nuclear weapons,” a Working Paper submitted by France to the Third Session of the Preparatory Committee for the 2010 NPT Review Conference, May 13, 2009, NPT/CONF.2010/PC.III/WP.37.

<sup>14</sup> Adrian Croft and Emmanuel Jarry, “France, UK agree to unprecedented military cooperation,” Reuters, November 1, 2010, <http://www.reuters.com/article/2010/11/02/britain-france-idUSLAG00638720101102>

<sup>15</sup> In reference to its nuclear deterrence (dissuasion), the *Livre Blanc* states that, “Elle est la garantie ultime de la sécurité et de l'indépendance nationale...La dissuasion nucléaire est strictement défensive.” *Livre blanc du défense et sécurité nationale*, June 2008, p. 69-70.

<sup>16</sup> *Ibid.*, p. 64. For a discussion of what France's “vital interests” might be, please see Bruno Tertrais, “The Last to Disarm? The Future of France's Nuclear Weapons,” *Nonproliferation Review*, Vol. 14, No. 2 (July 2007), pp. 251-273.

<sup>17</sup> Hans M. Kristensen and Robert S. Norris, “Nuclear Notebook: Russian Nuclear Forces, 2012,” *Bulletin of the Atomic Scientists*, Vol. 68, no. 2 (March/April 2012), p. 88.

<sup>18</sup> I.e., seven years after treaty's entry into force.

<sup>19</sup> New START text, [www.state.gov/documents/organization/140035.pdf](http://www.state.gov/documents/organization/140035.pdf)

reduced the number of deployed strategic delivery systems from 521 to 494 during the same period.<sup>20</sup>

Russia's current military doctrine, released in February 2010, foresees a role for nuclear weapons in a potential large-scale or regional war. It stipulates that nuclear weapons might be used in response to a nuclear attack, an attack with other WMD, or "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."<sup>21</sup> This has raised somewhat the threshold for employing nuclear weapons compared to the 2000 doctrine, but Russia does not have a no-first-use policy and does not unconditionally pledge to not use nuclear weapons against non-nuclear-weapon states.<sup>22</sup>

Russia reportedly tested a new warhead during the test launch of the SS-19 missile in late December 2011. This "hypersonic maneuverable warhead" was developed earlier and reportedly first tested in 2004.<sup>23</sup> The test did not involve a nuclear explosion. Russia is a party to the CTBT and has maintained a moratorium on explosive nuclear testing since 1990. Russia also maintains an official moratorium on the production of fissile material for weapons purposes and is engaged in material disposition programs through its agreements with the United States (see Action 16).

Russia is actively modernizing its delivery systems. In August 2010, Russian Foreign Minister Sergey Lavrov stated that, while Russia will be reducing its strategic nuclear arms (under the New START provisions), it would also continue to modernize its arsenal. Lavrov's article asserts that "our decision to continue cutting and limiting strategic offensive weapons does not mean that we are giving up the modernization of strategic nuclear forces at this stage. As long as nuclear weapons exist, Russia's national security must be strengthened by phasing in modern, more effective and reliable types of strategic offensive weapons in conditions of coordinated and planned reduction of their aggregate amount."<sup>24</sup> In February 2011, Russia's First Deputy Minister of Defense, Vladimir Popovkin, told journalists that around \$70 billion would be spent on Russia's strategic triad of land, sea and air nuclear forces between 2011 and 2020.<sup>25</sup>

Russia has been retiring some of its SS-18, SS-19, and SS-25 land-based missiles, replacing them with SS-27s (Topol-M).<sup>26</sup> In addition to the silo-based single-warhead (RS-12M2) and mobile single-warhead (RS-12M1) variations of SS-27, the newest modification, known as RS-24 Yars, is equipped with multiple independently-targeted re-entry vehicles (MIRV).<sup>27</sup> The deployment of RS-24 began in March 2010, and the "first full regiment" was completed by July 2011.<sup>28</sup> In late 2011, Russian media

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<sup>20</sup> "Factsheet: New START Treaty Aggregate Numbers of Strategic Offensive Arms," U.S. Department of State, April 6, 2012, [www.state.gov/t/avc/rls/178058.htm](http://www.state.gov/t/avc/rls/178058.htm)

<sup>21</sup> Russian Federation Presidential edict, "The Military Doctrine of the Russian Federation," February 5, 2010.

<sup>22</sup> For analysis, please see Nikolai Sokov, "The New, 2010 Russian Military Doctrine: The Nuclear Angle," James Martin Center for Nonproliferation Studies, February 5, 2010, [cns.miis.edu/stories/100205\\_russian\\_nuclear\\_doctrine.htm](http://cns.miis.edu/stories/100205_russian_nuclear_doctrine.htm).

<sup>23</sup> Pavel Podvig, "New Warhead Tested in a UR-100NUTTH/SS-19 Launch," Russian Strategic Nuclear Forces blog, December 27, 2011, [http://russianforces.org/blog/2011/12/new\\_warhead\\_tested\\_in\\_a\\_ur-100.shtml](http://russianforces.org/blog/2011/12/new_warhead_tested_in_a_ur-100.shtml).

<sup>24</sup> Interfax News Agency, Russia and CIS Military Weekly, August 6, 2010, accessed through Lexis-Nexis.

<sup>25</sup> Pavel Podvig, "Russia to Spend \$70 billion on strategic forces by 2020," Russian Strategic Forces blog, February 24, 2011, [http://russianforces.org/blog/2011/02/russia\\_to\\_spend\\_70\\_billion\\_on.shtml](http://russianforces.org/blog/2011/02/russia_to_spend_70_billion_on.shtml)

<sup>26</sup> Kristensen and Norris, "Russian Nuclear Forces, 2011."

<sup>27</sup> Kristensen and Norris, "Russian Nuclear Forces, 2011."

<sup>28</sup> Pavel Podvig, "Deployment of First Full Regiment of RS-24 Is Completed," Russian Strategic Nuclear Forces blog, July 7, 2011, [http://russianforces.org/blog/2011/07/deployment\\_of\\_the\\_first\\_full\\_r.shtml](http://russianforces.org/blog/2011/07/deployment_of_the_first_full_r.shtml); quoting «Арсенал прирастает Ярсам», *Военно-Промышленный Курьер*, July 6, 2011, <http://vpk-news.ru/articles/7844>.

reported that Russia was still planning to develop a new “heavy” liquid-fuel ICBM with “enhanced capability” to overcome ballistic missile defense.<sup>29</sup> Such plans were previously announced in 2009 and 2010, though experts judged the projections of deployment in 2016 as unrealistic.<sup>30</sup> The target date for missile completion was subsequently quoted as 2018, but it is not clear if research and development work on this new ICBM has indeed started.<sup>31</sup>

Modernization of nuclear submarines (SSBNs) and submarine-launched ballistic missiles (SLBMs) is also ongoing. After years of development and testing, in January 2012, the Russian Defense Ministry approved the contract “for the manufacture of Bulava SLBMs through 2020.”<sup>32</sup> This new missile is supposed to be deployed on Borey class strategic submarines (also new), but officials have not yet announced when the missile will enter into service. Russia has previously announced plans to build up to eight Borey class SSBNs, each designed to be armed with 16 Bulava missiles,<sup>33</sup> but the first submarine of this class, Yuri Dolgorukii, has not yet been deployed. Media reported that in September 2011, Prime Minister Vladimir Putin told members of the United Russia Party that “the submarine is successfully undergoing trials and should be delivered to the Pacific Fleet in 2012.”<sup>34</sup> Russia is modernizing and extending the life of its older, Delta IV class submarines: five boats “have undergone an overhaul which extended their service life by 10 years and included the installation of the new modification of the RSM-54 Sineva missile.”<sup>35</sup> The sixth boat “is expected to return to service in 2012.”<sup>36</sup> In March 2011, Russian media reported that Russia was “planning to develop its newest fifth-generation submarine by 2020.”<sup>37</sup> Finally, research and development has started on a new strategic bomber, which reportedly is expected to be completed by 2025.<sup>38</sup>

## United Kingdom

The United Kingdom maintains the posture of “minimum nuclear deterrent,” and the October 2010 Strategic Defence and Security Review (SDSR) stipulates that the UK would consider using nuclear weapons only “in extreme circumstances of self-defence, including the defence of [UK’s] NATO allies.”<sup>39</sup> Specifics of such extreme circumstances are not discussed. However, the UK announced in the 2010 SDSR the provision of negative security assurances to all states parties to the NPT, if they are not “in material breach of those non-proliferation obligations.”<sup>40</sup> The UK also reserves the right

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<sup>29</sup> “Россия создаст стратегическую ракету с повышенными возможностями по преодолению ПРО” (“Russia Will Develop a New Strategic Missile with Enhanced Capabilities to Overcome BMD”), Interfax, December 16, 2011, [www.interfax.ru/politics/news.asp?id=222259](http://www.interfax.ru/politics/news.asp?id=222259)

<sup>30</sup> Pavel Podvig, “Would Russia Build a New MIRVed ICBM?” Russian Strategic Nuclear Forces blog, December 20, 2010, [http://russianforces.org/blog/2010/12/would\\_russia\\_build\\_a\\_new\\_mirve.shtml](http://russianforces.org/blog/2010/12/would_russia_build_a_new_mirve.shtml)

<sup>31</sup> Podvig, “Russia to Spend \$70 billion on Strategic Forces by 2020.”

<sup>32</sup> “Defense Ministry Signs Bulava Missile Contract,” RIA Novosti, January 24, 2012, [http://en.rian.ru/military\\_news/20120124/170925888.html](http://en.rian.ru/military_news/20120124/170925888.html)

<sup>33</sup> SIPRI 2011 Yearbook, p. 333.

<sup>34</sup> “Russia to Deploy Nuclear Sub in Pacific,” *The Chosunilbo*, September 9, 2011, [http://english.chosun.com/site/data/html\\_dir/2011/09/09/2011090901013.html](http://english.chosun.com/site/data/html_dir/2011/09/09/2011090901013.html)

<sup>35</sup> SIPRI 2011 Yearbook, p. 333.

<sup>36</sup> Kristensen and Norris, “Russian Nuclear Forces, 2011,” p. 70.

<sup>37</sup> “Russian 5G Subs to Be Equipped with Ballistic, Cruise Missiles – Source,” RIA Novosti, March 19, 2011, [en.rian.ru/military\\_news/20110319/163091053.html](http://en.rian.ru/military_news/20110319/163091053.html), quoted in Kristensen and Norris, “Russian Nuclear Forces, 2011.”

<sup>38</sup> Podvig, “Russia Begins R&D on a New Strategic Bomber,” December 28, 2011,

[http://russianforces.org/blog/2011/12/russia\\_begins\\_rd\\_on\\_a\\_new\\_stra.shtml](http://russianforces.org/blog/2011/12/russia_begins_rd_on_a_new_stra.shtml), and Kristensen and Norris, “Russian Nuclear Forces, 2011.”

<sup>39</sup> “Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review,” October 2010, p. 37.

<sup>40</sup> *Ibid.*, p. 38.

to revise this position in the event of “future threat, development and proliferation” of chemical and biological weapons.<sup>41</sup>

Following the 2010 NPT Review Conference, the UK announced new reductions to its arsenal. According to the October 2010 SDSR, the UK will reduce its overall stockpile to “no more than 180” warheads (compared to no more than 225 announced in May 2010). The UK further committed to reduce the “requirement for operationally available warheads from fewer than 160 to no more than 120.” Reductions are supposed to take effect over “the next few years,” with the achievement of the stockpile ceiling of no more than 180 warheads expected “in mid-2020s.”<sup>42</sup> In June 2011, the UK government further specified the reductions timeline, informing parliament that the 120-warheads target for deployed weapons is expected to be reached “within the current parliament” (by 2015).<sup>43</sup> The UK also decided to further lower the operational status of its nuclear arsenal, announcing the intent to “reduce the number of operation launch tubes” on its submarines to 8 (from 12), and the maximum number of warheads carried by each submarine from 48 to 40.<sup>44</sup>

All of the UK’s nuclear weapons are sea-based, and its only delivery system is Trident II SLBM, deployed on Vanguard-class submarines. The UK has decided to extend the service life of Vanguard SSBN, as a replacement submarine is not expected to be ready in time to retire Vanguard in 2024.<sup>45</sup> Design work on the new class of submarines meant to replace Vanguard, however, is in progress, although the “main gate” decision on investment (including “detailed acquisition plans, design and number of submarines”) has been postponed until 2016.<sup>46</sup> A decision on the replacement of the current warhead was also deferred until later. In May 2011, Defense Secretary Liam Fox announced that the design of a new generation SSBN, “together with £3 billion of initial contracts, had been agreed ahead of the final decision on replacing the existing fleet due in 2016,” but the government also agreed to consider alternatives to nuclear deterrent.<sup>47</sup> An additional £3 billion (total of £6 billion) is likely to be spent on the new submarines prior to the 2016 decision.<sup>48</sup>

The United Kingdom has maintained an official moratorium on the production of fissile material for weapons purposes since 1995.<sup>49</sup> It has not conducted nuclear test explosions since 1991, and ratified the Comprehensive Nuclear Test Ban Treaty in 1998. The UK does not have its own nuclear test site.

## United States

The United States has the world’s largest and most advanced nuclear weapons arsenal (complete systems, not warheads). In May 2010, the United States for the first time revealed the total number of warheads in its active arsenal, i.e., deployed and non-deployed, strategic and non-strategic, as of

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<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

<sup>43</sup> Secretary of State for Defence Dr. Liam Fox, statement before the Parliament, June 29, 2011, accessed at Acronym Institute website, [www.acronym.org.uk/parliament/1109.htm#warheads](http://www.acronym.org.uk/parliament/1109.htm#warheads)

<sup>44</sup> Ibid.

<sup>45</sup> Hans Kristensen and Robert Norris, “Nuclear Notebook: British nuclear forces, 2011,” *Bulletin of the Atomic Scientists*, Vol. 67, no. 5 (September 2011).

<sup>46</sup> Ibid.

<sup>47</sup> Gavin Cordon, “Trident Alternatives to Be Assessed,” *The Independent*, May 18, 2011, [www.independent.co.uk/news/uk/home-news/trident-alternatives-to-be-assessed-2285757.html](http://www.independent.co.uk/news/uk/home-news/trident-alternatives-to-be-assessed-2285757.html)

<sup>48</sup> “MOD Softens under Pressure on Trident,” Campaign for Nuclear Disarmament, December 9, 2011, [www.cnduk.org/media/item/1305-mod-soften-under-pressure-on-trident](http://www.cnduk.org/media/item/1305-mod-soften-under-pressure-on-trident)

<sup>49</sup> See UK statement at the 2010 NPT Review Conference and SIPRI 2011 Yearbook, Annex A.

September 30, 2009.<sup>50</sup> The number – 5,113 warheads – did not include the thousands of retired warheads awaiting dismantlement.

The United States, together with Russia, is party to the New START treaty, which requires the two countries to reduce, by 2018,<sup>51</sup> their deployed warheads to no more than 1550, deployed ICBMs, SLBMs and heavy bombers to no more than 700, and deployed and non-deployed launchers to no more than 800.<sup>52</sup> According to the New START fact sheet released by the U.S. Department of State in April 2012, as of March 2012, the United States had 1,737 deployed strategic warheads, down from 1,790 in September 2011 and 1,800 in February 2011. The United States reduced the number of deployed delivery systems from to 882 to 812 since the New START entry into force.<sup>53</sup>

Current US policy is guided by the “Prague Agenda” outlined by President Obama in a major speech in April 2009.<sup>54</sup> The speech signaled a shift in the US policy towards reducing the reliance on nuclear weapons. Although President Obama announced the commitment to “seek the peace and security of a world without nuclear weapons,” he also emphasized that while nuclear weapons exist, the United States would maintain a reliable, “safe and secure” arsenal.

Released a month before the 2010 NPT Review Conference, the U.S. Nuclear Posture Review (NPR) indicated a reduced reliance on nuclear weapons and narrowed the scope for their potential use compared to the previous posture review. The NPR declared that the United States would not use or threaten to use nuclear weapons against NNWS party to the NPT “in compliance with their nuclear non-proliferation obligations.” The document did not, however, clarify the criteria for establishing compliance and also reserved the right for the United States to “make any adjustment in the assurance that may be warranted by the evolution and proliferation of the biological weapons threat and U.S. capacities to counter that threat.”<sup>55</sup>

In February 2011 the U.S. Department of Defense released a new National Military Strategy, which commits to “reduce the role and numbers of nuclear weapons, while maintaining a safe, secure, and effective strategic deterrent.” It also describes the role of the nuclear arsenal as to “continue to support strategic stability through maintenance of an assured second-strike capability...retain sufficient nuclear force structure to hedge against unexpected geopolitical change, technological problems, and operational vulnerabilities.”<sup>56</sup>

In January 2012 President Obama, with the Department of Defense, announced a new defense strategy entitled “Sustaining US Global Leadership: Priorities for 21st-Century Defense.” This strategy reaffirms previous nuclear posture: “As long as nuclear weapons remain in existence, the United States will maintain a safe, secure, and effective arsenal.” It further notes, however, that, “it is possible that our deterrence goals can be achieved with a smaller nuclear force, which would reduce

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<sup>50</sup> “Fact Sheet: Increasing Transparency in the U.S. Nuclear Weapons Stockpile,” U.S. Department of Defense, May 3, 2010.

<sup>51</sup> I.e., seven years after treaty’s entry into force.

<sup>52</sup> New START text, [www.state.gov/documents/organization/140035.pdf](http://www.state.gov/documents/organization/140035.pdf)

<sup>53</sup> “Factsheet: New START Treaty Aggregate Numbers of Strategic Offensive Arms,” U.S. Department of State, April 6, 2012, [www.state.gov/t/avc/rls/178058.htm](http://www.state.gov/t/avc/rls/178058.htm)

<sup>54</sup> “Remarks by President Barack Obama In Prague as Delivered,” Office of the Press Secretary, The White House, April 5, 2009, [www.whitehouse.gov/video/The-President-in-Prague/#transcript](http://www.whitehouse.gov/video/The-President-in-Prague/#transcript)

<sup>55</sup> U.S. Nuclear Posture Review Report, U.S. Department of Defense, April 2010.

<sup>56</sup> *The National Military Strategy of the United States of America*, U.S. Department of Defense, February 8, 2011, pp. 9, 21.

the number of nuclear weapons in our inventory as well as their role in U.S. national security strategy.”<sup>57</sup>

In February 2012, US media reported that the Department of Defense, at the request of President Obama, is working on proposals for further cuts in the US nuclear arsenal. According to reports based on information from unnamed US officials, the three arsenal levels under consideration are 1,000-1,100; 700-800, and 300-400 “strategic, deployed nuclear weapons” (probably meaning warheads, not complete systems).<sup>58</sup> When questioned by media, Pentagon officials noted that the “status quo” – that is, the ceiling prescribed by the New START treaty – is also one of the options. Proposals have not yet been completed and presented to the White House.

In November 2010, the Obama administration committed to allocate more than \$85 billion over the next decade to the modernization of the U.S. nuclear weapons infrastructure in order to maintain the reliability of its arsenal.<sup>59</sup> However, specific budget for each year is subject to US Congress approval, and both the 2011 and 2012 budgets proposed by the administration were cut by Congress.

The 2010 Nuclear Posture Review indicated that the United States would maintain the nuclear Triad of ICBMs, SLBMs, and heavy bombers.<sup>60</sup> The United States is also modernizing its arsenal, although a number of programs appear to be affected by budget problems. According to the 2011 IPFM report, the United States started to work on “plans for a next generation intercontinental ballistic missile (ICBM), long-range cruise missile, strategic bomber fleet, and ballistic missile submarines—the last to begin service in 2029.”<sup>61</sup> Another plan is to extend the life of Trident II (D5) SLBMs, also deployed by the United Kingdom.<sup>62</sup> The 2013 budget proposed by the U.S. Department of Defense, however, indicated delays in several nuclear weapons programs, including the completion of replacement SSBNs and refurbishment of some of the bombs.<sup>63</sup> In February 2012, U.S. Air Force also signaled a decision to postpone by two years the development of a new missile, the “Long-Range Stand-Off weapon,” meant to replace the current “nuclear-capable Air Launched Cruise Missile aboard bomber aircraft.”<sup>64</sup>

The United States is also planning the construction of a new facility for the production of plutonium pits (nuclear warhead components), known as the Chemical and Metallurgy Research Replacement – Nuclear Facility. The facility is to be located at the Los Alamos National Laboratory, but the start of

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<sup>57</sup> *Sustaining U.S. Global Leadership: Priorities for 21<sup>st</sup> Century Defense*, U.S. Department of Defense, January 3, 2012, p. 11.

<sup>58</sup> Phil Stewart and David Alexander, “Pentagon Chief Grilled over Possible Nuclear Cuts,” Reuters, February 15, 2012, <http://www.reuters.com/article/2012/02/15/usa-nuclear-pentagon-idUSL2E8DFJYR20120215>

<sup>59</sup> Fact Sheet: An Enduring Commitment to the U.S. Nuclear Deterrent, Office of the Press Secretary, November 17, 2010, The White House website, [www.whitehouse.gov/the-press-office/2010/11/17/fact-sheet-enduring-commitment-us-nuclear-deterrent](http://www.whitehouse.gov/the-press-office/2010/11/17/fact-sheet-enduring-commitment-us-nuclear-deterrent)

<sup>60</sup> Nuclear Posture Review Report, U.S. Department of Defense, April 2010.

<sup>61</sup> International Panel on Fissile Materials Report, 2011.

