

**Hiroshima Report**  
**Evaluation of Achievement in**  
**Nuclear Disarmament, Non-Proliferation and Nuclear Security: 2014**  
**(Executive Summary)**

March 2014  
 Center for the Promotion of Disarmament and Non-Proliferation  
 The Japan Institute of International Affairs

*Hiroshima Report—Nuclear Disarmament, Nuclear Non-Proliferation and Nuclear Security: 2014* (hereinafter referred to as “*Hiroshima Report 2014*”) is an outcome of a research project commissioned by the Hiroshima Prefecture to the Japan Institute of International Affairs (JIIA).

The prospects of eliminating nuclear weapons are still distant at best. Even more worrying, the situation regarding nuclear weapons is becoming more and more complex. The five nuclear-weapon states (NWS) under the Nuclear Non-Proliferation Treaty (NPT)—China, France, Russia, the United Kingdom and the United States—have not made any definite move toward renouncing their nuclear arsenals. Three non-NPT parties—India and Pakistan which declared to possess nuclear weapons, and Israel which has maintained a policy of “nuclear ambiguity” but is widely considered to have nuclear weapons—seems unlikely to accede to the NPT as non-nuclear-weapon states (NNWS) in the near future. North Korea declared withdrawal from the NPT, and has conducted three nuclear test explosions. While the situation surrounding the Iranian nuclear issues has moved more positively, it is too early to be optimistic. The threat persists for a new proliferator to emerge on the scene. The threat of nuclear terrorism also remains a high security concern in this globalized world. Growing worldwide interest in peaceful use of nuclear energy would entail the increasing risk of nuclear proliferation as well as terrorism. While problems facing nuclear disarmament, non-proliferation and nuclear security intensify, efforts toward solving them have progressed at a snail’s pace.

This report attempts to help the movement toward a world without nuclear weapons—first, by clarifying the current status of the issues and efforts surrounding nuclear disarmament, non-proliferation and nuclear security. By doing so, it aims to encourage increased debate on these issues by policy-makers, experts in and outside governments, and civil society. Furthermore, by issuing this report from Hiroshima, where a nuclear weapon was once used, it aims to help focus attention and promote further actions in various fields towards the realization of a world without nuclear weapons.

**Items and Countries Surveyed in the *Hiroshima Report 2014***

Items (64)	<ul style="list-style-type: none"> <li>● Nuclear Disarmament: 31</li> <li>● Nuclear Non-Proliferation: 17</li> <li>● Nuclear Security: 16</li> </ul>
Countries surveyed (31)	<ul style="list-style-type: none"> <li>● NWS: China, France, Russia, United Kingdom and United States</li> <li>● Non-NPT parties: India, Israel and Pakistan</li> <li>● NNWS: Australia, Austria, Belgium, Brazil, Canada, Egypt, Germany, Indonesia, Iran, Japan, Kazakhstan, South Korea, Mexico, Netherlands, New Zealand, Norway, South Africa, Sweden, Switzerland, Syria, Turkey and UAE</li> <li>● Other: North Korea*</li> </ul>

\* North Korea declared its suspension from the NPT in 1993 and its withdrawal in 2003, and conducted nuclear tests in 2006, 2009 and 2013. However, there is no agreement among the states parties on North Korea’s official status.

Following is a result of surveying and evaluating countries’ performances in 2013.

## 1. Nuclear Disarmament

After the end of the Cold War, the overall number of nuclear weapons has been decreasing. Non-nuclear-weapon states (NNWS) continue to explore promotion of nuclear disarmament through, among others, United Nations General Assembly (UNGA) Resolutions, proactive proposals on disarmament measures, and convening of important conferences. Still, approximately 17,000 nuclear weapons remain on the earth, and many challenges still exist. The United States and Russia have yet to commence a negotiation of their nuclear arms reduction in the post-New START. China, India, Israel, Pakistan and North Korea are considered not to have undertaken any process to reduce their nuclear weapons. And the entry into force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and commencement of a Fissile Material Cut-Off Treaty (FMCT) negotiation have not yet been achieved; instead, North Korea conducted the third nuclear test in February 2013. Furthermore, nuclear-weapon/armed states continue to perceive their nuclear weapons as one of the indispensable components for their national security. China has been criticized for being the least transparent about nuclear weapons among the five nuclear-weapon states (NWS).

