

# Practical Steps towards Transparency of Nuclear Arsenals

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## Introduction

Nuclear disarmament is one of the key elements of the nuclear non-proliferation regime established by the Nuclear Non-Proliferation Treaty (NPT). Article VI of the Treaty explicitly commits all states to “pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament”. The number of nuclear weapons has indeed been dramatically reduced—it was estimated that in 2010 all nuclear-weapon states had about 18,000 nuclear warheads in their arsenals, down from the peak of about 70,000 in 1986.<sup>1</sup> It is clear, however, that nuclear arsenals can be reduced even further.

The 2010 NPT Review Conference Action Plan reinforced the obligation of article VI of the NPT by asking all nuclear-weapon states to “undertake further efforts to reduce and ultimately eliminate all types of nuclear weapons”.<sup>2</sup> The Action Plan identified transparency and accountability as an important part of the nuclear disarmament process and encouraged the nuclear-weapon states “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”.<sup>3</sup> Providing information about nuclear arsenals would be an important confidence-building measure that would help advance the cause of nuclear disarmament, strengthen global and regional stability, and create conditions for bringing all nuclear-weapon states in the disarmament process.

As of 2012, the only nuclear-weapon states that have an obligation to provide information about their nuclear forces are Russia and the United States, which exchange data as part of the New START agreement, which entered into force in February 2011. States with smaller nuclear arsenals are reluctant to provide detailed information about their nuclear holdings, arguing that since the two largest nuclear powers still hold about 95% of all nuclear weapons they would have to undertake very deep reductions before transparency can be established as a universal norm. Only two other states—France and the United Kingdom—

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1 Robert S. Norris and Hans M. Kristensen, “Global nuclear weapons inventories, 1945–2010”, *Bulletin of the Atomic Scientists*, vol. 66, no. 4, 2010, pp. 77–83.

2 Final Document of the 2010 NPT Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, document NPT/CONF.2010/50 (vol. I), 4 June 2010, § I.B.iv, action 3.

3 *Ibid.*, § I.F.i, action 21.

released some information about their nuclear forces. Arsenals of other nuclear-weapon states remain non-transparent.

The development of a comprehensive reporting standard called for in the 2010 NPT Action Plan would require a coordinated effort on the part of the international community. However, important elements of the future transparency regime are already in place in the US–Russian nuclear disarmament process. As discussed below, the legal and institutional framework created by the New START Treaty could provide a practical template for a future regime of comprehensive transparency of nuclear arsenals.

## Transparency in US–Russian arms control treaties

The United States and the Soviet Union and Russia have a long history of nuclear arms control negotiations that helped them to develop a comprehensive legal and institutional framework for data exchange and verification regarding their nuclear forces. Among the key achievements in this area are the Strategic Arms Reduction Treaty (START) that resulted in substantial reductions of strategic nuclear arsenals of the two states and the New START Treaty that further developed provisions of its predecessor.

The START Treaty required its parties to exchange data on the number of strategic delivery vehicles—intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs) and long-range bombers. The data exchange was made every six months during the time the Treaty was in force—from December 1994 to December 2009.<sup>4</sup> The states did not report the number of deployed nuclear warheads—this number was determined from the number of launchers by agreed accounting rules. The Treaty also included detailed provisions for verification and inspection activities that allowed the parties to ensure accuracy of the submitted information. For the purposes of the Treaty the United States and the Soviet Union developed a comprehensive set of rules that covered all aspects of data exchange and verification. To coordinate this activity and resolve disputes, the Treaty created the Joint Compliance and Inspection Commission. All data exchanged by the parties were available to the public, with the exception of geographic coordinates of launchers that were withheld by common agreement.

The New START Treaty has made a number of important changes in the data exchange and verification regime. First, the Treaty simplified the verification and inspection procedures by eliminating overly intrusive and unnecessary inspections. At the same time, it changed the accounting rules to ensure that the number of warheads reported more accurately reflects the number of operationally deployed nuclear weapons. In contrast to START, which used accounting rules to determine the total warhead count, the New START Treaty requires Russia and the United States to report the actual number of warheads deployed on each individual missile.<sup>5</sup> This rule does not cover strategic bombers, which do not routinely carry operationally deployed nuclear weapons—each bomber is counted as one nuclear warhead. The Treaty also allows the parties to conduct inspections to verify that the reported number of warheads deployed on any missile corresponds to the number

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4 One additional data exchange took place at the time the START Treaty was signed in July 1991. The last START data exchange took place in October 2009.

5 Protocol to the Treaty Between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, Part Two—Categories of Data Pertaining to Strategic Offensive Arms.

reported in the data exchange.<sup>6</sup> To resolve questions related to the implementation of the Treaty Russia and the United States established the Bilateral Consultative Commission, which meets on a regular basis.

The reporting and verification provisions of the New START Treaty are much more comprehensive than any measures that have been implemented in the past, since they allow the parties to verify the actual number of operationally deployed strategic nuclear warheads. Even though the Treaty does not place any limits on the number of non-deployed warheads, it effectively limits those by establishing the maximum number of non-deployed launchers each state is allowed to have.