<sup>62</sup> Ibid. Also, see US Nuclear Modernization Programs Factsheet on the Arms Control Association website, [www.armscontrol.org/factsheets/USNuclearModernization](http://www.armscontrol.org/factsheets/USNuclearModernization)

<sup>63</sup> Elaine M. Grossman, “Pentagon Seeks \$25 Billion for Strategic Nuclear Efforts through 2017,” *Global Security Newswire*, February 14, 2012, [www.nti.org/gsn/article/pentagon-seeks-25-billion-strategic-nuclear-efforts-through-2017/](http://www.nti.org/gsn/article/pentagon-seeks-25-billion-strategic-nuclear-efforts-through-2017/)

<sup>64</sup> Elaine M. Grossman, “U.S. Air Force Plans Two-Year Delay in Developing New Cruise Missile,” *Global Security Newswire*, February 24, 2012, [www.nti.org/gsn/article/us-air-force-plans-two-year-delay-developing-new-cruise-missile/](http://www.nti.org/gsn/article/us-air-force-plans-two-year-delay-developing-new-cruise-missile/)



construction has been delayed several times.<sup>65</sup>

The United States has maintained an official moratorium on nuclear testing since 1992 but is yet to ratify the Comprehensive Nuclear-Test-Ban Treaty. It also does not produce fissile material for nuclear weapons and other nuclear explosive devices.

### ***Indicator 1.2. Policy and declaratory documents reflect commitment to achieving a world without nuclear weapons***

All the nuclear-weapon states have in some way expressed their general support for the goal of nuclear disarmament, but differ in the kinds of caveats and conditions they attach to progress toward the goal. Only China officially supports the idea of negotiating a nuclear weapons convention (NWC) that would ban nuclear weapons altogether, while other NWS characterize it as unrealistic for the foreseeable future. NWS tend to emphasize instead the step-by-step approach, including entry into force of the CTBT and negotiation of a fissile material cut-off treaty (FMCT).

China's support for nuclear disarmament is not without caveats, as the country is currently reluctant to join the United States and Russia in arms control, arguing that its arsenal is too small in comparison. France, having implemented some progressive measures in the past, still has a cautious approach to nuclear disarmament, emphasizing that "appropriate conditions" must be in place. Official NPT page of the French government states that "it is vital to continue down the path of disarmament without limiting or stifling our discussion or our ambition" and that it is "important to avoid disassociating nuclear disarmament from collective security and the strategic context."<sup>66</sup> Russia's position on nuclear disarmament appears to be regressing, with its unwillingness to begin negotiations on a follow-on treaty to New START and recent statements by Vladimir Putin that Russia would never surrender its "strategic deterrent."<sup>67</sup>

The 2010 SDSR declares the UK's commitment "to the long term goal of a world without nuclear weapons," a commitment reiterated by UK representatives at different international fora.<sup>68</sup> As mentioned earlier, speaking in Prague in April 2009, US President Obama stated "clearly and with conviction America's commitment to seek the peace and security of a world without nuclear weapons." The 2010 NPR reiterated this vision, while also reaffirming that the United States would maintain a reliable arsenal for as long as nuclear weapons exist. Speaking at international fora, the US representatives place activities such as conclusion and implementation of New START and transparency in arsenals in the context of steps towards nuclear disarmament.<sup>69</sup>

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<sup>65</sup> For a detailed study on the proposed facility, see "U.S. Nuclear Weapons Complex: Energy Department Plans to Waste Billions of Dollar on Unneeded Los Alamos Lab Facility," January 18, 2012, [www.pogo.org/pogo-files/reports/nuclear-security-safety/energy-department-plans-to-waste-billions/nss-nwc-20120118-us-nuclear-weapons-complex.html](http://www.pogo.org/pogo-files/reports/nuclear-security-safety/energy-department-plans-to-waste-billions/nss-nwc-20120118-us-nuclear-weapons-complex.html)

<sup>66</sup> "A Concrete and Comprehensive Support for Disarmament," France TNP website, [www.francetnp2010.fr/spip.php?article77](http://www.francetnp2010.fr/spip.php?article77)

<sup>67</sup> Vladimir Putin, "Being Strong: National Security Guarantees for Russia," Official Website of the Government of Russian Federation, February 20, 2012, <http://premier.gov.ru/eng/events/news/18185/>

<sup>68</sup> SDSR 2010, paragraph 3.5. Also, see Statement by Ambassador Michael Tatham of the UK Mission to the UN at the General Assembly High-Level Meeting on Disarmament, July 27, 2011, <http://ukun.fco.gov.uk/en/news/?view=News&id=636316882>

<sup>69</sup> See, for example, the statement by Rose Gottemoeller, Acting Under Secretary of State, at the Conference on Disarmament, January 24, 2012.

It is worth noting that the final Communiqué adopted by leaders of 53 states at the Nuclear Security Summit in Seoul in March 2012 reaffirmed the “shared goals of nuclear disarmament, nuclear nonproliferation and peaceful uses of nuclear energy.” However, the document did not contain a reference to “concrete steps toward a world without nuclear weapons” – language that reportedly was present in an earlier version of draft communiqué.<sup>70</sup>

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

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While this action item refers to treaty obligations more broadly, the principles of irreversibility, verifiability and transparency are usually meant to apply to NWS, and in particular their policies on disclosing information about their nuclear arsenals, allowing international verification of arms reductions, and ensuring reduction measures cannot be later reversed through the re-introduction of warheads and delivery systems into the active arsenal.

Irreversibility is demonstrated through the dismantlement of warheads and delivery vehicles (or, if possible, their conversion to conventional payloads), removal of fissile material from military stockpiles and its disposition, and the conversion of any fissile material production facility to the production of non-weapons-usable material or dismantlement of such a facility. The latter – conversion and dismantlement of facilities – is addressed in greater detail under Action 18.

***Indicator 2.1. Irreversibility: the dismantlement of warheads and material disposition are taking place, or plans to do so are announced during the reporting period; military fissile material production facilities are being decommissioned/dismantled, or plans to do so are announced***

### **China**

#### **No observable progress**

The Chinese government does not release information on its nuclear arsenal, and it is therefore impossible to assess if China has conducted any warhead dismantlement and material disposition during the reporting period.<sup>71</sup>

Its facilities for producing fissile material for nuclear weapons are reported to have been decommissioned or to have shifted to producing material for the civilian nuclear industry.<sup>72</sup> IPFM 2011 report lists three operational uranium enrichment facilities in China, all of them designated as civilian. See Action 18.

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<sup>70</sup> “World Leaders Pledge Strong Action against Nuke Terrorism,” AFP, March 27, 2012, <http://www.focus-fen.net/?id=n274276>

<sup>71</sup> The only official information related to weapons production that CNS could locate concerns the decommissioning of China’s first nuclear weapon production bas, Plant 221 in the Qinghai province. In a presentation delivered at the IAEA it was reported that China decommissioned the facility in 1993 and conducted its complete environmental rehabilitation. See [www.qhnews.com/2009zt/system/2009/05/27/002746930.shtml](http://www.qhnews.com/2009zt/system/2009/05/27/002746930.shtml); [www.qhnews.com/2009zt/yzc/](http://www.qhnews.com/2009zt/yzc/); and [www.iaea.org/OurWork/ST/NE/NEFW/environet/meetings/TM\\_Guide\\_Stakeholder\\_Involvement/China.pdf](http://www.iaea.org/OurWork/ST/NE/NEFW/environet/meetings/TM_Guide_Stakeholder_Involvement/China.pdf)

<sup>72</sup> “Global Fissile Material Report 2010,” International Panel on Fissile Materials.

## France

Warhead dismantlement and material disposition – no observable progress

Facility dismantlement – completed prior to 2010

By the time of the 2010 NPT Review Conference, France had already decommissioned and dismantled its weapons material production facilities.

France has made no declarations on warhead dismantlement during the reporting period.

France has not declared any fissile material in excess of military requirements and is not known to be implementing any material disposition programs.

## Russia

Limited progress

The New START treaty, while limiting the number of deployed warheads and delivery systems, does not require the dismantlement of warheads.

Russia is dismantling its retired warheads, but has not officially disclosed information on the rate of dismantlement during the reporting period or future plans in this regard. Hans Kristensen and Robert Norris estimate that, as of 2011, there were 3,000 strategic and 1,600-3,000 non-strategic retired warheads in Russia awaiting dismantlement.<sup>73</sup> Independent estimates also suggest that the “net dismantlement rate in Russia is on the order of 200–300 warheads a year, with another 200 warheads being dismantled but then replaced with remanufactured warheads.”<sup>74</sup>

“Megatons to Megawatts,” the disposition program under which HEU taken out of Russian nuclear weapons is converted to LEU and sold to the United States, is ongoing. According to USEC, by 2012 (since 1993), about 442 metric tons of HEU have been converted.<sup>75</sup> The material converted between April 2010 and March 2012 (roughly coincides with the reporting period) is approximately 60 metric tons. The disposition of surplus plutonium under the Plutonium Disposition and Management Agreement (PDMA) with the United States has not yet started.

No information on dismantlement of fissile material production facilities during the reporting period was found. None of the currently operational facilities produce material for weapons purposes. Russia had shut down all of its plutonium producing reactors by May 2010. The last reactor, ADE-2 in Zheleznogorsk, was shut down in April 2010. There has been no update on the status and plans for the dismantlement of previously plutonium-producing reactors during the reporting period. See Action 18.

## United Kingdom

Limited progress

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<sup>73</sup> Kristensen and Norris, “Russian Nuclear Forces, 2011,” p. 68. Estimate as of

<sup>74</sup> “Global Fissile Material Report 2011,” International Panel on Fissile Materials, p. 5.

<sup>75</sup> See “Megatons to Megawatts, Program Status,” <http://www.usec.com/russian-contracts/megatons-megawatts>. The exact date of the update is not listed.

The United Kingdom has decided to reduce its overall arsenal to no more than 180 warheads by mid-2020s,<sup>76</sup> but so far has not made any official announcements on dismantlement of the retired warheads.

HEU declared in excess of military needs is reportedly being utilized for nuclear submarine fuel, but again, there is no official information on the rate of conversion and utilization. Disposition of surplus plutonium is not taking place yet, as the UK is considering options in this regard.<sup>77</sup>

A gaseous diffusion plant at Capenhurst that previously produced HEU for weapons was shut down in 1982 and subsequently decommissioned and demolished.<sup>78</sup> All of the facilities that produced plutonium for the UK nuclear weapons program had been shut down. See Action 18.

## United States

### Progress

The New START treaty, while limiting the number of deployed warheads and delivery systems, does not require the dismantlement of warheads.

Warhead dismantlement is ongoing, however, although the United States has not released the number of warheads dismantled since 2009. (In its fact sheet released in 2010, the United States declared that it had dismantled 8,748 warheads between 1994 and 2009.) The NNSA Strategic Plan released in May 2011 included the commitment to complete the dismantlement of B53 bombs by 2012, and of all warheads retired prior to 2009 by 2022.<sup>79</sup>

In August 2010, US Secretary of Energy Steven Chu announced the complete dismantlement of all W62 warheads, retired from service in March 2010.<sup>80</sup> In October 2011, the United States announced the complete dismantlement of B53 bombs and “all components associated with W70 warheads,” which were retired in the 1990s<sup>81</sup> The NNSA also noted that dismantlement was completed “years ahead of schedule” due to the use of new, more efficient and safe technology.<sup>82</sup> Still, experts note that the current rate of dismantlement is significantly lower than the level achieved in the 1990s.<sup>83</sup> See Action 18 for dismantlement of facilities.

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<sup>76</sup> Ibid.

<sup>77</sup> “Plutonium Strategy: Current Position Paper,” Nuclear Decommissioning Authority, February 2011, [www.nda.gov.uk/documents/upload/NDA-Plutonium-Current-Position-February-2011.pdf](http://www.nda.gov.uk/documents/upload/NDA-Plutonium-Current-Position-February-2011.pdf)

<sup>78</sup> The plant stopped producing HEU for weapons in 1962. “Global Fissile Material Report 2011,” p. 10; also, [http://fissilematerials.org/countries/united\\_kingdom.html](http://fissilematerials.org/countries/united_kingdom.html). The demolition of the plant was reported in February 2008, [www.wise-uranium.org/edeur.html](http://www.wise-uranium.org/edeur.html).

<sup>79</sup> *The National Nuclear Security Administration Strategic Plan*, National Nuclear Security Administration, May 2011, p 8.

<sup>80</sup> “W62 Dismantlement Factsheet,” National Nuclear Security Administration, August 12, 2010, <http://nnsa.energy.gov/mediaroom/factsheets/w62dismantlement>

<sup>81</sup> “NNSA Announces Dismantlement of Last B53 Nuclear Bomb,” National Nuclear Security Agency, 25 October 2011, <http://nnsa.energy.gov/mediaroom/pressreleases/b53dismantle102511>; “NNSA, Y-12 Complete Dismantlement of W70 Components,” National Nuclear Security Administration, 21 October 2011, <http://nnsa.energy.gov/mediaroom/pressreleases/w70dismantle102111>.

<sup>82</sup> “NNSA, Y-12 Complete Dismantlement of W70 Components,” National Nuclear Security Administration, 21 October 2011, <http://nnsa.energy.gov/mediaroom/pressreleases/w70dismantle102111>.

<sup>83</sup> “Global Fissile Material Report 2011,” p. 5.

***Indicator 2.2. Verifiability: disarmament/arms control agreements contain verification provisions; such provisions are being implemented; the IAEA (and/or other relevant international organizations) is involved in the verification of said agreements/unilateral reduction measures***

**China**

No

No internationally verifiable nuclear weapons reductions are being implemented in China.

**France**

No

France is not party to any verifiable nuclear arms reductions agreements. No third party was involved in the verification of unilateral reductions implemented by France.

**Russia**

Yes (partially)

The New START treaty establishes an extensive bilateral verification regime, including data exchanges, inspections and notifications. However, neither the IAEA nor any other third party is involved in the verification of New START.

**United Kingdom**

No

The UK is not party to any verifiable nuclear arms reductions agreements. Its unilateral arms reductions are also not subject to outside verification. However, the United Kingdom is cooperating with Norway in developing approaches to warhead dismantlement verification that would allow the participation of NNWS.

The United Kingdom is also cooperating with the United States on developing disarmament verification technology, but this work is not being publicized, unlike the UK-Norway initiative.<sup>84</sup>

**United States**

Yes (partially)

As described above, the New START establishes an extensive bilateral verification regime, but neither the IAEA nor any other third party is involved in the verification of the treaty.

The United States places at least part of its fissile material in excess of military needs under the IAEA safeguards.

The United States is also cooperating with the United Kingdom on developing arms control verification technology,<sup>85</sup> but this work is not being publicized, presumably for domestic political reasons.

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<sup>84</sup> "Fact Sheet: Nuclear Verification," Office of Nonproliferation and International Security, NNSA, September 2011. Practically no information on this work is available from open sources.

<sup>85</sup> Ibid.

***Indicator 2.3. Transparency: information on arsenals and reductions is being reported to the international community/international organizations through official reports, press releases, and/or statements at international fora***

**China**

No

China does not officially disclose information on its arsenal.

**France**

No change

According to a working paper that France submitted to the 2010 NPT Review Conference, it had by May 2010 reached the level of 300 warheads (or fewer) in its total arsenal, a target it announced in 2008. No further reductions were announced, and France does not disclose information on warhead dismantlement.

**Russia**

Limited progress

Through the data exchange under the New START, Russia has declared the number of its deployed warheads and missiles, as well as the total number of deployed and non-deployed launchers. It is expected that this information will continue to be made public, reflecting changes in the arsenal, for the duration of New START (until February 2021). However, a delay in the release of information on the basis of first data exchange has led experts to question the level of transparency provided under the New START.<sup>86</sup>

Russia does not release official data on the overall size of its arsenal, the number of non-strategic weapons, and the number of warheads awaiting dismantlement.

**United Kingdom**

Limited progress

The United Kingdom announced its target reductions of both the overall and deployed warheads in the October 2010 Strategic Defence and Security Review. It has also declared the decision to reduce the maximum number of warheads carried on each of its submarines. Since that announcement, the only additional information provided was in response to a query from the House of Commons, where Defence Secretary Liam Fox stated in June 2011 that, “at least one of the Vanguard class ballistic missile submarines (SSBN) now carries a maximum of 40 nuclear warheads.” He provided no further specifics and added that “the Government does not comment upon the operational programme and therefore updates on this implementation programme will not be given.”<sup>87</sup>

**United States**

Limited progress

Since May 2010, the United States has not officially released an update on its overall nuclear stockpile. However, as part of data exchange under New START, the United States made public the reductions in the number of its deployed warheads and missiles, and deployed and non-deployed

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<sup>86</sup> See Hans Kristensen, “New START Data Exchange: Will It Increase or Decrease International Nuclear Transparency?” FAS Strategic Security Blog, March 22, 2011, [www.fas.org/blog/ssp/2011/03/startexchange.php](http://www.fas.org/blog/ssp/2011/03/startexchange.php)

<sup>87</sup> Written Ministerial Statements, Defence, Nuclear Deterrent, June 29, 2011: Column 51WS, [www.acronym.org.uk/parliament/1109.htm#warheads](http://www.acronym.org.uk/parliament/1109.htm#warheads)

launchers. As mentioned above, a delay in the release of aggregate numbers gave rise to questions about the level of transparency under the treaty.<sup>88</sup> The Department of Energy has also announced the completion of dismantlement of two classes of warheads (W62 and W70) and one type of bombs (B53), although it did not update the total dismantlement figures.

**Action 3: In implementing the unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals, 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.**

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***Indicator 3.1. Reductions in nuclear delivery systems and warheads (deployed and non-deployed) are made during the reporting period***

**China:** None

**France:** None

**Russia and the United States:** Yes, see Action 4

**United Kingdom:** Yes

The United Kingdom announced the decision to reduce its overall arsenal to 180 warheads, with no more than 160 of them deployed. It has not, however, made public an update on how many warheads were taken off deployment and retired since the release of the Strategic Defence and Security Review in October 2010.

***Indicator 3.2. Warheads are dismantled during the reporting period***

**Insufficient information**

None of the NWS reported on the number of warheads dismantled during the reporting period. The United States announced complete dismantlement of two types of warheads and one class of bombs, but did not specify the exact figures. (See Indicator 3.1.)

***Indicator 3.3. National plans on nuclear weapons reductions and disarmament (apart from bilateral/multilateral agreements) are developed and/or adopted during the reporting period; such plans contain proposed timelines for reductions***

The United Kingdom is the only NWS that announced, during the reporting period, a unilateral nuclear reductions plan, pledging to reduce its overall arsenal to 180 warheads by mid-2020.

***Indicator 3.4. Bilateral and/or multilateral agreements (if any) contain provisions on the elimination/reduction of nuclear weapons, with target reductions and timelines***

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<sup>88</sup> Kristensen, “New START Data Exchange: Will It Increase or Decrease International Nuclear Transparency?”

Russia and the United States are the only NWS who have concluded a bilateral arms reduction agreement. The New START entered into force in February 2011 and commits the two sides to reduce, by 2018, the number of their deployed warheads to no more than 1,550 and deployed missiles and bombers to no more than 700. See Action 4.

**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.**

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***Indicator 4.1. Relevant states ratify the treaty; New START enters into force***

**Completed**

The United States ratified the New START on December 22, 2010.

Russian Federation ratified the treaty on January 25, 2011.

New START entered into force on February 6, 2011.<sup>89</sup>

***Indicator 4.2. New START is being implemented according to its provisions***

**Yes, significant progress**

The two states have successfully started implementation of the new treaty. As of April 2012, Russia and the United States conducted three exchanges of data on the aggregate number of strategic arms subject to the treaty. The figures from data exchange were made publicly available online. Under the terms of the treaty, data exchange takes place twice a year.

The Bilateral Consultative Commission, established under the New START, met three times since the treaty's entry into force: on 28 March-8 April 2011, 19 October-2 November 2011, and 24 January-7 February 2012. The Commission discussed issues related to inspections such as transportation of inspection teams, the use of photography during Type I inspections, data exchanges, etc.<sup>90</sup> During the latest meeting of the Commission, the United States and Russia "signed agreements on the amount of telemetric information on ICBM and SLBM launches that each party shall provide" and agreed on the number of ICBM and SLBM launches in 2012 on which the two sides will exchange telemetric information.<sup>91</sup>

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<sup>89</sup> Mark Memmott, "Senate Ratifies New START," NPR, December 22, 2010, <http://www.npr.org/blogs/thetwo-way/2010/12/22/132262684/senate-ratifies-start>; "Duma adopts bill on ratification of New START," RT, January 25, 2011, <http://rt.com/politics/adopt-bill-new-start/>

<sup>90</sup> "The Bilateral Consultative Commission Joint Statement Number 1: On the Arrival Time of the Inspection Team at the Point of Entry on the Territory of the Inspected Party," Bureau of Arms Control, Verification and Compliance, U.S. Department of State, April 8, 2011, [www.state.gov/t/avc/newstart/160492.htm](http://www.state.gov/t/avc/newstart/160492.htm); "The Bilateral Consultative Commission Joint Statement Number 2: On the Use of Equipment for Photography During Type One Inspections," Bureau of Arms Control, Verification and Compliance, U.S. Department of State, April 8, 2011, [www.state.gov/t/avc/newstart/160490.htm](http://www.state.gov/t/avc/newstart/160490.htm)

<sup>91</sup> "Third Session of the Bilateral Consultative Commission," Bureau of Arms Control, Verification and Compliance, U.S. Department of State, February 7, 2012, [www.state.gov/r/pa/prs/ps/2012/02/183535.htm](http://www.state.gov/r/pa/prs/ps/2012/02/183535.htm)



The two countries started mutual inspections on April 13, 2011, and by February 2012, each side conducted 18 inspections (the maximum allowed for a 12-month period). The United States and Russia have also exchanged “over 1,800 notifications” (including quantities, locations, and operational specifications of armaments).<sup>92</sup>

Information on the aggregate numbers of strategic weapons released by the two sides indicate that, between February 2011 and March 2012, the United States reduced the number of deployed missiles and bombers by 70 (from 882 to 812) and the number of deployed warheads by 63 (from 1800 to 1737). During the same period, Russia decreased the number of deployed missiles and bombers by 27 (from 521 to 494) and decreased the number of deployed warheads by 45 (from 1537 to 1492). Interestingly, the number of Russia’s deployed warheads went up between February 2011 and September 2011 (by 29), and it is not entirely clear what accounted for that significant increase. Presumably, the fluctuations are due to the deployment of MIRVed RS-24 missiles and rapid withdrawal of older single-warhead systems.