### (1) The amount of nuclear weapons (estimates)

- In spite of the reduction of 2,000 nuclear weapons from the previous year, approximately 17,000 nuclear weapons still exist on the earth. China, India and Pakistan are estimated to have added about 10 warheads each in the course of the past year.

### (2) Commitment to achieve a world without nuclear weapons

- 169 countries, including France, the United Kingdom and the United States, voted in favor of the UNGA Resolution, titled “United action towards the total elimination of nuclear weapons.”
- The United States announced to seek reduction of its deployed strategic nuclear weapons by up to one-third. However, the United States and Russia could not commence a negotiation on further reductions of nuclear arsenals after the New START.
- 124 countries, including Japan, participated in the “Joint Statement on the Humanitarian Consequences of Nuclear Weapons” presented at the First Committee of the UNGA.
- NWS did not join the Conference on the Humanitarian Impact of Nuclear Weapons in Oslo.

### (3) Reduction of nuclear weapons

- Russia and the United States reduce their strategic nuclear forces in accordance with the New START. Russia has been below the treaty’s limit of deployed strategic nuclear warheads and their delivery vehicles.

### (4) Diminishing the role and significance of nuclear

### weapons in the national security strategies and policies

- There have been few significant changes in nuclear policies regarding: the role and significance of nuclear weapons; a “sole purpose” or no first use; negative security assurances; protocols to nuclear-weapon-free zone treaties; and extended deterrence.
- Russia was reported to have a plan to gradually expand areas of nuclear submarine patrols.
- China reiterated to maintain its no first use policy.

### (5) De-alerting or measures for maximizing decision time to authorize the use of nuclear weapons

- Russian and U.S. strategic nuclear forces are considered to remain on high alert status.
- The United States announced to examine further options to reduce the alert status.

### (6) CTBT

- North Korea conducted the third nuclear test in February.
- Among the 44 states listed in Annex 2 of the CTBT, whose ratification is a prerequisite for the treaty’s entry into force, five states (China, Egypt, Iran, Israel and the United States) have signed but not ratified, and three (India, North Korea and Pakistan) have not even signed.
- The United States reiterated its intention to make efforts for ratifying the CTBT, but has yet to submit it to the Senate for ratification.

### (7) FMCT

- In the 2013 session of the Conference on

Disarmament (CD), negotiation of an FMCT could not be commenced yet again.

**(8) Transparency in Nuclear Forces, Fissile Material for Nuclear Weapons, and Nuclear Strategy/Doctrine**

- No nuclear-weapon/armed states took additional, significant transparency measures regarding nuclear forces, fissile material for nuclear weapons, or nuclear strategy/doctrine.
- Five NWS reaffirmed to submit a glossary of definitions of key nuclear terms to the 2015 NPT Review Conference.