From the point of view of transparency, the biggest drawback of the New START Treaty is that it does not require its parties to publish the data that they submit to each other as part of the biannual data exchange. The only data that is automatically available to the public are the aggregate numbers of operationally deployed warheads, operationally deployed launchers, and launchers (deployed and non-deployed).<sup>7</sup> Although the Treaty allows each party to publish its own data in full, neither Russia nor the United States have done so. In December 2011 the United States released parts of its New START data exchange.<sup>8</sup> In addition to the aggregate numbers, the released document contains information about the numbers of deployed and non-deployed ICBMs, SLBMs and bombers, and their locations. Information on the number of warheads on individual launchers, and on the distribution of warheads among the components of the strategic force, was withheld.

As a result of this limited data release, there are now three categories of data on the US and Russian nuclear arsenals—the publicly available aggregate numbers of operationally deployed warheads and delivery systems, the complete detailed data exchange, and the abridged version of the data exchange released by the United States for its strategic force. As discussed below, each category could provide a template for the development of a universal transparency regime in nuclear disarmament.

## Steps towards universal transparency of nuclear arsenals

As a first step towards creating a transparency regime that would support the nuclear disarmament process, all states that have nuclear weapons should be encouraged to release information about their nuclear forces in the format that the United States and Russia use to exchange their data every six months—the aggregate numbers of operationally deployed strategic warheads and the numbers of deployed and non-deployed strategic launchers. Even though this information would be released on a voluntary basis and its disclosure would not imply an obligation to accept limits on the nuclear forces, this reporting would definitely strengthen the nuclear non-proliferation regime by establishing the principle of transparency and accountability in nuclear disarmament.

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6 Ibid., Part Five—Inspection Activities.

7 US Department of State, Bureau of Arms Control, Verification and Compliance, “New START Treaty Aggregate Numbers of Strategic Offensive Arms”, Fact Sheet, 1 June 2011, <[www.state.gov/t/avc/rls/164722.htm](http://www.state.gov/t/avc/rls/164722.htm)>.

8 US Department of State, Bureau of Arms Control, Verification and Compliance, “New START Treaty Aggregate Numbers of Strategic Offensive Arms,” Fact Sheet, 1 December 2011, <[www.state.gov/t/avc/rls/178058.htm](http://www.state.gov/t/avc/rls/178058.htm)>.

The publication of aggregate numbers is unlikely to negatively affect the security of the states involved. Indeed, the experience of the US–Russian nuclear disarmament efforts suggest that greater transparency helps build stable relationships and improve mutual understanding.

Two nuclear-weapon states—France and the United Kingdom—have already released some information about their nuclear forces. In 2008, France declared that its arsenal “will include fewer than 300 nuclear warheads” after the reductions that were announced at the time.<sup>9</sup> The United Kingdom officially declared that its “operationally available warheads number fewer than 160.”<sup>10</sup> These statements suggest that neither state would find it difficult to make a declaration of its total nuclear holdings in the New START format.

Of the nuclear-weapon states that are members of the NPT, only China has not provided specific information about its nuclear arsenal. However, in April 2004, the Chinese government released a document that stated that “[a]mong the nuclear-weapon states, China ... possesses the smallest nuclear arsenal.”<sup>11</sup> Independent estimates indeed suggest that China’s arsenal includes about 180 deployed weapons.<sup>12</sup> Although China might find it difficult to reverse its long-standing policy of secrecy regarding its nuclear forces, it is not inconceivable that it could decide in favour of the disclosure, especially if other states join the transparency regime.

Adherence to the common reporting standard established by the New START Treaty would ensure comparability of reports and provide a strong legal foundation for transparency measures. If necessary, states could consult Russia and the United States on any issue related to interpretation of the treaty provisions, probably using the procedures of the Bilateral Consultative Commission. This would provide all states with a forum for discussion of various issues related to nuclear forces. Eventually, these interactions could become an important part of a trust- and confidence-building process among the nuclear states, which is one of the essential elements of nuclear disarmament.

A transparency regime built around the basic reporting requirements of the New START Treaty would not be comprehensive, at least not initially. The Treaty deals only with strategic weapons and delivery systems—ICBMs, SLBMs, and long-range bombers. It leaves all other categories of nuclear weapons and delivery systems outside of its scope. Neither does it deal with nuclear weapons that are in active reserve or in storage. As a result, the reports would not present an accurate picture of nuclear arsenals (as they do not in the case of Russia and the United States today). However, as long as the limitations of the reports are understood, the transparency measures would be a great improvement over the current situation, when almost no information is available outside of the bilateral US–Russian strategic disarmament process.