Aggregate numbers of strategic offensive arms, on the basis of data exchanges:<sup>93</sup>

Category of Data	Treaty Limits	As of 5 Feb 2011		As of 1 Sept 2011		As of 1 March 2012	
		U.S.	Russia	U.S.	Russia	U.S.	Russia
Deployed Missiles	700	882	521	822	516	812	494
Deployed Warheads	1,550	1,800	1,537	1,790	1,566	1,737	1,492
Deployed and non-deployed launchers	800	1,124	865	1,043	871	1,040	881

**Indicator 4.3. Follow-on measures: meetings are held for discussions on a follow-on treaty/other follow-on measures to New START; negotiations on a follow-on treaty begin**

**Limited progress**

The US Senate, in its Resolution of Ratification on New START, stated that the United States should seek to initiate, within one year, “negotiations with the Russian Federation on an agreement to address the disparity between the non-strategic (tactical) nuclear weapons stockpiles of the Russian Federation and of the United States and to secure and reduce tactical nuclear weapons in a verifiable manner.”<sup>94</sup> President Obama announced to the Senate in March 2011 that he would attempt to commence such negotiations within a year of the ratification of New START (i.e. by February 2012). However, Russia has indicated that it is still too early to discuss tactical nuclear

<sup>92</sup> “Russia, U.S. Each Complete 18 New START Audits,” NTI website, [www.nti.org/gsn/article/russia-us-each-complete-18-new-start-audits/](http://www.nti.org/gsn/article/russia-us-each-complete-18-new-start-audits/)

<sup>93</sup> “New START Treaty Aggregate Numbers of Strategic Offensive Arms,” Fact Sheet, Bureau of Arms Control, Verification and Compliance, U.S. Department of State, updated April 6, 2012; December 1, 2011, and June 1, 2011.

<sup>94</sup> The full text of the Resolution of Ratification can be found on page S10982 of the Congressional Record from December 22, 2010, [www.congress.gov/cgi-lis/query/z?r111:S22DE0-0012](http://www.congress.gov/cgi-lis/query/z?r111:S22DE0-0012)

weapons.<sup>95</sup> Russian officials have further suggested that it is premature to discuss the next treaty, stating that it is important “to gather practical experience of the New START implementation and assess objectively the quality and viability of this agreement” before planning next steps.<sup>96</sup> On December 27, 2011, acting US Under Secretary of State Rose Gottemoeller told RIA Novosti that the United States was preparing for talks on non-strategic nuclear weapons, but described talks as in the “homework period,” noting that “we are not yet ready to embark on new negotiations.”<sup>97</sup>

**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:**

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- (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 five NWS met in Paris in June 2011 to continue their consultations on nuclear disarmament, following up to the 2010 NPT Review Conference and the 2009 London Conference on Transparency and Confidence Building Measures. The details of discussion are confidential, but in the statement issued after the meeting, the five NWS reaffirmed their commitment to the goal of nuclear disarmament, while also linking it to nonproliferation efforts:

They [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. They called on all States, both States Parties and Non Parties, to contribute to this nuclear disarmament

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<sup>95</sup> “Russia Says Too Early to Talk Tactical Nuclear Weapons with United States,” *RIA Novosti*, January 29, 2011, [http://en.rian.ru/mlitary\\_news/20110129/162362622.html](http://en.rian.ru/mlitary_news/20110129/162362622.html); and “Moscow Keeps Tactical Nuclear Weapons Cuts Issue Low-Key – Russian Senator,” *RIA Novosti*, March 30, 2011, <http://en.rian.ru/russia/20110430/163787812.html>

<sup>96</sup> Statement at the UN First Committee, thematic debate, October 4, 2011.

<sup>97</sup> “U.S. preparing for tactical nuclear cuts in future arms deal with Russia,” *RIA Novosti*, December 27, 2011, [http://en.rian.ru/mlitary\\_news/20111227/170513651.html](http://en.rian.ru/mlitary_news/20111227/170513651.html)

objective, including by ensuring that the international nuclear non-proliferation regime remains robust and reliable.<sup>98</sup>

During the meeting the five NWS also agreed to continue to work on key nuclear glossary terms and organized a “dedicated working group” on terminology.<sup>99</sup>

Avoiding comments on multilateral nuclear disarmament, and initiatives such as a nuclear weapons convention or the relationship with international humanitarian law, the five NWS highlighted elements of a step-by-step approach. They reaffirmed commitment to promote the entry into force of the CTBT, and to uphold their respective moratoria on nuclear test explosions.<sup>100</sup> They also reiterated their support for commencement of the negotiations on a fissile material cut-off treaty at the CD.

**(a) Rapidly moving towards an overall reduction in the global stockpile of all types of nuclear weapons, as identified in action 3;**

***Indicator 5a.1. Discussions/consultations among the NWS address nuclear weapons reductions and complete elimination of nuclear weapon***

**Limited progress**

While the five NWS did engage in consultations as a follow-up to their first meeting in 2009, they are far from developing any joint action on “rapidly moving towards an overall reduction in the global stockpile.” To the extent that the NWS consultations have so far addressed nuclear weapons reductions, they seem to be focused on the experience of past and present US-Russian agreements, and questions of strategic stability. It is understood that there are persistent disagreements over the necessary levels of transparency and next steps towards nuclear disarmament. The five NWS are yet to develop even a standard form for reporting on steps taken to implement the 2010 action plan and Article VI of the NPT. A welcome development is the discussion among the NWS of verification of arms reductions and warhead dismantlement.

**(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;**

***Indicator 5b.1. Discussions/consultations among the NWS, particularly US-Russia, achieve progress on addressing such issues as reductions of non-strategic nuclear weapons and***

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<sup>98</sup>“Nuclear Weapon States Discuss Nuclear Disarmament Obligations,” U.K. Foreign & Commonwealth Office, 6 July 2011, <http://www.fco.gov.uk/en/news/latest-news/?view=PressS&id=627529382>; and “Statement by Ambassador Jo Adamson at the First Committee of the 66<sup>th</sup> Session of the United Nations General Assembly,” New York, October 12, 2011, available at [www.reachingcriticalwill.org/political/1com/1com11/statements/12Oct\\_UK.pdf](http://www.reachingcriticalwill.org/political/1com/1com11/statements/12Oct_UK.pdf)

<sup>99</sup> Please see “First P5 Follow-up Meeting to the NPT Review Conference (Paris, June 30<sup>th</sup> – July 1<sup>st</sup>, 2011),” Statement by the Spokesperson of the Ministry of Foreign and European Affairs, France TNP website, [www.franceonu.org/spip.php?article5660](http://www.franceonu.org/spip.php?article5660); also, “The State Department’s Role in NATO Deterrence and Defense Posture Review (DDPR) and Future Arms Control,” Testimony by Ellen Tauscher, Under Secretary for Arms Control and International Security, November 2, 2011, [www.state.gov/t/us/176669.htm](http://www.state.gov/t/us/176669.htm)

<sup>100</sup> “First P5 Follow-up Meeting to the NPT Review Conference (Paris, June 30<sup>th</sup>-July 1<sup>st</sup>, 2011),” [www.franceonu.org/spip.php?article5660](http://www.franceonu.org/spip.php?article5660)

## ***withdrawal of nuclear weapons stationed abroad; as well as addressing other classes of weapons***

### **No progress**

It is not clear if the NWS (P-5) consultations have specifically addressed the issue of Russian and U.S. non-strategic weapons, as there is no reference to this in the joint statement. The formulation of Action 5b was influenced by the U.S. and other states' concerns over the size of the Russian arsenal of non-strategic weapons, as well as Russia's objection to the deployment of US non-strategic nuclear weapons in Europe. No observable progress was achieved during the reporting period in addressing and resolving either issue.

#### 1. Regarding non-strategic nuclear weapons:

The United States and Russia have not included limits on non-strategic nuclear weapons in their past arms control agreements, including the New START.<sup>101</sup> Please see Action 4 for discussion.

#### 2. Regarding nuclear weapons stationed outside national territory:

The United States stations non-strategic nuclear weapons in Europe as part of its NATO commitments.

In its 2010 nuclear posture review, the U.S. stated that it would “retain the capability to forward-deploy non-strategic nuclear weapons in support of its Alliance commitments.”<sup>102</sup> The first NATO summit following the 2010 RevCon took place in November 2010 in Lisbon, Portugal. The new Strategic Concept adopted at the summit somewhat reduced the emphasis on U.S. non-strategic nuclear weapons stationed in Europe, compared to the 1999 Strategic Concept.<sup>103</sup> Unlike the 1999 version, the 2010 Concept also explicitly mentions the prospect of further reductions of these weapons in the future.<sup>104</sup> NATO emphasizes, however, that “in any future reductions, our aim should be to seek Russian agreement to increase transparency on its nuclear weapons in Europe and relocate these weapons away from the territory of NATO members.”<sup>105</sup> Views on the withdrawal of U.S. weapons differ among European members of NATO, with states such as Belgium, Germany, Finland, Norway and others supporting the removal of non-strategic nuclear weapons from Europe.<sup>106</sup> Some U.S. officials have noted that, while the United States is open to the withdrawal of tactical nuclear weapons from Europe, some of the European allies are in fact adamantly opposed, even if they do not express such opposition in public, outside of intra-NATO consultations.<sup>107</sup> The

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<sup>101</sup> For a summary, see Amy F. Woolf, “Nonstrategic Nuclear Weapons, CRS Report RL32572, February 2, 2011, [www.fas.org/sgp/crs/nuke/RL32572.pdf](http://www.fas.org/sgp/crs/nuke/RL32572.pdf)

<sup>102</sup> Nuclear Posture Review Report, U.S. Department of Defense, April 2010.

<sup>103</sup> “Active Engagement, Modern Defence,” Strategic Concept, North Atlantic Treaty Organization, November 19, 2010, [www.nato.int/cps/en/natolive/official\\_texts\\_68580.htm](http://www.nato.int/cps/en/natolive/official_texts_68580.htm). For analysis, see Robert S. Norris and Hans M. Kristensen, “US Tactical Nuclear Weapons in Europe, 2011,” *Bulletin of the Atomic Scientists*, Vol. 67, no. 1 (January 2011), <http://bos.sagepub.com/content/67/1/64.full.pdf+html>

<sup>104</sup> “Active Engagement, Modern Defence,” Paragraph 26.

<sup>105</sup> *Ibid.*

<sup>106</sup> At the 2010 NPT Review Conference, Germany led the efforts to include in the final document a call on the United States and Russia to negotiate the reduction and elimination of non-strategic nuclear weapons. See William Potter et al, “The 2010 NPT Review Conference: Deconstructive Consensus,” June 17, 2010.

<sup>107</sup> Remarks made under the Chatham House rules, fall 2011.

Alliance is working on the Defence and Deterrence Posture Review that was mandated by the Lisbon Summit and should address the issue of non-strategic nuclear weapons.<sup>108</sup> NATO members are scheduled to meet for a summit in Chicago in May 2012, but analysts do not expect any significant changes regarding the Alliance's nuclear posture and nuclear weapons stationed in Europe.<sup>109</sup>

**(c) To further diminish the role and significance of nuclear weapons in all military and security concepts, doctrines and policies;**

***Indicator 5c.1. The diminishing role of nuclear weapons is reflected through changes in doctrines; adoption of new doctrines and/or security concepts and policies; or, (intended) changes are communicated through high-level statement.***

**China**

No change during the reporting period

China's 2010 defense white paper reaffirmed the no-first-use policy and stated that China "adheres to a self-defensive nuclear strategy, and will never enter into a nuclear arms race with any other country."<sup>110</sup>

**France**

No change during the reporting period

France did not release any new doctrinal documents.

**Russia**

No change +  Red flag

No new doctrinal documents were released by Russia between May 2010 and March 2012, so its nuclear posture remained the same, as outlined in the February 2010 military doctrine.

Russia's current military doctrine foresees a role for nuclear weapons in a potential large-scale or regional war. It stipulates that nuclear weapons might be used in response to a nuclear attack, an attack with other WMD, or "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."<sup>111</sup> This has raised somewhat the threshold for employing nuclear weapons compared to the 2000 doctrine, but Russia does not have a no-first-use policy and does not unconditionally pledge not to use nuclear weapons against non-nuclear-weapon states.<sup>112</sup>

Recent statements from high-ranking Russian officials, however, hint at the potential increase in the role of nuclear weapons or, at the very least, signal that the reliance on a nuclear arsenal is not likely

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<sup>108</sup> "NATO, U.S. Said Discussion Removal of Tactical Nukes from Europe," Global Security Newswire, July 15, 2011, [www.nti.org/gsn/article/nato-us-said-discussing-removal-of-tactical-nukes-from-europe/](http://www.nti.org/gsn/article/nato-us-said-discussing-removal-of-tactical-nukes-from-europe/)

<sup>109</sup> See, for example, Steven Pifer, "NATO, the Chicago Summit and Nuclear Weapons," Brookings, March 5, 2012, [www.brookings.edu/opinions/2012/0305\\_nato\\_pifer.aspx](http://www.brookings.edu/opinions/2012/0305_nato_pifer.aspx)

<sup>110</sup> China's National Defense in 2010, White Paper, [www.china.org.cn/government/whitepaper/node\\_7114675.htm](http://www.china.org.cn/government/whitepaper/node_7114675.htm)

<sup>111</sup> Russian Federation Presidential edict, "The Military Doctrine of the Russian Federation," February 5, 2010.

<sup>112</sup> For analysis, please see Nikolai Sokov, "The New, 2010 Russian Military Doctrine: The Nuclear Angle," James Martin Center for Nonproliferation Studies, February 5, 2010, [http://cns.miis.edu/stories/100205\\_russian\\_nuclear\\_doctrine.htm](http://cns.miis.edu/stories/100205_russian_nuclear_doctrine.htm).

to decrease in the foreseeable future. Prime Minister Vladimir Putin, who won the presidential elections on March 4, 2012, published an article on foreign policy in February 2012, indicating complete dismissal of the prospect of nuclear disarmament. Putin stated that, because of the threats Russia is facing, it “will under no circumstances surrender [its] strategic deterrent capability, and indeed, will in fact strengthen it.”<sup>113</sup> (Suggestion that this was posturing for a domestic audience ahead of elections is not supported by the fact that a full English translation of the article is posted on the government’s website.)

## United Kingdom

### Limited progress

The United Kingdom continued to maintain the posture of “minimum nuclear deterrence.” The new Strategic Defence and Security Review (SDSR), released in October 2010, stipulates that the UK would consider using nuclear weapons only “in extreme circumstances of self-defence, including the defence of [UK’s] NATO allies.”<sup>114</sup>

## United States

### Limited progress

In January 2012 President Obama and the Department of Defense announced a new defense strategy entitled “Sustaining US Global Leadership: Priorities for 21st-Century Defense.” While the strategy reaffirmed the previous doctrine that “as long as nuclear weapons remain in existence, the United States will maintain a safe, secure, and effective arsenal,” it also suggested that the United States might implement new reductions in the arsenal. “It is possible that our deterrence goals can be achieved with a smaller nuclear force, which would reduce the number of nuclear weapons in our inventory as well as their role in U.S. national security strategy.”<sup>115</sup>

### ***Indicator 5c.2. The role of nuclear weapons in military alliances: the NATO security concept de-emphasizes the role of nuclear weapons***

### No progress

Adopted in November 2010, NATO’s Strategic Concept maintains that, “The supreme guarantee of the security of the Allies is provided by the strategic nuclear forces of the Alliance, particularly those of the United States” and that “deterrence, based on an appropriate mix of nuclear and conventional capabilities, remains a core element of our overall strategy.”<sup>116</sup> At the same time, the document emphasizes that NATO has “dramatically reduced [...] our reliance on nuclear weapons in NATO strategy.” It is not clear how the latter statement is compatible with the nuclear deterrence being the “supreme guarantee” and a “core element” of NATO strategy. The Alliance’s endorsement of a vision of a nuclear-weapon-free world appears less than solid, as the Security Concept “commits NATO to the goal of creating conditions for a world without nuclear weapons,” but in the context

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<sup>113</sup> Vladimir Putin, “Being Strong: National Security Guarantees for Russia,” Official Website of the Government of Russian Federation, February 20, 2012, <http://premier.gov.ru/eng/events/news/18185/>

<sup>114</sup> “Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review,” October 2010, p. 37.

<sup>115</sup> “Sustaining U.S. Global Leadership: Priorities for 21<sup>st</sup> Century Defense,” U.S. Department of Defense, January 3, 2012, p. 11.

<sup>116</sup> “Active Engagement, Modern Defence,” North Atlantic Treaty Organization, November 19, 2010, [www.nato.int/cps/en/natolive/official\\_texts\\_68580.htm](http://www.nato.int/cps/en/natolive/official_texts_68580.htm)

of continued commitment to nuclear weapons: “as long as there are nuclear weapons in the world, NATO will remain a nuclear Alliance.”<sup>117</sup>

According to the NATO Lisbon Summit Declaration, the NATO Council was tasked “to continue to review NATO’s overall posture in deterring and defending against the full range of threats to the Alliance... on the basis of deterrence and defence posture principles agreed in the Strategic Concept.”<sup>118</sup> This process, the Deterrence and Defense Posture Review, began in March 2011 but has not been completed yet.<sup>119</sup>

**(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;**

The formulation of action 5(d) is very broad and leaves a lot of room for interpretation as to what qualifies as implementation of this action item. Policies the discussion of which would be of relevance here can include the reduction of the role of nuclear weapons, arms reductions, lowering the operational status of nuclear weapons, strategic dialogue and transparency measures, and others. These areas are already covered under other sub-points of Action 5 as well as some other actions items. Here we would only highlight the engagement among the five NWS on advancing the negotiation of a fissile material cut-off treaty and implementation of the CTBT.

*Efforts toward commencing the negotiation of a fissile material cut-off treaty*

The United States has led the effort to convene a “contact group” of NWS, with a possible inclusion of other weapons possessors, on launching the FMCT negotiations.<sup>120</sup> The group met in August 2011 on the margins of the CD in Geneva and in October 2011 on the margins of the UN First Committee session in New York.<sup>121</sup> India reportedly took part in the first meeting, along with the five NWS. The content of these discussions is not disclosed, but the group evidently has not been able to come up with solutions for the current deadlock at the CD.

*NWS and the CTBTO engage on issues of on-site inspections and nuclear testing detection.*

In November 2011, the United Kingdom and CTBTO organized a meeting in Edinburgh focused on enhancing the detection of underground nuclear testing, inviting experts from the five NWS.<sup>122</sup> Speaking ahead of the meeting, UK Minister of Counter-Proliferation Alistair Burt stated that the experts would “discuss technical methods of carrying out inspections to determine whether a

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<sup>117</sup> Ibid., and “NATO’s Nuclear Forces,” North Atlantic Treaty Organization, updated 14 October 2011, [www.nato.int/cps/en/natolive/topics\\_50068.htm?](http://www.nato.int/cps/en/natolive/topics_50068.htm?)

<sup>118</sup> “Lisbon Summit Declaration,” North Atlantic Treaty Organization, 20 November 2010, [www.nato.int/cps/en/natolive/official\\_texts\\_68828.htm](http://www.nato.int/cps/en/natolive/official_texts_68828.htm)

<sup>119</sup> Oliver Meier, “NATO Posture Review Takes Shape,” *Arms Control Today*, March 2011, [www.armscontrol.org/act/2011\\_03/Brief\\_1](http://www.armscontrol.org/act/2011_03/Brief_1); for an discussion of the nature of the review, see Susi Snyder and Wilbert van der Zeijden, “NATO’s Defense & Deterrence Posture Review,” *NATO Watch*, March 11, 2011, [www.natowatch.org/node/481](http://www.natowatch.org/node/481)

<sup>120</sup> A senior State Department official, remarks under Chatham House rules.

<sup>121</sup> Conversations with diplomats familiar with the process, fall 2011.

<sup>122</sup> “Nuclear Weapon States Discuss Nuclear Disarmament Obligations,” UK Foreign & Commonwealth Office, July 6, 2011, [www.fc.gov.uk/en/news/latest-news/?view=News&id=688959382](http://www.fc.gov.uk/en/news/latest-news/?view=News&id=688959382)

nuclear weapon test explosion has taken place in violation of the Treaty.” He further noted that such technical exchanges “contribute to our wider cooperation on nuclear disarmament and non-proliferation, and are critical to building confidence and trust.”<sup>123</sup>

**(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;**

These two sub-actions are grouped here because high alert levels and the risk of accidental use are linked. The formulation of item 5(e) appears very weak in that it does not call on NWS to implement policies on reducing the operational status, such as de-alerting, de-targeting, de-mating and reducing the number of warheads associated with a given delivery vehicle, but merely to consider the interest of NNWS in such policies. Whether or not NWS actually consider this interest is hardly measurable. Linking 5(e) and 5(f), this report reviews the steps the NWS take to reduce the risk of accidental use, including through the reduction of operational status.