**(9) Verifications of Nuclear Weapons Reductions**

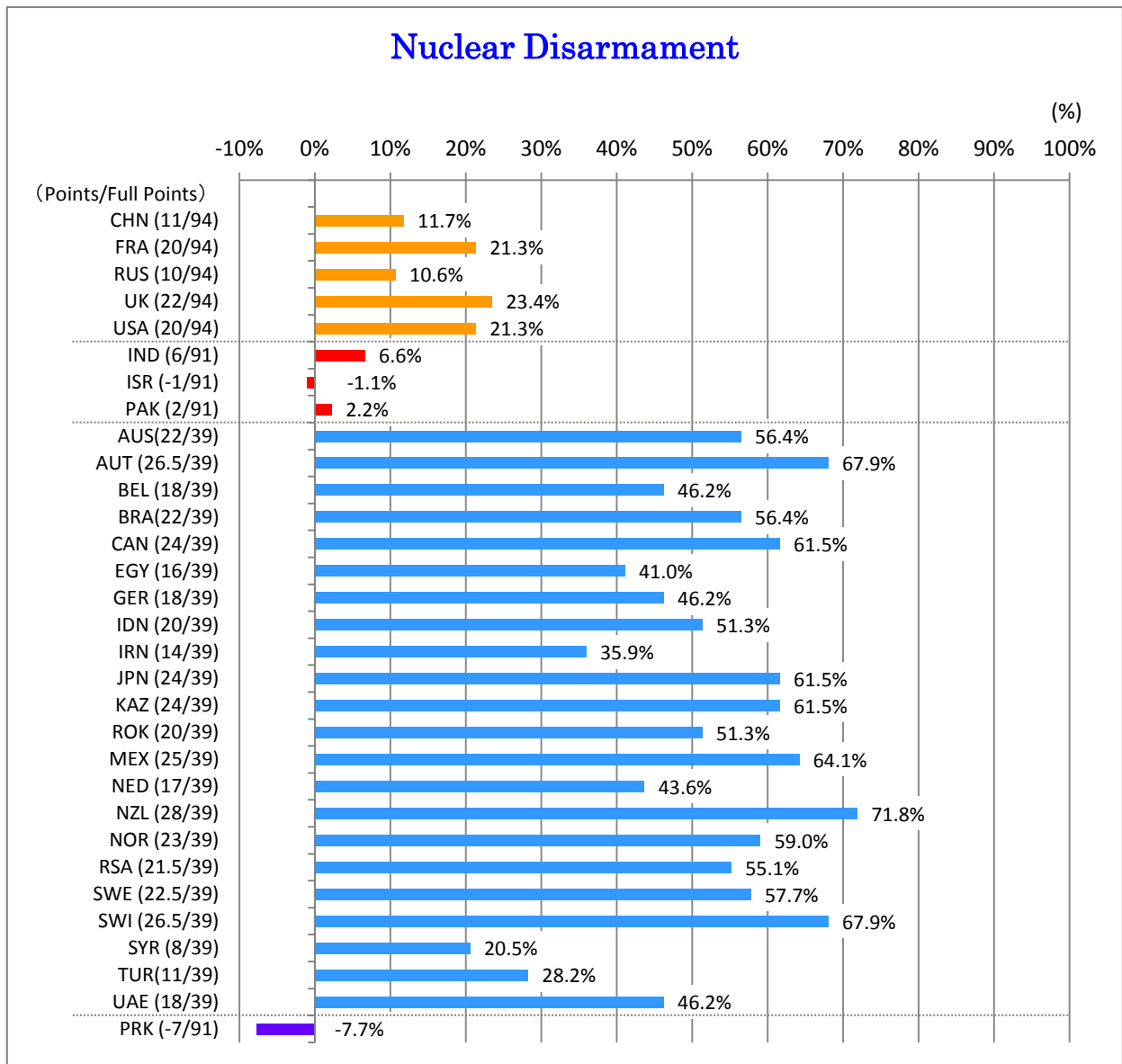
- No significant progress was seen on verifications of nuclear weapons reductions.

**(10) Irreversibility**

- The United States announced that it had dismantled nuclear warheads at a rate faster than its own goal, and that all nuclear warheads retired by 2009 would be permanently eliminated by 2022.