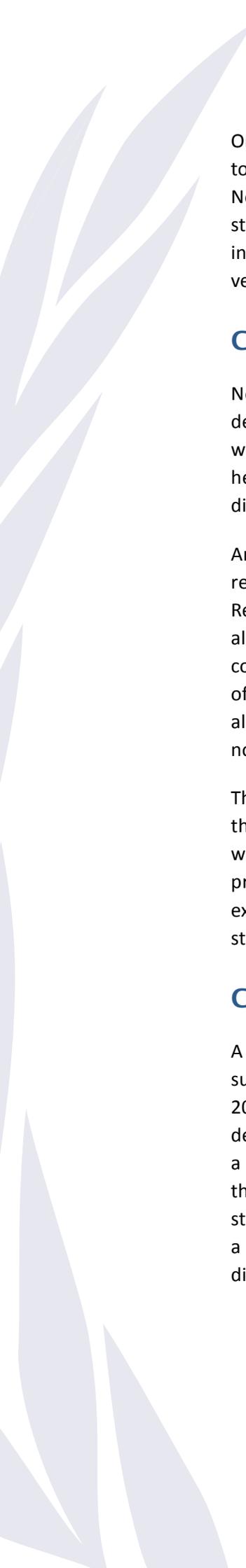
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9 Speech by Nicolas Sarkozy, President of the French Republic, presentation of *Le Terrible* in Cherbourg, 21 March 2008, <[www.francetnp2010.fr/IMG/pdf/discours\\_de\\_cherbourg\\_GB.pdf](http://www.francetnp2010.fr/IMG/pdf/discours_de_cherbourg_GB.pdf)>.

10 Gordon Brown, speech on nuclear energy and proliferation, 17 March 2009, <[http://news.bbc.co.uk/2/hi/uk\\_news/politics/7948367.stm](http://news.bbc.co.uk/2/hi/uk_news/politics/7948367.stm)>.

11 Ministry of Foreign Affairs of the People’s Republic of China, “Fact Sheet: China: Nuclear Disarmament and Reduction of [Nuclear Weapons]”, 27 April 2004, <[www.fmprc.gov.cn/eng/wjzb/zzjg/jks/cjkk/2622/t93539.htm](http://www.fmprc.gov.cn/eng/wjzb/zzjg/jks/cjkk/2622/t93539.htm)>.

12 Hans M. Kristensen and Robert S. Norris, “Chinese nuclear forces, 2011”, *Bulletin of the Atomic Scientists*, vol. 67, no. 6, 2011, pp. 81–7.



Once the key elements of the transparency regime are established, states could move towards disclosing more detailed information about their nuclear arsenals. The abridged New START report published by the United States in 2011 could provide a de facto standard for this type of reporting. Further development of the reporting regime could include exchange of complete New START data and accession of all participants to the verification and inspection regime established by the Treaty.

## **Contribution of non-nuclear-weapon states**

Non-nuclear-weapon states could also make a significant contribution to the development of a transparency and accountability regime. By submitting reports that would certify the absence of nuclear weapons and their delivery systems they would help to promote the new transparency regime and ensure its universal and non-discriminatory nature.

An important precedent for participation of non-nuclear-weapon states in a nuclear reductions treaty was established during the 1990s, when three former Soviet Republics—Belarus, Kazakhstan and Ukraine—became parties of the START Treaty. After all nuclear weapons and launchers were removed from their territories, these states continued to participate in the regular data exchange and verification arrangements of the START Treaty. They reported zeros in most categories of data required by START, although Kazakhstan and Ukraine were reporting the numbers of test launchers and non-deployed missiles that remained on their territories.

The situation in Belarus, Kazakhstan and Ukraine was unique for the period that followed the breakup of the Soviet Union. It does demonstrate, however, that non-nuclear-weapon states could make a substantial contribution to the nuclear disarmament process. Following this example, any state or group of states could initiate data exchange to help create an international institutional framework that nuclear-weapon states would eventually join.

## **Conclusions**

A transparency regime that is based on the New START reporting requirements could not substitute for the comprehensive accountability arrangements that are envisioned by the 2010 NPT Action Plan. As discussed earlier, this regime would not cover non-strategic delivery systems and warheads, and warheads in reserve. However, the Treaty provides a well developed legal and institutional framework for transparency and verification that has demonstrated its viability. This framework is open to the participation of all states, regardless of their NPT status. In fact, it could give non-nuclear-weapon states a stake in the future transparency architecture and significant leverage in the nuclear disarmament process.

## Discussion Series on the NPT Action Plan

Moving towards the 2012 NPT Preparatory Committee, UNIDIR in partnership with the Geneva Forum will convene several briefings to provide a forum for discussion of certain elements of the Action Plan agreed at the 2010 NPT Review Conference. The aim of this series is encourage that tangible efforts be made to further strengthen international cooperation in nuclear disarmament and non-proliferation.

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## About UNIDIR

The United Nations Institute for Disarmament Research (UNIDIR)—an autonomous institute within the United Nations—conducts research on disarmament and security. UNIDIR is based in Geneva, Switzerland, the centre for bilateral and multilateral disarmament and non-proliferation negotiations, and home of the Conference on Disarmament. The Institute explores current issues pertaining to the variety of existing and future armaments, as well as global diplomacy and local tensions and conflicts. Working with researchers, diplomats, government officials, NGOs and other institutions since 1980, UNIDIR acts as a bridge between the research community and governments. UNIDIR's activities are funded by contributions from governments and donor foundations.