***Indicator 5ef.1. De-alerting and other issues concerning the operational status of nuclear weapons and the reduction of accidental use risks are discussed among the NWS; decisions/commitments are made in this regard***

#### No action

The Joint P-5 statement did not mention any discussions of operational status, de-alerting and de-mating taking place within the framework of NWS consultations. U.S.-Russian consultations may have touched on the subject of reducing alert levels, but there is no mention of that in open sources during the reporting period.

Prior to the 2010 Review Conference, some NWS already had policies and agreements in place aimed at reducing the alert levels and operational status of their weapons.

#### Existing policies

China’s doctrine stipulates that, “in peacetime the nuclear missile weapons of the Second Artillery Force are not aimed at any country.”<sup>124</sup> Analysts assess that China’s nuclear weapons are kept at a low level of alert, and normally “missiles and fuel appear to be stored separately from warheads.”<sup>125</sup>

China and Russia have agreed on a mutual no-first-use policy and do not target nuclear weapons at each other. They also exchange missile launch notifications.<sup>126</sup> Russia and the United States, too,

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<sup>123</sup> Ibid.

<sup>124</sup> “China’s National Defense in 2008,” Defense White Paper, January 2009, [http://news.xinhuanet.com/english/2009-01/20/content\\_10688124.htm](http://news.xinhuanet.com/english/2009-01/20/content_10688124.htm)

<sup>125</sup> Mark Stokes, [http://project2049.net/documents/chinas\\_nuclear\\_warhead\\_storage\\_and\\_handling\\_system.pdf](http://project2049.net/documents/chinas_nuclear_warhead_storage_and_handling_system.pdf); Hui Zhang, “China’s Perspective on a Nuclear-Free World,” *The Washington Quarterly* (April 2010), [http://www.twq.com/10april/docs/10apr\\_Zhang.pdf](http://www.twq.com/10april/docs/10apr_Zhang.pdf); and [http://news.mod.gov.cn/forces/2011-05/29/content\\_4244145.htm](http://news.mod.gov.cn/forces/2011-05/29/content_4244145.htm)

<sup>126</sup> Please see [www.nti.org/media/pdfs/3b\\_1.pdf?\\_id=1316627913](http://www.nti.org/media/pdfs/3b_1.pdf?_id=1316627913) (in Chinese); Luke Champlin, “China, Russia Agree on Launch Notification,” November 2009, [www.armscontrol.org/act/2009\\_11/ChinaRussia](http://www.armscontrol.org/act/2009_11/ChinaRussia), and “China and Russia Sign Missile Notification Pact,” Sina, October 14, 2010, <http://english.sina.com/china/2009/1013/277312>



have a non-targeting agreement. Currently, neither the U.S. nor Russian strategic forces are targeted at any specific targets.<sup>127</sup>

At the same time, alert levels remain high. Russia's-deployed ICBMs are maintained at launch-on-warning, meaning that they are ready to launch if it appears that another state has initiated a nuclear strike against Russia. Sea- and air-based nuclear weapons are at a lower level of readiness: gravity bombs are not continuously deployed on heavy bombers and Russian SSBNs are not on continuous at-sea patrol.<sup>128</sup> Russia's non-strategic nuclear warheads are normally kept in central storage.

According to the 2010 Nuclear Posture Review, U.S. strategic forces are maintained at the following alert posture: "heavy bombers off full-time alert, nearly all ICBMs on alert, and a significant number of SSBNs at sea at any given time."<sup>129</sup> This is the same level as under the previous posture, although President Obama had stated during his election campaign that he would "work with Russia" to take ballistic missiles off of "hair-trigger alert."<sup>130</sup> Russian leaders have made no promises to this effect.

France and the United Kingdom each keep one SSBN at sea on deterrent patrol at all times. A UK submarine on patrol is usually at several days "notice to fire" and its missiles are de-targeted.<sup>131</sup> France has also de-targeted its nuclear weapons (in 1997) and, according to its working paper submitted to the 2010 Review Conference, has reduced "the alert status of the two nuclear components."<sup>132</sup> Its *Livre Blanc*, however, does not specify alert levels/posture.

### **Indicator 5f.1. NWS discussions/consultations address the risk of accidental use of nuclear weapons**

No

There were no specific announcements of such discussions having taken place at the P-5 meetings.

### **(g) Further enhance transparency and increase mutual confidence.**

### **Indicator 5g.1. Transparency and reporting are discussed in NWS consultations and decisions on measures are taken accordingly**

Limited progress

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<sup>127</sup> John Hallam, "Nuclear Weapons Operational Readiness/Operating Status," *Reaching Critical Will*, 2008, [www.reachingcriticalwill.org](http://www.reachingcriticalwill.org); "Clinton, Yeltsin Reaffirm Importance of Joint Cooperation," *Federation of American Scientists*, 14 January 1994, [www.fas.org](http://www.fas.org); Dr Nikolai Sokov, interview, winter 2012.

<sup>128</sup> Kristensen and Norris, "Russian Nuclear Forces, 2011," p. 71.

<sup>129</sup> Nuclear Posture Review Report, U.S. Department of Defense, April 2010, p. x.

<sup>130</sup> Discussed in Hans M. Kristensen, "US and Russian Nuclear Forces: Status and Trends in Light of the *Smaller and Safer* Article," Presentation at the United Nations, October 13, 2010, [www.fas.org/programs/ssp/nukes/.../Brief2010\\_SmallSafe.pdf](http://www.fas.org/programs/ssp/nukes/.../Brief2010_SmallSafe.pdf)

<sup>131</sup> SDR 1998, Supporting essay five, "Nuclear deterrent, arms control," Para 12; Kristensen and Norris, "British Nuclear Forces, 2011," and "Nuclear Subs Collide in Atlantic," *BBC News*, February 16, 2009, [http://news.bbc.co.uk/2/hi/uk\\_news/7892294.stm](http://news.bbc.co.uk/2/hi/uk_news/7892294.stm)

<sup>132</sup> "Nuclear disarmament: France's practical commitment," Working paper submitted by France to the 2010 NPT Review Conference, April 14, 2010, NPT/CONF.2010/WP.33.

At the July 2011 meeting in Paris, the NWS discussed issues of transparency and mutual confidence, including nuclear doctrine and capabilities, as well as verification.<sup>133</sup> According to the subsequent NWS statement, technical challenges associated with verification were given particular attention, and bilateral and multilateral experiences were shared among the NWS.<sup>134</sup>

The United States and Russia briefed the other NWS on the implementation of New START and particularly its verification regime.

The United Kingdom invited the other NWS to a confidential expert-level briefing on lessons learned from the U.K.-Norway Initiative.<sup>135</sup> The meeting took place on April 4, 2012 and was the first meeting of all NWS focused specifically on disarmament/warhead dismantlement verification. See Action 19.

The NWS also discussed, but have not yet agreed on, a standard form for reporting their implementation of the 2010 action plan.

### ***Indicator 5g.2. Strategic dialogue is taking place among/between the NWS***

The United States, United Kingdom and France are allies within NATO and engage in ongoing strategic dialogue in that context. This indicator thus primarily pertains to their dialogue(s) with China and Russia, as well as the China-Russia dialogue.

#### **China-United States:**

U.S.-China strategic dialogue has been taking place since the 1980s, although at varying time intervals and levels of seniority depending on external events.<sup>136</sup> According to U.S. accounts, China has often resisted discussing nuclear weapon stockpiles and postures as part of these exchanges.<sup>137</sup> In 1998, the two countries agreed “not to target at each other the strategic nuclear weapons under their respective control,” and subsequently reaffirmed this commitment in 2009.<sup>138</sup>

During the reporting period, in 2011, there were a number of high-level visits and exchanges between the militaries and defense departments of China and the United States.<sup>139</sup> Mutual visits included then-US Secretary of Defense Robert Gates’ trip to China and PLA Chief of Staff Chen Bingde’s visit in the United States. The U.S.-China Strategic and Economic Dialogue introduced a component called the Strategic Security Dialogue to “build more understanding on issues in the

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<sup>133</sup> “First P5 Follow-up Meeting to the NPT Review Conference (Paris, June 30<sup>th</sup>-July 1<sup>st</sup>, 2011),” Statement by the Spokesperson of the Ministry of Foreign and European Affairs, Permanent Mission of France to the United Nations in New York, July 1, 2011, [www.franceonu.org/spip.php?article5660](http://www.franceonu.org/spip.php?article5660)

<sup>134</sup> Ibid.

<sup>135</sup> “UK Norway Workshop: Questions Answered,” United Kingdom-Norway Initiative, <https://registration.livgroup.co.uk/ukniworkshop/FAQ/#faq10>

<sup>136</sup> For a general account of these exchanges, see Shirley A. Kan, “U.S.-China Military Contacts: Issues for Congress,” CRS Report RL32496, July 26, 2011, [www.fas.org/sfp/crs/natsec/RL32496.pdf](http://www.fas.org/sfp/crs/natsec/RL32496.pdf)

<sup>137</sup> Ibid.

<sup>138</sup> US-China Joint Statement, office of the Press Secretary, The White House, November 17, 2009, [www.whitehouse.gov/the-press-office/us-china-joint-statement](http://www.whitehouse.gov/the-press-office/us-china-joint-statement)

<sup>139</sup> Xu Aqing, “China-US military relations move ahead with difficulties,” Ecns.cn, January 19, 2012, <http://ecns.cn/military/2012/01-19/6603.shtml>

bilateral relationship that have the potential for miscalculation and accident.”<sup>140</sup> This dialogue could potentially include nuclear and missile defense issues, but the details of discussions are not made public.

China, along with Russia, continues to be concerned about the development of US ballistic missile defense, fearing it would undermine China’s minimum deterrent. The United States, for its part, has concerns about China’s lack of transparency in relation to its nuclear arsenal, and China’s modernization programs. Greater engagement is needed to help overcome mutual suspicions and possible misunderstandings.

### **China-Russia:**

China and Russia have held a number of strategic dialogue meetings over the years, but it is unclear to what extent they have discussed nuclear policy, disarmament, or other confidence-building measures related to nuclear weapons.<sup>141</sup> In 1994, the two countries agreed to a mutual no-first-use of nuclear weapons and no targeting of nuclear weapons at each other.<sup>142</sup> In 2009, they agreed to share missile launch notifications with each other.<sup>143</sup>

Military cooperation and high-level visits continued during the reporting period, and China and Russia “have smoothly implemented the agreement on informing each other of ballistic missiles and space launch vehicles.”<sup>144</sup> It is unclear to what extent their discussions in 2010-2011 touched on issues related to nuclear weapons policy, posture, verification, etc. In September 2010, the leaders of the two countries issued a joint statement in which they “reaffirmed the goal of establishing a nuclear-free world.”<sup>145</sup>

In the meantime, Russia also appears to be concerned about China’s modernization programs, though to a lesser extent than the United States.

### **Russia-United States**

The United States and Russia have a long-standing strategic dialogue, had concluded several bilateral arms control agreements in the past, and are currently implementing a bilateral arms reduction treaty with an extensive verification regime.

As indicated under Action 4, the United States and Russia exchanged numerous notifications during the reporting period, informing each other of strategic weapons movements and missile launches (flight tests).<sup>146</sup>

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<sup>140</sup> Charles Freeman and Bonnie S. Glaser, “The U.S.-China Strategic and Economic Dialogue,” CSIS, May 9, 2011, <http://csis.org/publication/us-china-strategic-and-economic-dialogue-0>; and Kan, “US-China Military Contacts: Issues for Congress.”

<sup>141</sup> Sherman Garnett, “Challenges of the Sino-Russian Strategic Partnership,” *The Washington Quarterly* (Autumn 2011), [www.twq.com/01autumn/garnett.pdf](http://www.twq.com/01autumn/garnett.pdf)

<sup>142</sup> [http://www.nti.org/media/pdfs/3b\\_1.pdf?\\_id=1316627913](http://www.nti.org/media/pdfs/3b_1.pdf?_id=1316627913)

<sup>143</sup> Champlin, “China, Russia Agree on Launch Notification,” and “China and Russia Sign Missile Notification Pact,” Sina, October 14, 2010.

<sup>144</sup> “China to Promote Relations with Russia to New Stage,” Xinhua, June 4, 2011, [www.china.org.cn/world/2011-06/04/content\\_22715946.htm](http://www.china.org.cn/world/2011-06/04/content_22715946.htm)

<sup>145</sup> “China, Russia Pledge Stronger Co-op on Arms Control, Disarmament: Statement,” Xinhua, September 28, 2010, [http://news.xinhuanet.com/english2010/china/2010-09/28/c\\_13534059.htm](http://news.xinhuanet.com/english2010/china/2010-09/28/c_13534059.htm)

<sup>146</sup> “New START Treaty,” Bureau of Arms Control, Verification and Compliance, U.S. Department of State, October 20, 2011, [www.state.gov/t/avc/rls/175945.htm](http://www.state.gov/t/avc/rls/175945.htm).

The Arms Control and International Security Working Group is part of the U.S.-Russia Presidential Commission launched in 2009. The Working Group's mandate is to "[address] 21st century challenges including enhancing stability and transparency, cooperating on missile defense, preventing the proliferation of weapons of mass destruction, and assessing common threats."<sup>147</sup> It met most recently on 14 December 2011. The two sides reportedly continued their discussions of nuclear postures and views on missile defense, particularly in light of President Medvedev's statement in early December 2011 that Russia could withdraw from New START if the United States proceeds with the establishment of missile defense in Europe.<sup>148</sup> In spite of the dialogue, Russia and the United States have so far been unable to reach a compromise on either the missile defense or the non-strategic nuclear weapons.

### **NATO-Russia**

The two sides engage in dialogue through the NATO-Russia Council (NRC) established in 2002.<sup>149</sup> The Council serves as a framework for consultations and cooperation in a variety of areas, beyond the nuclear/WMD realm. It "usually meets monthly at the level of ambassadors and military representatives; twice yearly at the level of foreign and defense ministers and chiefs of staff; and occasionally at summit level."<sup>150</sup> As far as nuclear issues are concerned, the Council has not been successful in recent years in bridging the difference between NATO states and Russia on questions of missile defense, deployment of US nuclear weapons in Europe, reduction of Russia's non-strategic nuclear weapons, and implementation of the Conventional Forces in Europe (CFE) treaty. On February 29, 2012, both the NATO Secretary General Anders Fogh Rasmussen and Russian Deputy Foreign Minister Sergei Ryabkov acknowledged that the negotiations on missile defense cooperation were at a standstill.<sup>151</sup>

Continued disagreements in this forum negatively affect prospects for a follow-on treaty between the United States and Russia that could entail deeper reductions in strategic arsenals, and for the first time cover reductions of non-strategic weapons.

**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 program of work.**

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***Indicator 6.1. A subsidiary body to deal with nuclear disarmament is established at the CD***

No progress

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<sup>147</sup> "The U.S.-Russia Arms Control and International Security Working Group," Office of the Spokesperson, U.S. Department of State, November 30, 2011, <http://www.state.gov/r/pa/prs/ps/2011/11/177935.htm>.

<sup>148</sup> "Russian-U.S. Arms Control Group Meets," Global Security Newswire, December 15, 2011, [www.nti.org/gsn/article/us-russia-hold-nuclear-disarmament-nonproliferation-talks/](http://www.nti.org/gsn/article/us-russia-hold-nuclear-disarmament-nonproliferation-talks/)

<sup>149</sup> Please see "NATO's Relations with Russia," Official NATO website, [www.nato.int/cps/en/natolive/topics\\_50090.htm](http://www.nato.int/cps/en/natolive/topics_50090.htm)

<sup>150</sup> Please see "NATO-Russia Council," Official NATO website, [www.nato.int/cps/en/SID-93331D27-9292E54B/natolive/topics\\_50091.htm](http://www.nato.int/cps/en/SID-93331D27-9292E54B/natolive/topics_50091.htm)

<sup>151</sup> "NATO Chief Says Missile Defense Talks with Russia at Standstill," Global Security Newswire, February 29, 2012, [www.nti.org/gsn/article/nato-chief-says-missile-defense-talks-russia-standstill/](http://www.nti.org/gsn/article/nato-chief-says-missile-defense-talks-russia-standstill/)

The Conference on Disarmament has not been able to adopt a program of work, and no new subsidiary bodies were established. Pakistan continued to block the adoption of a program of work due to its opposition to the commencement of negotiations of a fissile material treaty without assurances that such a treaty would cover existing stocks of fissile material for weapons purposes. The latest attempt to reach a consensus on a program of work was made under the Egyptian presidency of the CD in March 2012. The proposed program, based on the one adopted in 2009 (CD/1864), provided for the establishment of four working groups: on nuclear disarmament, a fissile material treaty, prevention of an arms race in outer space, and negative security assurances. Unlike the 2009 document, however, the new proposal did not specifically task the working group on fissile material treaty to begin negotiations, but rather to “deal with elements” of such a treaty.<sup>152</sup> Citing a worsened security situation, the representative of Pakistan stated he was not in the position to support the proposed program of work and rejected the ambiguity in its formulation.<sup>153</sup> The first part of the 2012 session of the CD closed on March 27 without adopting a program of work.

**Action 7: All States agree that the Conference on Disarmament should, within the context of an agreed, comprehensive and balanced program 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.**

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***Indicator 7.1. Discussions of an effective international arrangement to assure non-nuclear weapons states against the use or threat of use of nuclear weapons begin in the CD within an agreed program of work***

No progress

Four of the five NWS continue to oppose the idea of a multilateral, legally binding instrument on negative security assurances, and the CD members have otherwise been unable to break the deadlock over the negotiations of a fissile material treaty and adopt a program of work.

***Indicator 7.2. UN Secretary-General convenes a high-level meeting in Sept 2010***

Yes

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<sup>152</sup> Please see Reaching Critical Will website for the two drafts (original and revised) of proposed program of work: CD/1993 and CD/1993/Rev.1, [www.reachingcriticalwill.org/disarmament-fora/cd/2012/documents](http://www.reachingcriticalwill.org/disarmament-fora/cd/2012/documents). Also, please see RCW reports on the CD deliberations in 2012 at [www.reachingcriticalwill.org/disarmament-fora/cd/2012/reports](http://www.reachingcriticalwill.org/disarmament-fora/cd/2012/reports)

<sup>153</sup> Please see RCW report, March 15, 2012, [www.reachingcriticalwill.org/disarmament-fora/cd/2012/reports/5634-cd-fails-to-adopt-a-programme-of-work-again](http://www.reachingcriticalwill.org/disarmament-fora/cd/2012/reports/5634-cd-fails-to-adopt-a-programme-of-work-again)

The High-Level Meeting on Revitalizing the Work of the Conference on Disarmament and Taking Forward Multilateral Disarmament Negotiations was convened by the UN Secretary-General on September 24, 2010.<sup>154</sup>

Sixty-eight delegates spoke at the High Level Meeting, recognizing both recent successes in disarmament and the lack of concrete progress in the CD.<sup>155</sup> Although most states supported the main agenda items of the CD and the 2009 Programme of Work, they had differing opinions on how to move forward. The Secretary-General suggested a number of follow-up actions, including that the CD adopt the 2009 Programme of Work, review the possibility of establishing a high-level panel of eminent persons to address the functioning of the CD, and including this subject as an agenda item in the General Assembly.<sup>156</sup> No actionable decisions were adopted by the High Level Meeting.

As a follow-up, meeting took place in New York at the UN on July 27-29, 2011.<sup>157</sup> Over three days, a large number of member states, as well as representatives of groupings, such as the Non-Proliferation and Disarmament Initiative (NPDI), EU, P-5, and NAM, delivered statements. The P-5 highlighted their efforts on disarmament, including the June 30 meeting in Paris, and maintained that “the CD should maintain the primary role in substantive negotiations on priority questions of disarmament.”<sup>158</sup> They especially emphasized negotiation of an FMCT and entry into force of the CTBT.

In addition, meetings of the UN Secretary-General’s Advisory Board on Disarmament Matters, in February and June, 2011, discussed “Follow-up on the issue raised at the High-level Meeting, including inter alia the possible establishment of a high-level panel of eminent persons with special focus on the functioning of the Conference on Disarmament.”<sup>159</sup> Regarding the high-level panel, some board members thought it would be valuable, but others doubted that it would be successful; there were also different views of what type of panel would be most beneficial.<sup>160</sup> The Board recommended that the Secretary-General 1) “persist in encouraging the Conference on Disarmament to seek all efforts to achieve a breakthrough,” 2) develop recommendations “should a

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<sup>154</sup>“High-level Meeting on Revitalizing the Work of the Conference on Disarmament and Taking Forward Multilateral Disarmament Negotiations convened by the Secretary-General,” Meetings of the 65<sup>th</sup> Session of the General Assembly of the United Nations, [www.un.org/en/ga/65/meetings/disarmament.shtml](http://www.un.org/en/ga/65/meetings/disarmament.shtml)

<sup>155</sup>“Annex to the Letter dated 5 October 2010 from the Secretary-General Addressed to the President of the General Assembly,” United Nations General Assembly A/65/496, October 14, 2010, [www.un.org/ga/search/view\\_doc.asp?symbol=A/65/496](http://www.un.org/ga/search/view_doc.asp?symbol=A/65/496)

<sup>156</sup> Paragraph 19, United Nations General Assembly document A/65/496, October 14, 2010, [www.un.org/ga/search/view\\_doc.asp?symbol=A/65/496](http://www.un.org/ga/search/view_doc.asp?symbol=A/65/496)

<sup>157</sup>“Revitalizing the Work of the Conference on Disarmament and Taking Forward Multilateral Disarmament Negotiations,” United Nations General Assembly 65<sup>th</sup> Session Plenary Meeting, 27-29 July 2011, [www.un.org/disarmament/content/news/ga65-113/](http://www.un.org/disarmament/content/news/ga65-113/)

<sup>158</sup>“Follow-up to the High Level Meeting Held on 24 September 2010: Revitalizing the Work of the Conference on Disarmament and Taking Forward Multilateral Disarmament Negotiations,” Statement by Mr. Gerard Araud, Permanent Representative of France to the United Nations, on behalf of the P5 and in a National Capacity, July 27 2011, [www.un.org/disarmament/content/news/ga65-113/docs/France%20on%20behalf%20of%20P5\\_En&Fr\\_bilingual.pdf](http://www.un.org/disarmament/content/news/ga65-113/docs/France%20on%20behalf%20of%20P5_En&Fr_bilingual.pdf)

<sup>159</sup>“Advisory Board on Disarmament Matters,” United Nations Office for Disarmament Affairs, [www.un.org/disarmament/HomePage/AdvisoryBoard/AdvisoryBoard.shtml](http://www.un.org/disarmament/HomePage/AdvisoryBoard/AdvisoryBoard.shtml)

<sup>160</sup> “Work of the Advisory Board on Disarmament Matters,” United Nations General Assembly document A/66/125, July 11, 2011.

high-level panel of eminent persons be established,” and 3) “continue to raise public awareness and encourage civil society groups and non-governmental organizations to offer input.”<sup>161</sup>

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

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Most of the NWS released their updated doctrines, postures and white papers prior to the 2010 NPT Review Conference, so little – if any – change was observed during the reporting period. The only exception is the UK, which released its Strategic Defence and Security Review in October 2010.