**(11) Disarmament and Non-Proliferation Education and Cooperation with Civil Society**

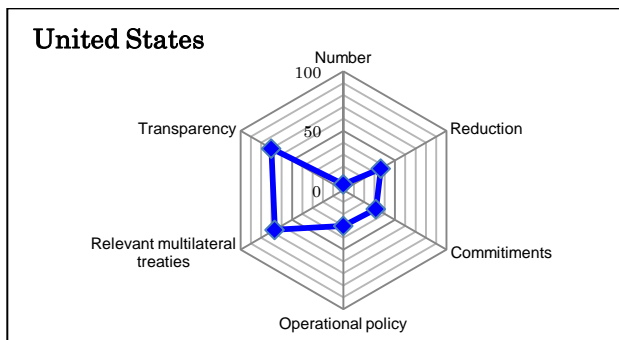
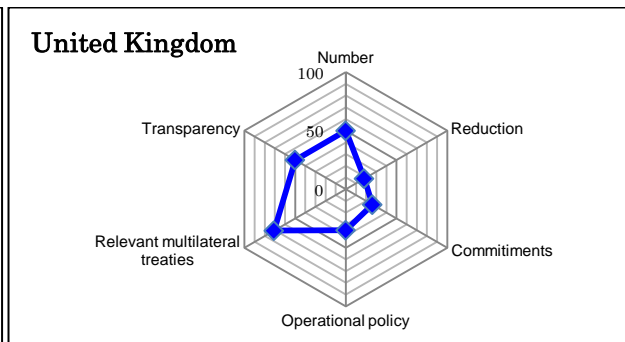
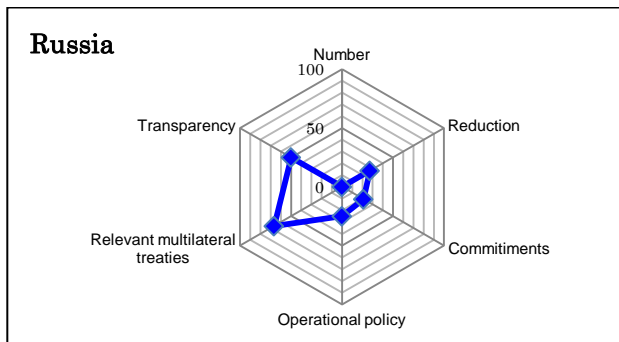
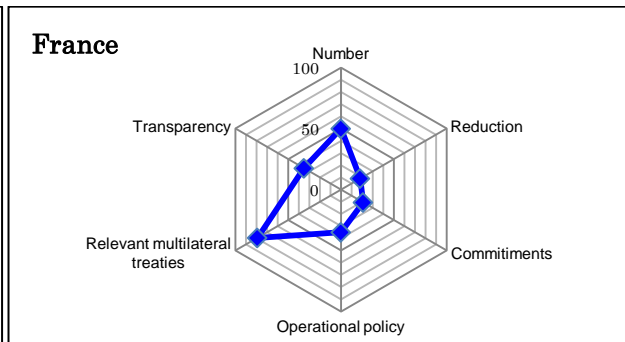
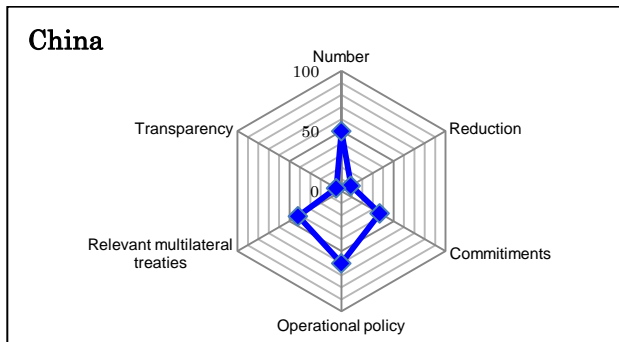
- Japan and other western countries proactively conducted disarmament and non-proliferation education, and cooperated with civil society through, among others, holding side events during the NPT Preparatory Committee, and the First Committee of the UN General Assembly



## 6-Point Nuclear Disarmament Radar Charts (NWS)

The following radar charts aim to illustrate where NWS stand in different aspects of nuclear disarmament. For this purpose, the 12 issues used for nuclear disarmament evaluation were grouped into six aspects. According to the radar charts, China is required to improve its efforts for nuclear weapons reduction and transparency. To a lesser extent, France could be more transparent regarding its nuclear weapons-related issues. Russia and the United States are urged toward further reductions of nuclear arsenals. The performances of the United Kingdom are relatively well-balanced.

Aspects	Issues
Number	The Number of Nuclear weapons
Reduction	Reduction of Nuclear weapons
Commitments	Commitments to achieving a world without nuclear weapons
	Disarmament and non-proliferation educations and cooperation with the civil society
	Hiroshima Peace Memorial Ceremony
Operational policy	Diminishing roles and significance of nuclear weapons in the national security strategies and policies
	De-alerting, or measures for maximizing decision time to authorize the use of nuclear weapons
Relevant multilateral treaties	Comprehensive Nuclear-Test-Ban Treaty (CTBT)
	Fissile Material Cut-Off Treaty (FMCT)
Transparency	Transparency regarding nuclear forces, fissile material for nuclear weapons, and nuclear strategy/doctrine
	Verifications of nuclear weapons reductions
	Irreversibility



## 2. Nuclear Non-Proliferation

190 countries have acceded to the Nuclear Non-Proliferation Treaty (NPT), long regarded as the cornerstone of the nuclear non-proliferation regime. However, three nuclear-armed states—India, Israel and Pakistan—remain outside and are less likely to join the Treaty in the near future. North Korea declared its withdrawal from the NPT twice, announced to possess nuclear weapons, and conducted nuclear test explosions three times. While Iran’s non-compliance with the IAEA Safeguards Agreement has yet to be solved, the situation surrounding the Iranian nuclear issues has moved more positively.