***Indicator 8.1. States maintain security assurance policies at least at the same level as before May 2010; existing security assurances are reiterated***

### **China**

No change

In its 2010 National Defense White Paper, China reiterated that it had “made the unequivocal commitment that under no circumstances will it use or threaten to use nuclear weapons against non-nuclear-weapon states or nuclear-weapon-free zones.”<sup>162</sup> There were no changes to this policy during the reporting period.

### **France**

No change

The 2008 *Livre Blanc* states that, “the use of nuclear weapons would be conceivable only in extreme circumstances of self-defence, as enshrined in the United Nations Charter,” but does not explicitly rule out the use of nuclear weapons against non-nuclear-weapon states. According to France’s official NPT page, French policy on security assurances continues to be in line with its unilateral statement of April 1995, as recognized in the UN Security Council Resolution 984 (1995).<sup>163</sup> France, like Russia and the United Kingdom, declared in 1995 that it would not use nuclear weapons against NNWS party to the NPT except in cases of invasion or attack on its territory, armed forces, and allies by an NNWS in alliance with a nuclear-weapon state.<sup>164</sup>

### **Russia**

No change

No new doctrinal documents have been released, and there has been no change in Russia’s overall policy on security assurances since the 2010 NPT Review Conference. (Russia did, however, ratify Protocols to the African NWFZ Treaty, which is covered under Action 9)

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<sup>161</sup> Ibid.

<sup>162</sup> China’s National Defense in 2010, [www.china.org.cn/government/whitepaper/node\\_7114675.htm](http://www.china.org.cn/government/whitepaper/node_7114675.htm)

<sup>163</sup> Please see “Support and Assistance to Strengthening the Nuclear Non-Proliferation Regime,” France TNP website, [www.francetnp2010.fr/spip.php?article84](http://www.francetnp2010.fr/spip.php?article84)

<sup>164</sup> Unilateral declaration contained in UN document S/1995/264, available at [www.undemocracy.com/S-1995-264](http://www.undemocracy.com/S-1995-264)

## United Kingdom

### Limited Progress

The UK stated in its 2010 SDSR that, “the UK will not use or threaten to use nuclear weapons against non-nuclear weapon states parties to the NPT,” except those “in material breach” of their nonproliferation obligations.<sup>165</sup> On the one hand, this can be considered modest progress compared to the assurances contained in the 1999 Strategic Defence Review, which did not apply to NNWS that “attacks [the UK], [its] Allies or a state to which [it has] a security commitment, in association or alliance with a nuclear weapon state.<sup>166</sup> On the other hand, the 2010 SDSR adds a new caveat that reads, “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.”<sup>167</sup>

## United States

### No change

No new doctrinal documents have been released, and there has been no change in U.S. overall policy on security assurances since the 2010 Nuclear Posture Review. The NPR declared that “the United States will not use or threaten to use nuclear weapons against any non-nuclear-weapon state that is party to the NPT and in compliance with their nuclear non-proliferation obligations.”<sup>168</sup>

**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 reservations.**

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No new NWFZ were established during the reporting period, and no negotiations on a new NWFZ have started. Monitoring under this action item will cover the five existing zones, compliance with their provisions, and ratification of protocols, as a separate set of decisions was adopted by the 2010 RevCon in relation to the Middle East zone free of nuclear weapons and all other weapons of mass destruction.

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<sup>165</sup> 2010 UK SDSR, p. 37-38.

<sup>166</sup> “Negative Security assurances,” UK Strategic Defence Review, July 1998, paragraph 31.

<sup>167</sup> 2010 UK SDSR, p. 38.

<sup>168</sup> Nuclear Posture Review Report, U.S. Department of Defense, April 2010, p. 15.



## NWFZ in Latin America and the Caribbean (Treaty of Tlatelolco)

### ***Indicator 9.1. Relevant states join their respective NWFZ during the reporting period***

#### Not applicable

All eligible states had joined the Treaty of Tlatelolco by 2002.

### ***Indicator 9.2. Relevant/eligible states ratify protocols to the NWFZ during the reporting period (number of ratifications)***

#### Not applicable – action completed prior to 2010

All NWS had previously ratified Protocols to the Treaty of Tlatelolco.<sup>169</sup>

### ***Indicator 9.3. Nuclear-weapon states take steps toward ratification of NWFZ protocols – by submitting protocols to parliaments; declaring an intent to ratify, or engaging NWFZ members in consultations, negotiations, or other relevant activities to achieve signature and ratification of NWFZ protocols***

#### Not applicable - action completed prior to 2010

All NWS had previously ratified Additional Protocols to the Treaty of Tlatelolco.

### ***Indicator 9.4. NWS withdraw, revise or otherwise reconsider the reservations and interpretive declarations previously attached to their signature and ratification of NWFZ protocols; absent that, NWS and NWFZ engage in consultations to facilitate the withdrawal of reservations***

#### No action

The Soviet Union expressed a number of reservations and interpretations at the time of signing Protocol II to the Treaty of Tlatelolco, and the Russian Federation has not revised or withdrawn those reservations.<sup>170</sup>

### ***Indicator 9.5. States parties to NWFZs implement respective treaties according to their provisions, including main prohibitions, safeguards requirements, and special requirements such as export controls***

#### Yes

No violations by states parties to Treaty of Tlatelolco were observed. However, Argentina lodged a protest with the United Nations in February 2012, arguing that the United Kingdom had sent a nuclear-capable (possibly nuclear-armed) submarine to the South Atlantic, violating commitments under Protocol I to the Treaty of Tlatelolco.<sup>171</sup> The UK stated it did not comment on the location of its nuclear submarine on patrol. The case has not been settled at the time of this writing.

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<sup>169</sup> “Status of the Member States and Signatories to the Treaty of Tlatelolco,” OPANAL website, [www.opanal.org/opanal/tlatelolco/p-tlatelolco-i.htm](http://www.opanal.org/opanal/tlatelolco/p-tlatelolco-i.htm)

<sup>170</sup> See “Communication Received from the Union of Soviet Socialist Republics Regarding the Treaty for the Prohibition of Nuclear Weapons in Latin America,” May 18, 1978, [www.iaea.org/Publications/Documents/Infcircs/Others/inf262.shtml](http://www.iaea.org/Publications/Documents/Infcircs/Others/inf262.shtml)

<sup>171</sup> “UK Sent Nuclear Sub Near Falklands, Says Argentina,” BBC, February 10, 2012, [www.bbc.co.uk/news/world-latin-america-16993391](http://www.bbc.co.uk/news/world-latin-america-16993391)

## South Pacific Nuclear-Free Zone (SPNFZ; Treaty of Rarotonga)

### ***Indicator 9.1. Relevant states join their respective NWFZ during the reporting period***

#### No new members

Three dependent territories (Marshall Islands Republic, Federated States of Micronesia, and Palau) eligible to be Parties to the Treaty of Rarotonga have not yet joined the treaty.<sup>172</sup>

### ***Indicator 9.2. Relevant/eligible states ratify protocols to the NWFZ during the reporting period (number of ratifications)***

#### None (Target: 1)

The United States is the only eligible state that has not yet ratified the protocols to the Treaty of Rarotonga.<sup>173</sup>

### ***Indicator 9.3. Nuclear-weapon states take steps toward ratification of NWFZ protocols – by submitting protocols to parliaments; declaring an intent to ratify, or engaging NWFZ members in consultations, negotiations, or other relevant activities to achieve signature and ratification of NWFZ protocols***

#### Limited progress

On May 2, 2011, President Obama submitted the three protocols of the South Pacific NWFZ to the U.S. Senate “With a view to receiving the advice and consent of the Senate to ratification.”<sup>174</sup> The Senate has not taken any action on the protocols since and is not likely to take up the matter until after the elections in fall 2012.

### ***Indicator 9.4. NWS withdraw, revise or otherwise reconsider the reservations and interpretive declarations previously attached to their signature and ratification of NWFZ protocols; absent that, NWS and NWFZ engage in consultations to facilitate the withdrawal of reservations***

#### No action

France and Russia (USSR) signed and ratified the protocols to SPNFZ with reservations, and no indication of intent to revise or withdraw these reservations was given during the reporting period. China and the UK did not attach any reservations to their ratifications.

### ***Indicator 9.5. States parties to NWFZs implement respective treaties according to their provisions, including main prohibitions, safeguards requirements, and special requirements such as export controls***

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<sup>172</sup> SPNFZ Treaty currently has 13 members: Australia, Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Inventory of International Organizations and Regimes, [www.nti.org/treaties-and-regimes/south-pacific-nuclear-free-zone-spnfz-treaty-rarotonga/](http://www.nti.org/treaties-and-regimes/south-pacific-nuclear-free-zone-spnfz-treaty-rarotonga/)

<sup>173</sup> Inventory of International Organizations and Regimes, <http://www.nti.org/treaties-and-regimes/south-pacific-nuclear-free-zone-spnfz-treaty-rarotonga/>; note that China and Russia are not eligible to sign Protocol I.

<sup>174</sup> Message to the Senate of the United States, Office of the Press Secretary, The White House, May 2, 2011, [www.whitehouse.gov/sites/default/files/2011sptreaty\\_msg\\_rel.pdf](http://www.whitehouse.gov/sites/default/files/2011sptreaty_msg_rel.pdf)

## Yes + Red flag

States parties to the South Pacific NWFZ Treaty have been compliant with the main prohibitions under the treaty, but concerns arose in relation to potential nuclear trade with India. Article 4 of the Treaty of Rarotonga prohibits member states from exporting nuclear material and equipment to non-nuclear-weapon states “unless subject to the safeguards required by Article III.1 of the NPT.”<sup>175</sup> In light of the exemption granted to India by the NSG, a number of states, including Australia, have begun to consider nuclear cooperation with the South Asian state. India is not a member of the NPT, is not recognized as a nuclear-weapon state under the Treaty, and does not have a comprehensive safeguards agreement with the IAEA. As such, it appears that supply of uranium from an SPNFZ state to India would be in contravention of the Treaty of Rarotonga, though some observers have argued that India could be recognized as a “special case” rather than a non-nuclear-weapon state.<sup>176</sup> It is unclear how one could legally circumvent the specific reference to safeguards required by the NPT short of amending the Rarotonga Treaty.

In December 2011, Australia’s ruling Labor Party, at a national party conference, adopted a decision to allow the export of uranium to India.<sup>177</sup> “Other than the requirement of NPT membership, Australia will apply the same approach to India as we do to other countries to which we export uranium – a bilateral safeguards agreement, and conclusion of the IAEA Additional Protocol,” Defense Minister Stephen Smith announced on December 9, 2011. He further stated that in 2012, “Australian and Indian officials will start the detailed work on a bilateral safeguards agreement.”<sup>178</sup> No further developments have been reported.

## Southeast Asian NWFZ (SEANWFZ; Treaty of Bangkok)

### ***Indicator 9.1. Relevant states join their respective NWFZ during the reporting period***

#### Not applicable

The action was completed prior to 2010, with all ten eligible states becoming members of the Southeast Asian NWFZ.

### ***Indicator 9.2. Relevant/eligible states ratify protocols to the NWFZ during the reporting period (number of ratifications)***

#### None (Target: 5)

By May 2010, none of the NWS had ratified the protocol to the Bangkok Treaty, due in particular to concerns about the application of the protocol to the exclusive economic zones (EEZ). The protocol commits the parties to refrain from the use or threat of use of nuclear weapons against

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<sup>175</sup> South-Pacific Nuclear-Free Zone Treat text, <http://cns.miis.edu/inventory/pdfs/aptspnfz.pdf>

<sup>176</sup> John Carlson, “India, Uranium, and the Rarotonga Objection,” *The Interpreter*, Lowy Institute for International Policy, November 30, 2011, [www.lowyinterpreter.org/post/2011/11/30/India-uranium-and-the-Raratonga-objection.aspx](http://www.lowyinterpreter.org/post/2011/11/30/India-uranium-and-the-Raratonga-objection.aspx); for a brief overview of the debate, see Daniel Horner, “Australia Allows Uranium Sales to India,” *Arms Control Today*, January/February 2012, [www.armscontrol.org/act/2012\\_01-02/Australia\\_Allows\\_Uranium\\_Sales\\_to\\_India](http://www.armscontrol.org/act/2012_01-02/Australia_Allows_Uranium_Sales_to_India)

<sup>177</sup> As announced by Australia’s Minister for Defence Stephen Smith during a visit to India on December 9, 2011, <http://www.minister.defence.gov.au/2011/12/10/minister-for-defence-australia-and-india-building-the-strategic-partnership>

<sup>178</sup> Ibid.

members of the zone, as well as to not use nuclear weapons within the zone. As the geographical definition of the zone includes EEZs, the protocol has implications for NWS operating nuclear-armed submarines, presumably prohibiting the entry of such submarines into the EEZs and the launch of nuclear-tipped missiles from within the zone.

As of April 2012, none of the NWS has signed the protocol, but significant progress was achieved in overcoming the differences (please see indicator 9.3.).

***Indicator 9.3. Nuclear-weapon states take steps toward ratification of NWFZ protocols – by submitting protocols to parliaments; declaring intent to ratify, or engaging NWFZ members in consultations, negotiations, or other relevant activities to achieve signature and ratification of NWFZ protocols***

**Significant progress**

During summer and fall 2011, the five NWS, under U.S. leadership, engaged in consultations with ASEAN (headed by Indonesia at the time) and discussed “strategies for addressing the powers’ objections to acceding to the Southeast Asia Nuclear Weapon-Free Zone Treaty.”<sup>179</sup>

On November 14, 2011, the Executive Committee of the SEANWFZ Commission met with nuclear weapon states and came to an agreement that “could be the start towards the signing of the SEANWFZ Treaty by the nuclear weapon states.”<sup>180</sup> According to a U.S. statement at the CD in January 2012, “The Nuclear Weapon States and the states of ASEAN resolved long standing differences related to the South East Asian Nuclear-Weapon-Free Zone’s Protocol language”<sup>181</sup>

The details of the agreement have not been made public. It appears, however, that the sides decided to amend the protocol to SEANWFZ so as to clarify that it does not apply to the EEZs.<sup>182</sup> Should this be the case, the amendment(s) will need to be adopted by the SEANWFZ Commission and will enter into force after at least seven treaty members formally accept such amendment(s).<sup>183</sup> The protocol may then be opened for signature by the NWS.

China has expressed concerns about the geographic area of application of the Bangkok Treaty in light of its own territorial claims in the South China Sea. It is reported that, as a result of the negotiations in 2011, states agreed that there would be a separate memorandum of understanding

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<sup>179</sup> “Powers, ASEAN to Continue Nuke-Free Zone Talks,” *Global Security Newswire*, 12 August 2011, [www.nti.org/gsn/article/powers-asean-to-continue-nuke-free-zone-talks/](http://www.nti.org/gsn/article/powers-asean-to-continue-nuke-free-zone-talks/)

<sup>180</sup> “ASEAN FMs Agree on Nuclear-Free Zone,” Xinhua, November 16, 2011, [http://news.xinhuanet.com/english2010/world/2011-11/16/c\\_131250652.htm](http://news.xinhuanet.com/english2010/world/2011-11/16/c_131250652.htm); “Nuclear Powers to Mull Backing Southeast Asian Atomic-Free Zone,” *Global Security Newswire*, November 16, 2011, [www.nti.org/gsn/article/nuclear-powers-to-mull-backing-southeast-asian-atomic-free-zone/](http://www.nti.org/gsn/article/nuclear-powers-to-mull-backing-southeast-asian-atomic-free-zone/); and “Outcome of Meeting of the SEANWFZ Commission, Bali, Indonesia, 15 November 2011,” Ministry of Foreign Affairs of the Republic of Indonesia, No. 205/PR/XI/2011/53, November 15, 2011, [www.kemlu.go.id/Pages/PressRelease.aspx?IDP=1277&l=en](http://www.kemlu.go.id/Pages/PressRelease.aspx?IDP=1277&l=en)

<sup>181</sup> Statement at the Conference on Disarmament, January 24, 2012, [www.reachingcriticalwill.org/political/cd/2012/statements/part1/24January\\_US.pdf](http://www.reachingcriticalwill.org/political/cd/2012/statements/part1/24January_US.pdf)

<sup>182</sup> Based on information from diplomats familiar with consultations.

<sup>183</sup> According to the provisions of Article 19 of the Bangkok Treaty, see CNS Inventory of International Organizations and Regimes, <http://cns.miis.edu/inventory/pdfs/aptspnfz.pdf>

(MoU) between China and ASEAN (SEANWFZ states) on this matter, and the MoU would be referred to in the “accession protocol.”<sup>184</sup>

**Indicator 9.4. NWS withdraw, revise or otherwise reconsider the reservations and interpretive declarations previously attached to their signature and ratification of NWFZ protocols; absent that, NWS and NWFZ engage in consultations to facilitate the withdrawal of reservations**

Not applicable

NWS have not yet ratified the SEANWFZ protocol.

**Indicator 9.5. States parties to NWFZs implement respective treaties according to their provisions, including main prohibitions, safeguards requirements, and special requirements such as export controls**

Yes

No evidence found of non-compliance with the main provisions under the SEANFWZ Treaty; all the states have relevant safeguards agreements with the IAEA in place.

**African NWFZ (ANWFZ, Treaty of Pelindaba)**

**Indicator 9.1. Relevant states join their respective NWFZ during the reporting period**

Yes, 6 more member states (Target: 24 ratifications<sup>185</sup>)

Twenty-nine states had ratified ANWFZ Treaty and deposited instruments of ratification to the AU Commission at the time of the 2010 NPT Review Conference.

Since the 2010 NPT Review Conference six states have joined the Pelindaba Treaty: Cameroon, Chad, Ghana, Guinea-Bissau, Namibia, and Zambia.<sup>186</sup> As of March 2012, all 53 members of the African Union have signed the Treaty (including the Sahrawi Arab Democratic Republic, which is not a member of the UN and not a party to the NPT). Morocco signed and ratified the Treaty in April 1996, but is not a member of the AU. Thirty-six states are currently States Parties to the Treaty. There are 18 countries that have yet to join the African NWFZ.<sup>187</sup>

**Indicator 9.2. Eligible states ratify protocols to the NWFZ during the reporting period (number of ratifications)**

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<sup>184</sup> “ASEAN, P-5 Meet to Smoothen SEANWFZ Accession,” *The Jakarta Post*, November 15, 2011, [www.thejakartapost.com/news/2011/11/15/asean-p5-meet-smoothen-seanwzf-accession.html](http://www.thejakartapost.com/news/2011/11/15/asean-p5-meet-smoothen-seanwzf-accession.html), and “ASEAN Wooing Nuclear Powers,” *The Jakarta Post*, July 19, 2011, [www.thejakartapost.com/news/2011/07/19/asean-wooing-nuclear-powers-disarmament-push.html](http://www.thejakartapost.com/news/2011/07/19/asean-wooing-nuclear-powers-disarmament-push.html)

<sup>185</sup> As of May 2010, 24 of the eligible states had not yet ratified the Pelindaba Treaty.

<sup>186</sup> List of countries which have signed, ratified/acceded to the African Nuclear-Weapon-Free Zone Treaty (The Treaty of Pelindaba), African Union website, [www.au.int/en/sites/default/files/pelindaba%20Treaty.pdf](http://www.au.int/en/sites/default/files/pelindaba%20Treaty.pdf). The list excludes Morocco, which is not an African Union member but a state party to the African NWFZ treaty.

<sup>187</sup> Please see Inventory of International Organizations and Regimes, [www.nti.org/media/pdfs/apmanwzf.pdf?\\_id=1316624342](http://www.nti.org/media/pdfs/apmanwzf.pdf?_id=1316624342)

### One – Protocols I and II (Target: 2 for Protocols I and II, 1 for Protocol III)

As of May 2010, two NWS – Russia and the United States – were yet to ratify Protocols I and II to the African NWFZ Treaty, which commit them not to use or threaten to use nuclear weapons against states of the zone and not to test or assist or encourage the testing of nuclear explosive devices on the territory of the zone, respectively. Spain is the last state that is eligible to sign and ratify Protocol III, which would commit it to apply provisions of the Treaty of Pelindaba to the territories located within the zone for which it is *de jure* or *de facto* internationally responsible.

Russia ratified Protocols I and II in March 2011. However, it attached reservations to its ratification. First, Russia does not rule out the possibility of using nuclear weapons “against states that are part of the zone free from nuclear weapons in Africa in situations where they have allied commitments to other nuclear states and may participate in military actions using nuclear weapons against Russia, or are members of the corresponding coalitions.”<sup>188</sup> Second, Russia does not recognize the application of the Pelindaba Treaty to Diego Garcia, an island in Indian Ocean under UK control that is used as a military base by the United States.

***Indicator 9.3. Nuclear-weapon states take steps toward ratification of NWFZ protocols – by submitting protocols to parliaments; declaring an intent to ratify, or engaging NWFZ members in consultations, negotiations, or other relevant activities to achieve signature and ratification of NWFZ protocols***

#### Yes, limited progress

On May 3 2010, U.S. Secretary of State Hillary Clinton announced at the 2010 NPT Review Conference that the U.S. administration was preparing to submit the treaty protocols to the U.S. Senate for approval.

On May 2, 2011, U.S. administration submitted Protocols I and II for Senate advice and consent to ratification.<sup>189</sup> No action has been taken since and, according to Noel Stott of the Institute for Strategic Studies in South Africa, “it is not expected to be discussed until after the US mid-term elections in 2012.”<sup>190</sup>

***Indicator 9.4. NWS withdraw, revise or otherwise reconsider the reservations and interpretive declarations previously attached to their signature and ratification of NWFZ protocols; absent that, NWS and NWFZ engage in consultations to facilitate the withdrawal of reservations***

#### No action

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<sup>188</sup> “Russia Ratifies African Nuke-Free Zone Pact,” Global Security Newswire, March 14, 2011, [www.nti.org/gsn/article/russia-ratifies-african-nuke-free-zone-pact/](http://www.nti.org/gsn/article/russia-ratifies-african-nuke-free-zone-pact/).

<sup>189</sup> Message to the Senate of the United States, Office of the Press Secretary, The White House, May 2, 2011, [www.whitehouse.gov/sites/default/files/2011african\\_msg\\_rel.pdf](http://www.whitehouse.gov/sites/default/files/2011african_msg_rel.pdf); Inventory of International Organizations and Regimes, [www.nti.org/treaties-and-regimes/african-nuclear-weapon-free-zone-anwzf-treaty-pelindaba-treaty/](http://www.nti.org/treaties-and-regimes/african-nuclear-weapon-free-zone-anwzf-treaty-pelindaba-treaty/)

<sup>190</sup> Institute for Strategic Studies report, October 2011, p. 7 [www.keepandshare.com/doc/3212181/policybriefnumber9pelindabaoctober2011-pdf-october-21-2011-12-13-pm-364k?da=y](http://www.keepandshare.com/doc/3212181/policybriefnumber9pelindabaoctober2011-pdf-october-21-2011-12-13-pm-364k?da=y)

**Indicator 9.5. States parties to NWFZs implement respective treaties according to their provisions, including main prohibitions, safeguards requirements, and special requirements such as export controls**

States parties to the Pelindaba Treaty have been compliant with the main prohibitions under the treaty. However, two of the Pelindaba member states (Benin and Guinea) have not yet brought into force their comprehensive safeguards agreements with the IAEA (as mandated by Article 9 (b) of the treaty).<sup>191</sup>

Establishment of AFCONE and Review Processes: As mandated by Article 14 of the Pelindaba Treaty,<sup>192</sup> the First Conference of States Parties was held in Addis Ababa on November 4, 2010. The Conference was attended by states parties and signatories to the treaty and the NWS. Article 12 of the Pelindaba Treaty mandates the establishment of the African Nuclear Energy Commission (AFCONE), to ensure compliance with the treaty. The Conference of States Parties elected 12 commissioners and endorsed the decision to establish the headquarters of AFCONE in South Africa.<sup>193</sup>

On 4 May 2011, AFCONE held its First Ordinary Session to decide on the Commission's structure, budget and rules of procedure, "as well as to elect its chairman and vice-chairman and to establish a process to appoint an executive secretary."<sup>194</sup>

 **Red Flag**

In October 2011, it was reported that India sought to import uranium from South Africa. India's High Commissioner to South Africa Virender Gupta reportedly said the two countries had already started discussions on the matter.<sup>195</sup> Supply of uranium to India, a country that does not have a comprehensive safeguards agreement with the IAEA, would contradict Article 9(c) of the Pelindaba Treaty.

Namibia, which ratified the Pelindaba Treaty in early 2012, had previously concluded a nuclear cooperation agreement with India that allows for the supply of uranium to the latter.<sup>196</sup> It is unclear whether Namibia had already sold any uranium to India before joining the Pelindaba Treaty, and how it is reconciling the provisions of the two agreements.

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<sup>191</sup> NPT Comprehensive Safeguards Agreements: Overview of Status, IAEA, [www.iaea.org/Publications/Factsheets/English/nptstatus\\_overview.html](http://www.iaea.org/Publications/Factsheets/English/nptstatus_overview.html)

<sup>192</sup> General Assembly, Final text of a treaty on an African nuclear-weapon-free zone, UN document A/50/426, September 13, 1995, p. 13.

<sup>193</sup> Institute for Strategic Studies report, October 2011, p. 7.

<sup>194</sup> Noel Stott, "The Treaty of Pelindaba: Towards the Full Implementation of the African WNFZ Treaty," UNIDIR report, p. 21, <http://unidir.org/pdf/articles/pdf-art3083.pdf>

<sup>195</sup> See "India Wants South African Uranium" Global Security Newswire, October 19, 2011, [www.nti.org/gsn/article/india-wants-south-african-uranium/](http://www.nti.org/gsn/article/india-wants-south-african-uranium/), and Parvin Padmanahan, "India Hopes It can Import Uranium from South Africa," IANS India Private Limited, October 18, 2011, <http://in.news.yahoo.com/india-hopes-import-uranium-south-africa-165934959.html>

<sup>196</sup> "India Offers Namibia \$100 mn, Signs Nuclear Deal," *IndiaAfrica Connect*, August 31, 2009, [www.indiaafricaconnect.in/index.php?param=news/244/the-big-story/114](http://www.indiaafricaconnect.in/index.php?param=news/244/the-big-story/114)

## Central Asian NWFZ (CANWFZ)

### ***Indicator 9.1. Relevant states join their respective NWFZ during the reporting period***

#### Not applicable – action completed prior to 2010

All the states eligible to join the Central Asian NWFZ had ratified the treaty prior to the 2010 NPT Review Conference, and CANWFZ entered into force in March 2009.

### ***Indicator 9.2. Relevant/eligible states ratify protocols to the NWFZ during the reporting period (number of ratifications)***

#### None

Protocol to the Central Asian NWFZ Treaty has not yet opened for signature due to continued disagreement between the members of the zone on the one hand and three nuclear-weapon-states, France, UK and United States, on the other. The three NWS do not recognize the zone, arguing that provisions in Article XII of the treaty would allow the stationing of Russian nuclear weapons in Central Asia if the Tashkent (Collective Security Organization) Treaty is invoked. Russia has repeatedly stated that it had no problem with the text of the Central Asia NWFZ Treaty “as-is,” and was ready to sign the Protocol. China has also welcomed CANWFZ and expressed its readiness to join its protocol.

### ***Indicator 9.3. Nuclear-weapon states take steps toward ratification of NWFZ protocols – by submitting protocols to parliaments; declaring an intent to ratify, or engaging NWFZ members in consultations, negotiations, or other relevant activities to achieve signature and ratification of NWFZ protocols***

#### Limited progress

At the 2010 NPT Review Conference, US Secretary of State Hillary Clinton expressed US willingness to engage with CANWFZ member states to resolve the disagreements over the treaty provisions.

Since then, the Central Asia states have held consultations with the United States, including on the margins of the UNGA First Committee sessions, on possible ways to overcome existing differences, but the content and results of such consultations are not made public. No solution has been reached so far.<sup>197</sup>

### ***Indicator 9.4. NWS withdraw, revise or otherwise reconsider the reservations and interpretive declarations previously attached to their signature and ratification of NWFZ protocols; absent that, NWS and NWFZ engage in consultations to facilitate the withdrawal of reservations***

#### Not applicable

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<sup>197</sup> Conversations with diplomats familiar with the consultations.



**Indicator 9.5. States parties to NWFZs implement respective treaties according to their provisions, including main prohibitions, safeguards requirements, and special requirements such as export controls**

The Central Asian states have been compliant with the main prohibitions under the CANWFZ treaty, as well as provisions on concluding safeguards agreements with the IAEA. However, Kazakhstan's nuclear cooperation with India appears to contradict the terms of Article 8 of CANWFZ.

CANWFZ requires its member states to conclude Additional Protocols to the Comprehensive Safeguards Agreements with the IAEA. Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan all had their APs in force prior to 2010. Kyrgyzstan brought its Additional Protocol into force on November 10, 2011.<sup>198</sup>

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Article 8.c of the CANWFZ Treaty obligates states not to provide source or special fissionable material and related technologies to non-nuclear-weapon states that have concluded with the IAEA a comprehensive safeguards agreement and the Additional Protocol.<sup>199</sup>

As already stated above, India is not recognized as a nuclear-weapon state under the NPT; it does not have a comprehensive safeguards agreement with the IAEA, and its Additional Protocol has not yet entered into force. However, in January 2009, Kazakhstan's state nuclear company Kazatomprom signed a memorandum of understanding with the Nuclear Power Corporation of India Ltd, outlining "potential areas of cooperation between the two companies, including the supply of natural uranium and fuel elements from Kazakhstan to India."<sup>200</sup> According to media reports, already in the first half of 2010, India imported 300 tons of natural uranium from Kazakhstan.<sup>201</sup> The two countries signed a nuclear cooperation agreement in April 2011, with official remarks indicating that Kazakhstan would sell over 2,000 tons of uranium to India by 2014.<sup>202</sup>

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<sup>198</sup> Conclusion of Additional Protocols: Status as of 20 February 2012, IAEA, [www.iaea.org/OurWork/SV/Safeguards/documents/AP\\_status\\_list.pdf](http://www.iaea.org/OurWork/SV/Safeguards/documents/AP_status_list.pdf).

<sup>199</sup> Central Asian Nuclear-Weapon-Free Zone Treaty text (emphasis added), <http://cns.miis.edu/inventory/pdfs/apcanwz.pdf>

<sup>200</sup> "Kazakhstan i Indiya dogovorilis o rasshirenii diapazona sotrudnichestva v atomnoy oblasti" [Kazakhstan and India Agreed on Broadening Cooperation in Nuclear Sphere], Kazatomprom press release, 24 January 2009, [www.kazatomprom.kz](http://www.kazatomprom.kz). See NTI website, Kazakhstan nuclear chronology, [www.nti.org/media/pdfs/kazakhstan\\_nuclear.pdf?\\_=1316466791](http://www.nti.org/media/pdfs/kazakhstan_nuclear.pdf?_=1316466791).

<sup>201</sup> "Uranium Imports Boost Indian Reactor Output," World Nuclear News, October 12, 2010, [www.world-nuclear-news.org/NP-Uranium\\_imports\\_boost\\_Indian\\_reactor\\_output-1210104.html](http://www.world-nuclear-news.org/NP-Uranium_imports_boost_Indian_reactor_output-1210104.html)

<sup>202</sup> "India-Kazakhstan Nuclear Cooperation Agreement Signed," World Nuclear News, April 18, 2011, [www.world-nuclear-news.org/NP-India\\_Kazakhstan\\_nuclear\\_cooperation\\_agreement\\_signed-1804118.html](http://www.world-nuclear-news.org/NP-India_Kazakhstan_nuclear_cooperation_agreement_signed-1804118.html), and "Kazakhstan, India Sign Energy Deals," RIA Novosti, April 16, 2011, <http://en.rian.ru/business/20110416/163555805.html>

**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.**

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***Indicator 10.1. Number of new CTBT ratifications by the NWS in the reporting period; number of other Annex 2 countries that have ratified in the reporting period***

NWS: 0 (Target: 2); Other Annex 2: 1 (Target: 7)

The Parliament of Indonesia, an Annex 2 state, approved the CTBT on December 6, 2011, and Indonesia deposited its instrument of ratification on February 6, 2012.<sup>203</sup>

Two more Annex 2 states that are non-nuclear-weapon states party to the NPT have yet to ratify the CTBT: Egypt and Iran.

The United States and China, both Annex 2 states, did not ratify the CTBT during the reporting period.

***Indicator 10.2. NWS and other Annex 2 states announce their intent to ratify; submit treaty for ratification by national legislature; or undertake other steps towards ratification***

### **China**

**No change in position, no new actions**

China had several years ago submitted CTBT to the National People's Congress for its review, but no progress has been reported since. At the Article XIV Conference in September 2011, Chinese representative stated that, "The Chinese government will continue to make efforts for promoting the Treaty ratification review process by our national legislation authority."<sup>204</sup>

### **Egypt**

**No change in position, no new actions**

Egypt has traditionally linked its accession to new arms control treaties and acceptance of new nonproliferation measures to Israel's accession to the NPT as a non-nuclear-weapon state. In a somewhat softer stance, Egypt has also linked its support to progress on establishing a zone free of

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<sup>203</sup> "Ban Welcomes Indonesia's Ratification of Treaty Banning Nuclear Tests," UN News Center, December 6, 2011, [www.un.org/apps/news/story.asp?NewsID=40633](http://www.un.org/apps/news/story.asp?NewsID=40633). To enter into force, the CTBT must be ratified by 44 states listed in Annex 2 of the treaty and thus known as "Annex 2 states." Apart from the countries listed here, Annex 2 states are also DPRK, India, Israel, and Pakistan.

<sup>204</sup> "Statement by the Chinese Delegation at the 2011 Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty," New York, 23 September 2011, Permanent Mission of the People's republic of China to the UN, [www.china-un.org/eng/chinaandun/disarmament\\_armscontrol/qttx/t863094.htm](http://www.china-un.org/eng/chinaandun/disarmament_armscontrol/qttx/t863094.htm)

weapons of mass destruction in the Middle East. Egypt's statement at the Article XIC Conference in September 2011 did not signal a change in this position.<sup>205</sup>

## Iran

### No action

Iran did not deliver a statement at the Article XIV Conference in September 2011, and did not otherwise indicate an intent to ratify the CTBT.

## United States

### Limited progress

Upon assuming the office, President Obama announced the intent to “aggressively” pursue ratification of the CTBT, but it is not likely that the issue will be brought before the Senate until after the 2012 elections. Acting US Under-Secretary of State Rose Gottemoeller has been leading an “information exchange” campaign focused on providing the senators and staffers with factual and technical information about CTBT verification and US stockpile stewardship program. The work is being done as a preparation for eventual debate in the Senate, but the administration has not made public any timelines or more specific plans for ratification.<sup>206</sup> On March 30, 2012 the U.S. National Academies of Science released a report concluding that the United States would be able to maintain the safety and reliability of its nuclear arsenal in the absence of explosive nuclear testing, and that the capability to detect nuclear explosions had significantly improved since the previous report, released in 2002.<sup>207</sup>

**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**

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### *Indicator 11.1. State refrains from nuclear testing (maintains a moratorium)*

#### Yes

All five NWS have maintained their moratoria on nuclear test explosions.

### *Indicator 11.2. State does not produce/design new nuclear warheads and weapons systems*



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<sup>205</sup> Statement at the Article XIV Conference, New York, September 2011, [http://www.ctbto.org/fileadmin/user\\_upload/Art\\_14\\_2011/Statements/Egypt.pdf](http://www.ctbto.org/fileadmin/user_upload/Art_14_2011/Statements/Egypt.pdf)

<sup>206</sup> Statement by Rose Gottemoeller at the Article XIV Conference, New York, September 2011, available at <http://usun.state.gov/briefing/statements/2011/173911.htm>; “Opening Statement by Rose Gottemoeller, Assistant Secretary of State, at the Conference on Disarmament, January 24, 2012, U.S. Department of State website, [www.state.gov/t/avc/rls/182385.htm](http://www.state.gov/t/avc/rls/182385.htm).

<sup>207</sup> The Committee on Reviewing and Updating Technical Issues Related to the Comprehensive Nuclear Test Ban Treaty, “The Comprehensive Nuclear-Test-Ban Treaty: Technical Issues for the United States,” The National Academies Press, March 30, 2012, [www.nap.edu/catalog.php?record\\_id=12849](http://www.nap.edu/catalog.php?record_id=12849)

While the main prohibition under the CTBT concerns the conduct of nuclear explosions, the overarching purpose of the test ban treaty is progress towards nuclear disarmament and complete elimination of nuclear weapons, as stated in its preamble.<sup>208</sup> In this regard, the development of new nuclear weapons systems and their deployment would appear to defeat the long-term purpose and spirit of the CTBT. As discussed under Action 1, all NWS are modernizing their nuclear arsenals at varying rates, with only the UK yet to make the final decision on the replacement of Trident.

Furthermore, while all five NWS maintain their moratoria on nuclear weapons test explosions, the United States, United Kingdom (jointly with the United States), Russia and possibly China conduct so-called subcritical tests, which involve nuclear material and high conventional explosives, but do not produce a sustained nuclear chain reaction. In November 2010, France and the UK also concluded an unprecedented defense cooperation agreement. It provides for the two states' collaboration in conducting laboratory experiments that "will model performance of [their] nuclear warheads and materials to ensure long-term viability, security and safety."<sup>209</sup> Subcritical tests and lab experiments are not banned by the CTBT, but remain controversial as they can help NWS modernize their weapons without explosive testing.<sup>210</sup> At the same time, NWS argue that such tests are used to ensure the safety and security of warheads rather than development of new advanced nuclear warheads.

**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, of the measures adopted by consensus at the 6th 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.**

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Actions 12 and 13 overlap greatly, as both refer to states' efforts in support of entry into force of the CTBT. Action 12 is more specific with its reference to the final declaration of the 6th Article XIV Conference, but can still be combined with Action 13. Even though both items refer only to states that have ratified the CTBT, signatory states also attend Article XIV Conferences and undertake to

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<sup>208</sup> For example, "Recognizing that the cessation of all nuclear weapon test explosions and all other nuclear explosions [...] constitutes an effective measure of nuclear disarmament and non-proliferation in all its aspects" and "Further recognizing that an end to all such nuclear explosions will thus constitute a meaningful step in the realization of a systematic process to achieve nuclear disarmament." For the full text, see CTBT page, NTI website, [www.nti.org/treaties-and-regimes/comprehensive-nuclear-test-ban-treaty-ctbt/](http://www.nti.org/treaties-and-regimes/comprehensive-nuclear-test-ban-treaty-ctbt/)

<sup>209</sup> "Declaration Signed by the UK and France Following the UK-France Summit 2010 in London on 2 November 2010," [www.number10.gov.uk/news/uk%E2%80%93france-summit-2010-declaration-on-defence-and-security-co-operation/](http://www.number10.gov.uk/news/uk%E2%80%93france-summit-2010-declaration-on-defence-and-security-co-operation/)

<sup>210</sup> As early as 1998, a large group of anti-nuclear activists signed a petition calling on the United States to declare a moratorium on subcritical testing. See Federation of American Scientists, [www.fas.org/nuke/control/ctbt/news/980716-sub.htm](http://www.fas.org/nuke/control/ctbt/news/980716-sub.htm). The first subcritical test conducted during President Obama's term in office (in September 2010) drew criticism as contradicting his vision of achieving a world without nuclear weapons.

promote the treaty's entry into force. Reference to exclusively the ratifying states in the action plan is indeed regressive in comparison to the CTBT conference documents.

***Indicator 12.1. States participate in Article XIV conferences and are represented at a high level***

**Yes**

All five NWS took part in the 7th Article XIV Conference in September 2011 in New York. All, except China, were officially represented at the Foreign Minister or Deputy-Minister level. China was represented by a Counsellor from China's Permanent Mission to the United Nations.<sup>211</sup> According to the CTBTO Preparatory Commission, representatives of "over 160" states attended the 7th Article XIV Conference; representatives of 58 ratifying and signatory states delivered statements.<sup>212</sup> Of the Annex 2 states parties to the NPT, only Iran did not deliver a statement, although its representatives attended the conference.

***Indicator 12.2.: States report on activities undertaken to implement measures contained in the final declaration of the 6th Article XIV Conference and other efforts in support of entry into force of the CTBT***

**Yes, partially**

The 6th conference on facilitating the entry into force of the CTBT took place in September 2009 and resulted in the adoption of the final declaration where states undertook to implement measures to promote the treaty's entry into force. The 10-point list of measures includes the encouragement of further signatures and ratifications, selection of coordinators to promote cooperation, organization of regional seminars to increase awareness of the treaty, and other activities.<sup>213</sup> It is beyond the scope and capacity of this project to monitor and assess all relevant states' implementation of these measures. However, CTBTO Preparatory Commission has assembled a summary document on the activities reported under Measure I (requesting CTBTO to collect states' inputs on their outreach activities) by the ratifying and signatory states.<sup>214</sup> The document indicates that under 30 states submitted information on their activities to the CTBTO Preparatory Commission. A lot of these states reported that they took every opportunity to promote the treaty's entry into force in bilateral interactions and through statements at multilateral fora.

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<sup>211</sup> U.S. head of delegation was Ellen Tauscher, Under Secretary for Arms Control & International Security; Russian head of delegation Sergey Ryabkov, Deputy Minister of Foreign Affairs; France's head of delegation Alain Marie Juppé, Minister of Foreign Affairs; U.K. head of delegation Mr. Alistair Burt, MP, Parliamentary Under Secretary of State, and China's head of delegation was Zhang Jun'an, Counsellor, Permanent Mission of the People's Republic of China to the United Nations.