The number of countries that accept the IAEA safeguards under the IAEA Additional Protocols has increased steadily. Meanwhile, some NNWS, including Iran, have not accepted or implemented them, arguing that the conclusion of an Additional Protocol should be voluntary, not obligatory.

On export controls, most members of the Nuclear Suppliers Group (NSG) have solid export controls in place. On the other hand, questions remain as to whether China is conducting adequate and strict enforcement of export controls as written in the Reports issued by the UN Panels of Experts. There is also concern about the possibilities of cooperation on nuclear or ballistic missile developments among countries of proliferation concern.

### (1) Acceptance and Compliance with the Nuclear Non-Proliferation Obligations

- North Korea has failed to respond to the UN Security Council’s decisions, including return to the NPT. Rather, it conducted a nuclear test explosion in February 2013.
- Iran continued nuclear programs, including enrichment-related activities, against the UN Security Council Resolutions. Conclusion of the Joint Plan of Action between EU3+3 and Iran in November was a tentative, but positive step toward resolving the Iranian nuclear issue.
- A Conference on a Middle East Zone Free of Weapons of Mass Destruction (WMD), agreed at the 2010 NPT Review Conference (RevCon), could not be convened in 2013.

### (2) IAEA Safeguards

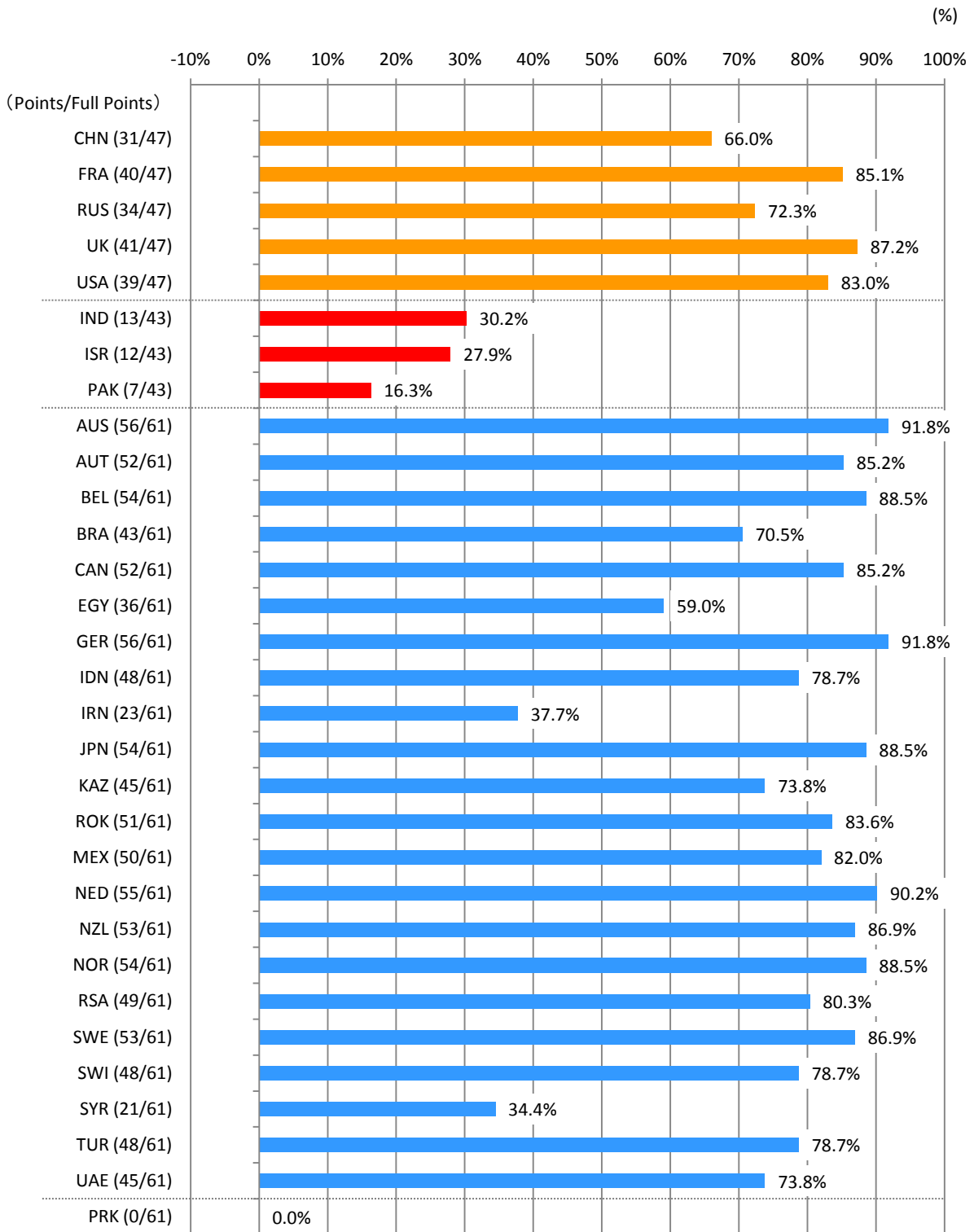
- As of September 2013, 116 NPT NNWS have ratified the IAEA Additional Protocols.
- Some countries argue that the conclusion of an Additional Protocol should be voluntary, not obligatory.
- Three cases of non-compliance with the IAEA Safeguards Agreements have yet to be solved: North Korea, Iran and Syria.
- The contentious relationship between Iran and the IAEA began to change after the inauguration of Iranian new President. The IAEA and Iran concluded a Joint Statement on a Framework for Cooperation at the meeting in