<sup>212</sup> "Urgent Calls by International Leaders to Bring Test Ban Treaty into Force," CTBTO Press Release, September 23, 2011, [www.ctbto.org/press-centre/press-releases/2011/urgent-calls-by-international-leaders-to-bring-test-ban-treaty-into-force/?Fsize=atextonly%3D1](http://www.ctbto.org/press-centre/press-releases/2011/urgent-calls-by-international-leaders-to-bring-test-ban-treaty-into-force/?Fsize=atextonly%3D1), and Statements in Alphabetical Order, [www.ctbto.org/the-treaty/article-xiv-conferences/2011-conference-on-facilitating-the-entry-into-force-of-the-comprehensive-nuclear-test-ban-treaty-united-nations-new-york-usa/statements-in-alphabetical-order-and-additional-statements/?Fsize=atextonly%3D1](http://www.ctbto.org/the-treaty/article-xiv-conferences/2011-conference-on-facilitating-the-entry-into-force-of-the-comprehensive-nuclear-test-ban-treaty-2011-conference-on-facilitating-the-entry-into-force-of-the-comprehensive-nuclear-test-ban-treaty-united-nations-new-york-usa/statements-in-alphabetical-order-and-additional-statements/?Fsize=atextonly%3D1)

<sup>213</sup> Final Declaration and Measures to Promote the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty, Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty, September 24, 2009, New York.

<sup>214</sup> Please see CTBT-Art.XIV/2011/4/Rev.1, September 19, 2011.

### **Indicator 13.1. States ensure full payment of dues to CTBTO Preparatory Commission**

#### **Partially**

Regular contributions to the CTBTO Preparatory Commission budget are assessed at the beginning of a calendar year. As of March 30, 2012, 53 states had paid their contributions for 2012 in full, including China, France, Russia and the UK; 23 had partially paid their current year contributions, including the United States; 29 had not paid their contributions for 2012, and the voting rights of 77 states were suspended for past dues.<sup>215</sup>

In addition to regular budget, some states provide voluntary contributions to the CTBTO, and according to the Preparatory Commission's website (as of early 2012), such contributions "have increased significantly during the last two years," certainly a positive development.<sup>216</sup> European Union provided a contribution of 5.3 million Euro in July 2010 to support the CTBTO's verification regime, and the United States pledged two contributions in September 2011, \$8.9 million and \$25.5 million, also towards the improvement of monitoring and verification.<sup>217</sup> In February 2012, CTBTO announced that Japan made a voluntary contribution of \$737,000 to improve the "organization's capabilities to monitor the dispersion of radioactivity in the atmosphere."<sup>218</sup>

**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, and provide assurance of compliance with that treaty**

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### **Indicator 14.2. New IMS monitoring stations are installed, or progress is made on the installation of IMS stations that began earlier**

#### **Yes**

Forty-two states have concluded facility agreements with the CTBTO Preparatory Commission, and eight of them (with Cameroon, Cape Verde, Italy, Israel, Portugal, Oman, Sri Lanka, and Tunisia) have not yet entered into force.<sup>219</sup>

According to CTBTO, the number of certified IMS stations went up from 255 in April 2010 to 270 by February 2012 (an approximately 5.5% increase), making the IMS system 80% complete.<sup>220</sup> There are also 17 stations currently undergoing testing, 22 under construction, and 28 planned. This brings

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<sup>215</sup> Latest status of payments available at the CTBTO website, [www.ctbto.org/member-states/member-states-payments/](http://www.ctbto.org/member-states/member-states-payments/)

<sup>216</sup> See CTBTO website, [www.ctbto.org/the-organization/the-provisional-technical-secretariat-pts/budget/page-2-budget/](http://www.ctbto.org/the-organization/the-provisional-technical-secretariat-pts/budget/page-2-budget/)

<sup>217</sup> Ibid.

<sup>218</sup> "Japan Makes Voluntary Contribution to CTBTO to Enhance Tracking of Radioactivity," CTBTO Press Release, February 27, 2012, [www.ctbto.org/press-centre/press-releases/2012/japan-makes-voluntary-contribution-to-ctbto-to-enhance-tracking-of-radioactivity/](http://www.ctbto.org/press-centre/press-releases/2012/japan-makes-voluntary-contribution-to-ctbto-to-enhance-tracking-of-radioactivity/)

<sup>219</sup> Information courtesy of CTBTO.

<sup>220</sup> See CTBTO website, [www.ctbto.org/map/](http://www.ctbto.org/map/), use the International Monitoring System tab on the right for exact numbers.

the IMS total to 337.<sup>221</sup> Twenty-four more facilities are planned, to be located in Australia (Antarctica), Brazil, Central African Republic, China, Ecuador, Egypt, French Guiana, Israel, Iran, Italy, Nepal, Pakistan, Russia, South Africa, United Kingdom, and United States. Another four facilities, originally planned to be located in India, have not been assigned new locations.<sup>222</sup>

**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.**

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***Indicator 15.1. The ad hoc committee to negotiate a fissile material treaty is established at the CD***

No

The Conference on Disarmament remained locked in a paralysis during the reporting period, as Pakistan blocked the adoption of program of work. Please see Action 6 (Indicator 6.1.).

***Indicator 15.2. The ad hoc committee begins work; makes progress in negotiating the treaty***

No.

***Indicator 15.3. The UN Secretary-General convenes a high-level meeting in support of the work of the CD***

Yes

Please see Action 7.

At the 2011 session of the UNGA First Committee, which took place October 3-31, several states and groups of states presented no less than four draft resolutions related to the start of negotiations on a fissile material treaty and reviving the Conference on Disarmament. On the one hand, the introduction of several proposals is indicative of existing concerns and growing anxiety, at least among some parties (especially in Europe), to overcome the CD “paralysis” and get *some* multilateral process going. At the same time, the regression of text in two of the resolutions and the withdrawal of one of the drafts altogether reflect the lack of political will to change the status quo and apprehensiveness among states about possible consequences of “undermining the CD.”

Draft Resolution L.40/Rev.1, “Treaty Banning the Production of Fissile Material for Nuclear Weapons and Other Nuclear Explosive Devices,” sponsored by Canada, was adopted by the UNGA

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<sup>221</sup> CTBTO website, <http://www.ctbto.org/map/>, Click on “show today” on the timeline to see current information in the right-hand sidebar.

<sup>222</sup> Information courtesy of CTBTO.

First Committee by a vote of 151 in favor, 2 against (DPRK and Pakistan), and 23 abstentions. Canada's initial draft contained very significant changes and proposals compared to previous years' text. In past years, the resolution simply urged the CD to adopt a program of work that includes "immediate commencement of negotiations" on an FMCT.<sup>223</sup> However, the draft in 2011 requested the UN Secretary-General to establish a Group of Governmental Experts (GGE) to "identify options" on FMCT, should the CD fail to adopt a program of work by end of March 2012. The UNSG was further asked to submit the report of the GGE to the next General Assembly session; the UNGA was then to consider options for the negotiation of FMCT. However, both the P-5 and many NNWS opposed the idea of taking the issue out of the CD, especially as early as spring 2012. As a result, the two paragraphs referring to the establishment and work of GGE were removed from the final version adopted by the Committee.

Resolution L.39, "Revitalizing the work of the Conference on Disarmament and taking forward multilateral disarmament negotiations," co-sponsored by the Netherlands, South Africa and Switzerland, was adopted without a vote, while Austria, Mexico and Norway had to withdraw their draft resolution, "Taking forward multilateral disarmament negotiations." These two proposals sought to address the stalemate at the CD in broader terms, without focusing solely on FMCT. The draft introduced by Austria, Norway and Mexico was, however, by far too ambitious to secure sufficient support of member states. In its initial form ("draft elements"), it called for the establishment of two open-ended working groups to consider the four core issues of the CD, should it fail to resume work during its 2012 session. A revised text called on the UNGA only to consider options, including the establishment of open-ended working groups, for "taking forward multilateral disarmament negotiations" at its next session.<sup>224</sup> Ultimately, the co-sponsors withdrew the draft resolution, recognizing that another resolution on the matter was much closer to consensus.

A resolution co-sponsored by the Netherlands, Switzerland, and South Africa represented a compromise, avoiding the specifics and calls for concrete decisions. Instead, it "recognizes the need to take stock... of all relevant efforts" to overcome current deadlock in multilateral disarmament negotiations.<sup>225</sup> It also provides for the General Assembly (First Committee) to "review progress" at its next session and "explore options" if necessary – that is, if the CD does not resume its work.

**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.**

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***Indicator 16.1. States submit declarations/reports to the IAEA on stocks of fissile material declared as no longer needed for military purposes***

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<sup>223</sup> See, for example, Resolution A/Res/65/65 (A/C.1/65/L.33) adopted in 2010.

<sup>224</sup> A/C.1/66/L.21/Rev.1. Interestingly, another change in text was the removal of a reference to the UNSC Resolution 1887 and P-5 efforts to "facilitate progress with respect" to FMCT.

<sup>225</sup> Draft resolution A/C.1/66/L.39.



## China

No

China submits reports to the IAEA pursuant to INFCIRC/549 (Plutonium Management Guidelines) but does not indicate material taken out of the weapons program. In December 2010, it included in its report 13.8 kg of Pu but did not specify its origin.<sup>226</sup> China has not declared HEU in excess of defense needs.

## France

No

France has not declared its stocks of fissile material no longer required for military purposes. IPFM estimates that the “current stock of military-related weapon-grade HEU” in France is between 20 and 32 metric tons, while the stockpile of weapon-grade plutonium is 5-7 metric tons.<sup>227</sup> France does declare to the IAEA its civilian HEU holdings under INFCIRC/549 reporting.

## Russia

No

Russia does not declare excess material to the IAEA, but it has designated 34 metric tons of plutonium in excess of military needs for disposition (recycling) through the use in reactor fuel.<sup>228</sup> (See Indicator 16.3)

## United Kingdom

Yes (but no update)

According to the Institute for Science and International Security (ISIS), the UK includes the material declared in excess of military requirements in its reporting under INFCIRC/549, as part of an overall stock of civil unirradiated plutonium stored at reprocessing plants.<sup>229</sup> The UK had previously declared 4.4 tons of plutonium in excess of defense purposes.<sup>230</sup> No additions have been made to this inventory during the reporting period. In 2006, the UK Ministry of Defence released a paper on historic production and use of HEU for military purposes and declared the HEU stock, as of March 2002, as 21.86.<sup>231</sup> None of this material was declared as in excess of defense needs.

## United States

Yes

As of December 31, 2010, the United States declared to the IAEA 61.5 metric tons of plutonium in “excess of national security means.”<sup>232</sup> According to IPFM, the United States has also declared 194 metric tons of HEU as excess to military requirements.<sup>233</sup> However, the NNSA website quotes a different figure, indicating that a total of 209 metric tons of HEU have been declared as excess and

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<sup>226</sup>The material (civil unirradiated plutonium) is stored at the new pilot reprocessing plant in Gansu province. See China’s report at [www.iaea.org/Publications/Documents/Infocircs/2011/infocirc549a7-10.pdf](http://www.iaea.org/Publications/Documents/Infocircs/2011/infocirc549a7-10.pdf) and commentary at [www.fissilematerials.org/ipfm/site\\_down/gfmr11.pdf](http://www.fissilematerials.org/ipfm/site_down/gfmr11.pdf).

<sup>227</sup> “Countries: France,” International Panel on Fissile Materials, <http://fissilematerials.org/countries/france.html>

<sup>228</sup> See David Albright and Christina Walrond, “Civil Separated Plutonium in the INFCIRC/549 States – Taking Stock,” ISIS, September 17, 2010, <http://isis-online.org/isis-reports/detail/civil-separated-plutonium-in-the-infocirc-549-states-taking-stock/>

<sup>229</sup> Ibid.

<sup>230</sup> UK Strategic Defence Review, 1998, Fissile material management.

<sup>231</sup> “Historic Accounting for UK Defence Highly Enriched Uranium,” Report by the Ministry of Defence, March 2006.

<sup>232</sup> “Annual Figures for Holding of Civil Unirradiated Plutonium,” September 20, 2011, INFCIRC/549/Add.6/14

<sup>233</sup> Countries: United States, International Panel on Fissile Materials, [http://fissilematerials.org/countries/united\\_states.html](http://fissilematerials.org/countries/united_states.html)

designated for downblending (see Indicator 16.3.) It is not clear what explains the discrepancy in numbers. HEU is not included in the U.S. reports to the IAEA under INFCIRC/549.

***Indicator 16.2. Material taken out of military programs is placed under IAEA safeguards or other verification arrangements (during the reporting period)***

**China**

No

China has not declared any material in excess of defense needs and did not place it under the IAEA safeguards. As of 2009, the only facilities under IAEA safeguards in China were the Qinshan Nuclear Power Plant, the HTR-10, and the Hanzhong Enrichment Plant.<sup>234</sup> These are all civilian nuclear facilities. No new facilities or materials were declared and placed under IAEA safeguards during the reporting period.

**France**

No

France has not declared any material in excess of defense needs to the IAEA. Its civilian uranium enrichment plants are subject to the IAEA safeguards.<sup>235</sup>

**UK**

No change

(HEU – No safeguards; Pu – EURATOM)

The 1998 SDR stated that all stocks of military HEU would remain outside of safeguards, and material no longer needed for nuclear weapons will be used for the naval propulsion program.<sup>236</sup> There does not appear to have been a change in this policy during the reporting period (by March 2012).

Plutonium declared in excess of military needs has been placed under the EURATOM safeguards and remained so safeguarded during the reporting period, 2010-2012.

In July 2011, when asked whether “any multilateral verification provisions have been put in place in relation to the warhead reduction programme on Vanguard class submarines,” UK Secretary of State for Defense Liam Fox responded in the negative.<sup>237</sup>

**Russia**

No

“Megatons to Megawatts,” a US-Russian surplus HEU disposition program, is not subject to IAEA safeguards, but is monitored bilaterally. Safeguards are also not applied to plutonium declared in excess of defense needs, but Russia, the United States and IAEA are currently working out a verification arrangement for the Plutonium Management and Disposition Program (see Indicator 16.3. and Action 17).

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<sup>234</sup> Facilities under Agency Safeguards or Containing Safeguarded Material on 31 December 2009, IAEA Annual Report, [www.iaea.org/Publications/Reports/Anrep2009/table\\_a25.pdf](http://www.iaea.org/Publications/Reports/Anrep2009/table_a25.pdf)

<sup>235</sup> “Global Fissile Material Report 2011,” IPFM, p. 32.

<sup>236</sup> UK Strategic Defence Review, 1998.

<sup>237</sup> House of Commons, Written Answers to Questions, Trident Missiles, Question from Paul Flynn, 19 July 2011, Column 869W, [www.acronym.org.uk/parliament/1109.htm#warheads](http://www.acronym.org.uk/parliament/1109.htm#warheads)

## United States

Yes, partially

The United States has been placing material declared in excess of military programs under IAEA safeguards since 1993.<sup>238</sup> By 1998, the U.S. had placed 12 tons of fissile material under voluntary IAEA safeguards.<sup>239</sup>

Information on what portion of fissile material declared in excess of defense needs is currently under IAEA safeguards does not appear to be readily available. According to the 2010 IPFM report, a lot of the plutonium declared in excess “is still in warheads or in pits” stored at a site where warhead assembly and disassembly takes place.<sup>240</sup> This material, therefore, cannot be under the IAEA safeguards at this point. The K Area Material Storage Vault at Savannah River National Laboratory, where some of the surplus material is stored, is the only U.S. facility under the IAEA remote monitoring.<sup>241</sup>

***Indicator 16.3. Material disposition measures are undertaken, planned, or in progress; IAEA is involved in verification***

## China

No

There are no known material disposition programs implemented by China.

## France

No

There are no known material disposition programs implemented by France.

## Russia

Yes

Russia has former weapons HEU and plutonium disposition programs either in progress or planned.

Under the Protocol to the US-Russian Agreement on the Management and Disposition of Plutonium Designated as No Longer Required for Defense Purposes and Related Cooperation (PMDA) signed in April 2010, “the Russian Federation will dispose of 34 tons of excess weapons-grade plutonium through irradiation in a BN-800 reactor.”<sup>242</sup> Amendment of PDMA (originally signed in 2000) “reduces the agreed rate of plutonium disposition from no less than two tons per year to no less than 1.3 tons per year.”<sup>243</sup> The disposition of material has not commenced yet and is

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<sup>238</sup> Agreement Between the United States of America and the IAEA for the Application of Safeguards in the US, U.S. Department of State website, <http://www.state.gov/t/isn/5209.htm>. In 1993, HEU at the Y-12 Plant in Oak Ridge, Tennessee, plutonium at Hanford Site, Washington, and HEU at DOE storage facility in Savannah River, South Carolina were placed under IAEA safeguards. Safeguards in the United States, Naval Treaty Implementation Program, <http://www.ntip.navy.mil/iaea/index.shtml>

<sup>239</sup> “Ending the Production of Fissile Material for Nuclear Weapons,” Institute for Science and International Security, <http://isis-online.org/section-7/>.

<sup>240</sup> “Global Fissile Material Report 2010,” IPFM, p. 37.

<sup>241</sup> International Safeguards, US Nuclear Regulatory Commission, [www.nrc.gov/about-nrc/ip/intl-safeguards.html](http://www.nrc.gov/about-nrc/ip/intl-safeguards.html)

<sup>242</sup> Para 104, 2010 NPT RevCon National Report, Russian Federation.

<sup>243</sup> “Global Fissile Material Report 2011,” IPFM, p. 17.

planned to start in 2018. Russia, the United States, and IAEA are working out an arrangement for the verification of PDMA by the Agency (see Action 17).

Under the US-Russia “Megatons to Megawatts” program, Russia committed to convert 500 tons of HEU taken out of dismantled warheads into LEU that is then sold to USEC (US Enrichment Corporation). By the time of the 2010 NPT RevCon Russia had downblended “over 350 tons” of HEU, according to the Russian report to the Conference.<sup>244</sup> Between April 2010 and March 2012, Russia downblended another 60.1 metric tons of HEU, bringing the total to almost 443 metric tons.<sup>245</sup> The program is not subject to verification by the IAEA.

“Megatons to Megawatts” is scheduled for completion in 2013. According to experts, it is not likely that it will be followed by another downblending agreement, and Russia has not announced any future plans for its HEU in excess of weapons requirements.<sup>246</sup>

## United Kingdom

### No – Pu; Yes - HEU

According to the IPFM global fissile material report for 2011, the UK so far has not begun to dispose of stocks of separated plutonium declared in excess of military programs.<sup>247</sup> According to the Nuclear Decommissioning Authority’s (NDA) plutonium strategic position paper released in February 2011, the UK is considering several options for disposition of plutonium. This position paper, together with NDA plutonium credible options policy paper revised and updated in 2011,<sup>248</sup> lists the following options for dealing with plutonium: 1) continued long term storage (prior to disposal), 2) reuse as fuel followed by disposal, and 3) prompt immobilization and disposal as soon as practicable.<sup>249</sup>

On disposition of HEU, IPFM estimates that by 2011 about 0.7 tons of HEU may have been consumed as fuel in the UK’s nuclear-powered submarines, leaving an estimated stockpile of about 21.2 tons of HEU (down from about 21.9 tons HEU declared in 2006).<sup>250</sup> None of this material has been designated in excess of defense needs.

## United States

### Yes

in December 2010, the United States reported that a small amount of the 61.5 MT of excess plutonium it declared would be disposed of at the Waste Isolation Pilot Plant (WIPP) in New Mexico, while 34 MT would be used for production of mixed oxide (MOX) fuel, irradiated in

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<sup>244</sup> Para 103, 2010 NPT RevCon National Report.

<sup>245</sup> For program description and status, see USEC website, [www.usec.com/russian-contracts/megatons-megawatts](http://www.usec.com/russian-contracts/megatons-megawatts)

<sup>246</sup> “Global Fissile Material Report 2011,” IPFM, p. 8

<sup>247</sup> “Global Fissile Material Report 2011,” IPFM, p. 3

<sup>248</sup> “Plutonium: Credible Options Analysis (Gate A0),” UK National Decommissioning Authority, 2010, [www.nda.gov.uk/documents/upload/Plutonium-Credible-Options-Analysis-redacted-2010.pdf](http://www.nda.gov.uk/documents/upload/Plutonium-Credible-Options-Analysis-redacted-2010.pdf)

<sup>249</sup> “Plutonium Strategy: Current Position Paper,” UK National Decommissioning Authority, February 2011, p. 6, [www.nda.gov.uk/documents/upload/NDA-Plutonium-Current-Position-February-2011.pdf](http://www.nda.gov.uk/documents/upload/NDA-Plutonium-Current-Position-February-2011.pdf)

<sup>250</sup> “Global Fissile Material Report 2011,” IPFM, p. 10.

civilian reactors and disposed of as spent fuel.<sup>251</sup> A MOX fuel production facility is under construction in Savannah River, South Carolina. There are disagreements, however, among experts in the United States about the safety and security implications and cost of this project.<sup>252</sup>

The United States is also downblending HEU taken out of military stockpiles. According to the National Nuclear Security Administration (NNSA), a total of 209 metric tons of HEU has been declared surplus to defense needs and designated for downblending. There are four ongoing projects within the framework of surplus HEU disposition (the fifth completed in 2006). To date, 119 metric tons have been converted to LEU.<sup>253</sup> It is not clear how much of this material was converted specifically between May 2010 and March 2012.

In August 2011, NNSA announced that part of the LEU obtained by downblending surplus HEU is available “for use as commercial nuclear power fuel” as part of the American Assured Fuel Supply (AFS) program, which establishes “backup fuel supply” in case of disruptions for countries that forego national uranium enrichment.<sup>254</sup> A total of 17.4 metric tons of surplus HEU (out of the overall 209 metric tons) was designated for the AFS, and its downblending is due to be completed in 2012.

***Indicator 16.4. States that have not yet done so, declare their intent to report fissile material in excess of military requirements to the IAEA***

**China**

No

No such intent announced during the reporting period.

**France**

No

No such intent announced during the reporting period.

**Russia**

No

During the reporting period, Russia did not indicate an intention to formally declare surplus material to the IAEA.

The United Kingdom and United States had previously declared excess material to the IAEA (see Indicator 16.1.).

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<sup>251</sup> IAEA INFCIRC/549/Add.6/13, December 15, 2010,

[www.iaea.org/Publications/Documents/Infcircs/2010/infcirc549a6-13.pdf](http://www.iaea.org/Publications/Documents/Infcircs/2010/infcirc549a6-13.pdf)

<sup>252</sup> “Experts Differ over U.S. MOX Fuel Plan,” Global Security Newswire, March 30, 2011,

[www.nti.org/gsn/article/experts-differ-over-us-mox-fuel-plan/](http://www.nti.org/gsn/article/experts-differ-over-us-mox-fuel-plan/)

<sup>253</sup> National Nuclear Security Administration website,

<http://nnsa.energy.gov/aboutus/ourprograms/nonproliferation/programoffices/fissilematerialsdisposition/surplusheudispositio>

<sup>254</sup> “DOE, NNSA Announce Availability of Reserve Stockpile of Nuclear Power Reactor Fuel Material from Downblending of Surplus Weapons-Usable Uranium,” NNSA press release, August 18, 2011,

<http://nnsa.energy.gov/mediaroom/pressreleases/doennaafs81811>

**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.**

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***Indicator 17.1. Development of relevant verification measures and agreements is taking place, with IAEA participation***

Yes, partial progress.

In the context of the PMDA arrangement between the United States and Russia (see Action 16), the two states have invited the IAEA to verify the disposition of plutonium declared in excess of military programs.<sup>255</sup> The joint letter from the United States and Russia to the IAEA sent in August 2010 requested “that the IAEA engage in all necessary efforts to undertake this important verification role, with the goal of preparing the necessary legally-binding verification agreements in 2011.”<sup>256</sup> The PMDA protocol (between Russia and the United States) entered into force in July 2011. According to the Defense Treaty Inspection Readiness Program (DTIRP), “as of July 2011, the two countries and the IAEA [were] making progress on appropriate IAEA verification measures for each country’s disposition program.”<sup>257</sup> However, in March 2012, an official indicated that the conclusion of agreement on verification was delayed because of conditions put forth by one of the parties.<sup>258</sup> The verification arrangement is still expected to be presented to the Board of Governors in 2012.

No multilateral arrangements, involving other NWS and NNWS, are being developed in the context of the IAEA.

**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.**

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Monitoring the implementation of this action and assessing what constitutes progress (short of complete dismantlement of facilities) is not entirely straightforward. The only clear-cut case is France, which by the time of the 2010 Review Conference had already dismantled all its facilities for weapons material production. None of the other NWS is known to be producing fissile material for military purposes, so presumably, all of the operational facilities can be considered as converted to civilian use already. (One possible exception might be China, as it has not officially declared a moratorium on the production of fissile material for weapons purposes.)

Dismantlement of facilities, on the other hand, is a lengthy, complex and expensive project. Initiation of “a process towards dismantling” seems to cover a wide range of actions, from announcement of the intent to, eventually, dismantle a facility, through to the actual shut down and

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<sup>255</sup> Please see IAEA INFCIRC/806, September 16, 2010, [www.iaea.org/Publications/Documents/Infcircs/2010/infcirc806.pdf](http://www.iaea.org/Publications/Documents/Infcircs/2010/infcirc806.pdf)

<sup>256</sup> Ibid.

<sup>257</sup> Plutonium Management and Disposition Agreement (PMDA) synopsis, <http://dtirp.dtra.mil/tic/synopses/pmda.aspx>

<sup>258</sup> Remarks made under Chatham House rules.

decommissioning of the facility. From this perspective, in most cases, the process “towards the dismantling” had been initiated prior to the 2010 Review Conference, through the shut down of plutonium producing reactors and reprocessing plants, or decisions on shut down and decommissioning.<sup>259</sup> Based on available information, it does not appear that any actual dismantlement of facilities has commenced during the reporting period (2010-2012), although in the US case, the demolition of one of the facilities that started in late 2008 was going during the reporting period (see below).

Under this action item the report therefore describes the status of facilities that used to produce fissile material for nuclear weapons, where such information is available from open sources.

***Indicator 18.1. Conversion/dismantlement of facilities is completed during the reporting period; or other steps towards dismantlement or conversion are taken during the reporting period***

**China**

**Insufficient information**

The facilities that previously produced fissile material for nuclear weapons are reported to have been decommissioned or to have shifted to producing material for the civilian nuclear industry.<sup>260</sup> At least one facility, the Guangyuan Plutonium Production Reactor and Reprocessing site (also known as site 821), appears to have been fully converted to civilian use, with military material production facilities decommissioned.<sup>261</sup> However, China has not officially announced a moratorium on military fissile material production, so it is unclear if any of the operational facilities can be reverted to military use if such a decision is taken in the future.

**France**

**Dismantlement completed prior to 2010**

**United Kingdom**

**Some dismantlement completed prior to 2010**

The UK has maintained a moratorium on the production of fissile material for nuclear weapons and other nuclear explosive devices since 1995. Most of the UK’s military plutonium was produced at the Sellafield complex. According to the 2010 IPFM global fissile material report, all 10 of the UK’s reactors that produced military plutonium had been shut down prior to 2010.<sup>262</sup> Dismantlement plans for these plants are very long-term, and dismantlement is not expected to be completed until “2041–2065 for Windscale, 2105–2117 for Calder Hall, and 2116–2128 for Chapelcross.”<sup>263</sup>

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<sup>259</sup> Note, however, that shut-down facilities can remain shut down but not dismantled for many years.

<sup>260</sup> “Global Fissile Material Report 2010,” IPFM.

<sup>261</sup> The new company operating the site, Sichuan Environmental Protection Engineering Co., Ltd, specializes in decommissioning nuclear facilities; see China: Nuclear Facilities, Country Profiles, [www.nti.org/facilities/730/](http://www.nti.org/facilities/730/) and [www.cnnc.com.cn/2006-10-17/000047102.html](http://www.cnnc.com.cn/2006-10-17/000047102.html) (in Chinese). Other sites are co-located with civilian nuclear facilities.

<sup>262</sup> “Global Fissile Material Report 2010,” p.83; exact dates vary for different reactors.

<sup>263</sup> Ibid. For detailed decommissioning plans see the “Lifetime Plans” for Windscale, Calder Hall, and Chapelcross, all available at [www.nda.gov.uk](http://www.nda.gov.uk)

One of the two gaseous diffusion plants at Capenhurst produced HEU for weapons purposes until 1962, and then was converted to LEU production. That plant was shut down in 1982, decommissioned and subsequently demolished.<sup>264</sup> The other Capenhurst enrichment plant is civilian and operated by URENCO.

## Russia

All of the operational uranium enrichment facilities in Russia are designated as civilian, although three of them are located in closed cities and used to be part of the military program.<sup>265</sup> All of the plutonium production reactors have been shut down – the last one in April 2010, after years of delay. According to NNSA, 27 plutonium production reactors that have been shut down in Russia are subject to bilateral monitoring under the US-Russia Plutonium Production Agreement (PPRA).<sup>266</sup> Under PPRA, the two governments agreed that the reactors that had been shut down would not be restarted, but no dismantlement plans appear to be in place. Two reprocessing plants in Russia, in Seversk and Zheleznogorsk, are also designated for shutdown,<sup>267</sup> though no timelines were available from open sources. The Zheleznogorsk reprocessing plant is expected to complete reprocessing spent fuel from the ADE-2 reactor in 2012.<sup>268</sup>

## United States

### Demolition/ “processes towards dismantling” in progress

The demolition of K-25 gaseous diffusion facility at Oak Ridge that produced HEU for nuclear weapons until 1964 is ongoing, and DOE reportedly plans to build a K-25 History Center at the site instead.<sup>269</sup> In August 2010, DOE also announced awarding a \$2 billion contract for decontamination and decommissioning of the Portsmouth Gaseous Diffusion Plant, which also used to be part of the US nuclear weapons complex and produced HEU for weapons until 1964. The work envisions the demolition of process facilities, clean up, and remediation of soil and groundwater.<sup>270</sup>

The United States has begun decommissioning five heavy-water plutonium production reactors at its Savannah River Site in South Carolina.<sup>271</sup> In October 2010, it was reported that DOE was considering the complete dismantlement of K East, one of the nine graphite-moderated plutonium production reactors at the Hanford site in Washington state.<sup>272</sup> However, the official Hanford website indicates that both K East and K West reactors are scheduled to be “cocooned” (partially taken apart with their cores encased to prevent the leakage of radiation) – one by 2015, and the other to follow. Reactor N is undergoing cocooning, scheduled to be completed by 2013. Five other reactors were cocooned by 2005. One more reactor at Hanford was turned into a museum.<sup>273</sup>

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<sup>264</sup> See Capenhurst, UK National Decommissioning Authority, [www.nda.gov.uk/ukinventory/sites/capenhurst/](http://www.nda.gov.uk/ukinventory/sites/capenhurst/)

<sup>265</sup> SIPRI 2011 Yearbook, p. 358, [www.sipri.org/yearbook/2011/files/SIPRIYB1107-07A.pdf](http://www.sipri.org/yearbook/2011/files/SIPRIYB1107-07A.pdf)

<sup>266</sup> Plutonium Production Reactors Agreement Fact Sheet, NNSA, September 2011.

<sup>267</sup> Appendix 3, “Global Fissile Material Report 2011,” IPFM, p. 33.

<sup>268</sup> *Ibid.*, p. 18.

<sup>269</sup> “Demolition Continues of Oak Ridge K-25 Building, Where Atomic Bombs First Produced,” Associated Press, February 6, 2012, [http://blog.al.com/wire/2012/02/demolition\\_continues\\_of\\_oak\\_ri.html](http://blog.al.com/wire/2012/02/demolition_continues_of_oak_ri.html)

<sup>270</sup> “DOE Awards Clean Up Contract for Portsmouth Decontamination and Decommissioning,” U.S. Department of Energy press release, August 13, 2010.

<sup>271</sup> “Global Fissile Material Report 2010,” IPFM, p. 7.

<sup>272</sup> “Energy Department Wants to Remove Hanford Reactor Rather Than Cocooning It,” Associated Press, October 19, 2010.

<sup>273</sup> Hanford: Projects and Facilities, U.S. Department of Energy, [www.hanford.gov/page.cfm/ProjectsFacilities](http://www.hanford.gov/page.cfm/ProjectsFacilities)



**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.**

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While the formulation of this action item is very broad, it was in fact linked to a specific project – the UK-Norway initiative on warhead dismantlement verification. VERTIC, a non-governmental organization, also participates in this initiative focused on developing technologies that would allow non-nuclear-weapon states to participate in the verification of nuclear warheads dismantlement.<sup>274</sup> The action item was thus meant to encourage this and possible other collaborative projects on nuclear disarmament verification.

***Indicator 19.1. States participate in disarmament/dismantlement verification initiatives or launch new ones***

**Limited progress**

In July 2011, the United Kingdom invited the other NWS to a confidential expert-level briefing on lessons learned from the experience of the U.K.-Norway Initiative.<sup>275</sup> The meeting took place on April 4, 2012, and according to official reports, “UK scientists and technical experts shared the outcomes and lessons” with their counterparts from other NWS.<sup>276</sup>

Some sources indicate that US nuclear labs have been cooperating with the United Kingdom in developing technical approaches to disarmament verification, but no details of such projects are publicly available, presumably for domestic political reasons.

**Action 20: States parties should submit regular reports, within the framework of all 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**

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**No progress**

According to UNODA, as of February 2012, no state reports have been received. It is expected that first reporting will begin closer to the dates of the Preparatory Committee meeting in April-May 2012.

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<sup>274</sup> For a description of the initiative and progress report, please see UK Ministry of Defence, [www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/SecurityandIntelligencePublications/InternationalSecurity/UkNorwayInitiativeOnNuclearWarheadDismantlementVerification.htm](http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/SecurityandIntelligencePublications/InternationalSecurity/UkNorwayInitiativeOnNuclearWarheadDismantlementVerification.htm);

<sup>275</sup> “UK Norway Workshop: Questions Answered,” United Kingdom-Norway Initiative, <https://registration.livegroup.co.uk/ukniworkshop/FAQ/#faq10>

<sup>276</sup> “UK Hosts Meeting on Nuclear Disarmament Verification Research,” British Embassy in Berlin, April 4, 2012, <http://ukingermany.fco.gov.uk/en/news/?view=News&id=750457882>

**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.**

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***Indicator 21.1. Nuclear weapons states agree on a standard form and establish reporting intervals***

**No progress**

Though this was discussed at the NWS (P-5) meeting in July 2011, no standard form or reporting intervals have been established. It appears that the states cannot agree on the level of transparency to be provided and are also working on developing common terminology in this regard.

The Non-Proliferation and Disarmament Initiative (NPDI), a ten-nation group established by Australia and Japan, proposed a draft reporting form to the NWS in fall 2010, but the proposal was not taken.<sup>277</sup>

***Indicator 21.2. NWS begin to report according to the adopted standard***

**No progress**

***Indicator 21.3. UN Secretary-General establishes a repository for NWS reports***

**Yes**

An online repository was established on the website of the UN Office for Disarmament Affairs.<sup>278</sup> It is currently empty.

**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.**

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The UN General Assembly in 2002 adopted 34 recommendations of the UN Experts Group Study on Disarmament and Nonproliferation (DNP) Education,<sup>279</sup> recognizing education as an integral part of achieving a safe and secure world free of nuclear weapons. General Assembly resolution 57/60 conveys the recommendations for implementation by States, international organizations and

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<sup>277</sup> See Statement by H.E. Mr. Mari Amano, head of Japan's delegation to the CD, at the UN First Committee, October 14, 2011, [www.disarm.emb-japan.go.jp/statements/Statement/141011UNGA.htm](http://www.disarm.emb-japan.go.jp/statements/Statement/141011UNGA.htm)

<sup>278</sup> Available at <http://www.un.org/disarmament/WMD/Nuclear/Repository/>

<sup>279</sup> The report of the Secretary-General in 2002 (A/57/124), containing the study conducted by the Expert group, was presented to the UNGA First Committee on 9 October 2002, and the General Assembly adopted resolution 57/60 on 22 November 2002. The UN Study also pertains to concerns over conventional armaments, including small arms and light weapons. Please see A/RES/57/60. For recommendations, see A/57/124.

civil society, and requests the UN Secretary-General to prepare a report reviewing the results of the implementation of the recommendations.<sup>280</sup>

Since 2004 the UNSG has issued biennial reports on the implementation of the Experts Group's recommendations on the basis of submissions from member states, as well as international and nongovernmental organizations.<sup>281</sup> Four UNSG reports on DNP education have been released to date, the most recent in July 2010. The number of reports submitted by states (indicator 22.1), as well as the level of support for the UN General Assembly resolution on DNP education (indicator 22.2), provides the basis for monitoring progress made in the implementation of NPT Action Item 22. It is beyond the scope of this report to examine unreported measures undertaken by States in implementing the recommendations of the UN Study on Disarmament and Nonproliferation Education.

### ***Indicator 22.1. State has submitted a report to the UN on the implementation of A/57/124***



#### **No Progress + Red Flag**

While States generally support the importance of disarmament and nonproliferation education,<sup>282</sup> reporting has been limited. The UN Secretary-General is due to issue his next report on DNP in July 2012. As of March 2012, the UN has not received additional state replies concerning implementation of recommendations on disarmament and nonproliferation education since the 2010 SG report.<sup>283</sup> It is therefore highly unlikely that the historic pattern of very limited reporting will change in the near future.

Since the adoption of the GA Resolution in 2002, only 28 reports have been submitted to the UN by a total of 21 states. Both Japan and Mexico have submitted three reports to date, which is the highest number of submissions per country (three out of four mandated reporting periods). Mauritius, New Zealand and Spain have each submitted two reports. The highest number of total submissions was in 2006, with eight reports. Only six state replies were submitted for the 2010 report period (A/65/160), the lowest number of submissions recorded so far. The Russian Federation is the only nuclear weapons state to report on its implementation of the UN study on disarmament education.<sup>284</sup> Remarkably, several countries that do implement and finance projects to promote nuclear disarmament and nonproliferation education, including Norway, Sweden, and the United States, have not reported at all.

The amount of information provided in State reports varies widely.<sup>285</sup> Japan, in particular, has been active in undertaking and reporting on measures dealing with nuclear disarmament and nonproliferation education, and in its 2010 report expressed the view that it believed in the “utmost

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<sup>280</sup> Recommendation 32 of the UN Study also requests the UNSG to prepare a report biennially. See A/RES/57/60 and A/57/124

<sup>281</sup> Recommendation 31, in particular, calls on Member States to report on their implementation of the recommendations. The report also contains information provided by international organizations and civil society on their implementation of the recommendations.

<sup>282</sup> All four GA resolutions have been adopted by consensus (adopted without a vote in the GA), which is an indication of general support towards disarmament and nonproliferation education.

<sup>283</sup> Information courtesy of UNODA.

<sup>284</sup> Russia reported in 2004.

<sup>285</sup> Bolivia (2006), Canada (2006), Italy (2008), Japan (2006 and 2010), Netherlands (2008), New Zealand (2004), Qatar (2008), Russian Federation (2004), and Turkmenistan (2010).

importance of disarmament and nonproliferation education, especially for the younger generation.<sup>286</sup>

Nevertheless, the findings on the implementation of the recommendations of the UN Study on DNP reflect the overall lack of progress made in the implementation of Action Item 22. An overview of state reporting is presented in the table below:

### Overview of report submissions

Year	UNSG Report Symbol	States that submitted reports	Total state reports
2004	A/59/178	Hungary, Japan, Mexico, New Zealand, Russian Federation*, Sweden, Venezuela	7
2006	A/61/169	Bangladesh, Bolivia, Canada, Japan, Mauritius, Mexico, New Zealand, Suriname	8
2008	A/63/158	Burundi, Cambodia, Italy, Mauritius, Netherlands, Qatar, Spain	7
2010	A/65/160	Burkina Faso, Japan, Mexico, Spain, Turkmenistan <sup>287</sup> , Ukraine	6
<b>TOTAL</b>		<b>21 States</b>	<b>28 Submissions</b>

\* Nuclear Weapon States

### **Indicator 22.2. State support expressed through General Assembly resolutions**

#### Progress

Since the first resolution on DNP education adopted in 2002 (A/RES/57/60), the General Assembly has adopted a follow-on resolution biennially.<sup>288</sup> To date, there are four General Assembly resolutions on DNP education, and they do not differ significantly in substance. All four resolutions have been adopted without a vote in both the First Committee and the General Assembly, reflecting general support by states for disarmament and nonproliferation education. Moreover, the number of state sponsors of the resolution has increased over the years: the most recent resolution adopted in 2010 (A/RES/65/77) had almost twice as many sponsors (44 states) as the first DNP education resolution adopted in 2002 (24 states). The number of state sponsors of the 2010 resolution increased slightly from previous State sponsor number of 42 in the 2008 resolution. Mexico, in particular, has taken a leading role in promoting DNP education, introducing all of the draft DNP resolutions on behalf of the sponsors. Among the nuclear weapon States, the UK sponsored and co-sponsored the 2010 and 2008 resolutions, respectively, while France was a co-sponsor of the 2004 resolution. China, the Russian Federation, and the United States have not (co-)sponsored a DNP education resolution. The full list of states sponsors and co-sponsors of the resolution on disarmament and nonproliferation education adopted in 2010 is presented below:

<sup>286</sup> The details of Japan's activities can be found in its 2010 reply, [www.un.org/disarmament/education/docs/SGReport65contributions/MemberStates/Japan.pdf](http://www.un.org/disarmament/education/docs/SGReport65contributions/MemberStates/Japan.pdf)

<sup>287</sup> Not originally included in the report. Added by Addendum 1.

<sup>288</sup> The years and symbols of the DNP resolutions are as follows: 2010 (A/RES/65/77); 2008 (A/RES/63/70); 2006 (A/RES/61/73); 2004 (A/RES/59/93); 2002 (A/RES/57/60).

2010 UN GA Resolution: A/RES/65/77<sup>289</sup>

Sponsors: Australia, Brazil, Costa Rica, Dominican Republic, Egypt, El Salvador, Guatemala, Hungary, Japan, **Mexico**, New Zealand, Nicaragua, Norway, Panama, Paraguay, Peru, Poland, South Africa, Spain, Sweden and Uruguay

Co-sponsors: Argentina, Austria, Belgium, Canada, Chile, Ecuador, Estonia, Germany, Greece, Honduras, India, Indonesia, Italy, Luxembourg, Montenegro, Netherlands, Nigeria, Pakistan, Philippines, Serbia, Trinidad and Tobago, Turkey and United Kingdom of Great Britain and Northern Ireland

As noted above, however, in spite of the broad support for the concept of disarmament and nonproliferation education, and associated resolutions, state reporting on relevant activities remains largely inadequate. In the absence of state reporting, it appears impossible to assess the implementation of Action 22.

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<sup>289</sup> Voting record from p.157, UN Disarmament Yearbook, 2010, Part I,  
[www.un.org/disarmament/HomePage/ODAPublications/Yearbook/2010/DY2010-Part1-Online.pdf](http://www.un.org/disarmament/HomePage/ODAPublications/Yearbook/2010/DY2010-Part1-Online.pdf)