November 2013.

### (3) Implementing Appropriate Export Controls on Nuclear-Related Items and Technologies

- Most of members of the Nuclear Suppliers Group (NSG) have solid export controls in place, including establishment of legislative measures and other relevant national implementation systems.
- Questions remain as to whether China is conducting adequate and strict enforcement of export controls as written in the Reports issued by the UN Panels of Experts.
- Concerns persist about the possibilities of cooperation on nuclear or ballistic missile developments among countries of proliferation concern, such as North Korea, Iran and Syria.
- On civil nuclear cooperation with India as a non-party to the NPT, some countries seek to promote proactively while others contemplate cooperation, subject to implementing additional nuclear disarmament and non-proliferation measures.
- China has been criticized because its export of nuclear power reactors to Pakistan may constitute a violation of the NSG guidelines.

# Nuclear Non-Proliferation



### 3. Nuclear Security

Countries which possess fissile materials usable for nuclear weapons, such as highly-enriched uranium (HEU) and weapon-grade plutonium, could be an “attractive” target for non-state actors attempting nuclear terrorism. Therefore, such countries have to take more responsibilities for ensuring security of those materials. In general, NWS and NNWS with advanced civil nuclear programs have made proactive efforts for implementing and strengthening nuclear security.

For implementation, it is imperative not only to accede to treaties on nuclear security and safety but also to apply the fifth revision of Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Rev.5) to nuclear security system of each country. As for the latter issue, countries with advanced civil nuclear programs have been in the process of incorporating INFCIRC/225/Rev.5 into their nuclear security regulations. International cooperation on bolstering nuclear security, such as minimization of HEU in civil use, prevention of illicit trafficking, and research and development of nuclear forensics, has also been promoted. Many states with advanced civil nuclear programs pledged to establish Centers of Excellence (COE) for nuclear security training. However, there still remains much to be done for enhancing nuclear security.

#### (1) The Amount of Fissile Material Usable for Weapons

- According to the International Panel on Fissile Materials (IPFM), Russia and the United States possess more than 90 percent of fissile material usable for weapons in the world although they have reduced the overall amount.

#### (2) Status of Accession to Nuclear Security and Safety Related Conventions, Participation to Nuclear Security Related Initiatives, and Application to Domestic Systems

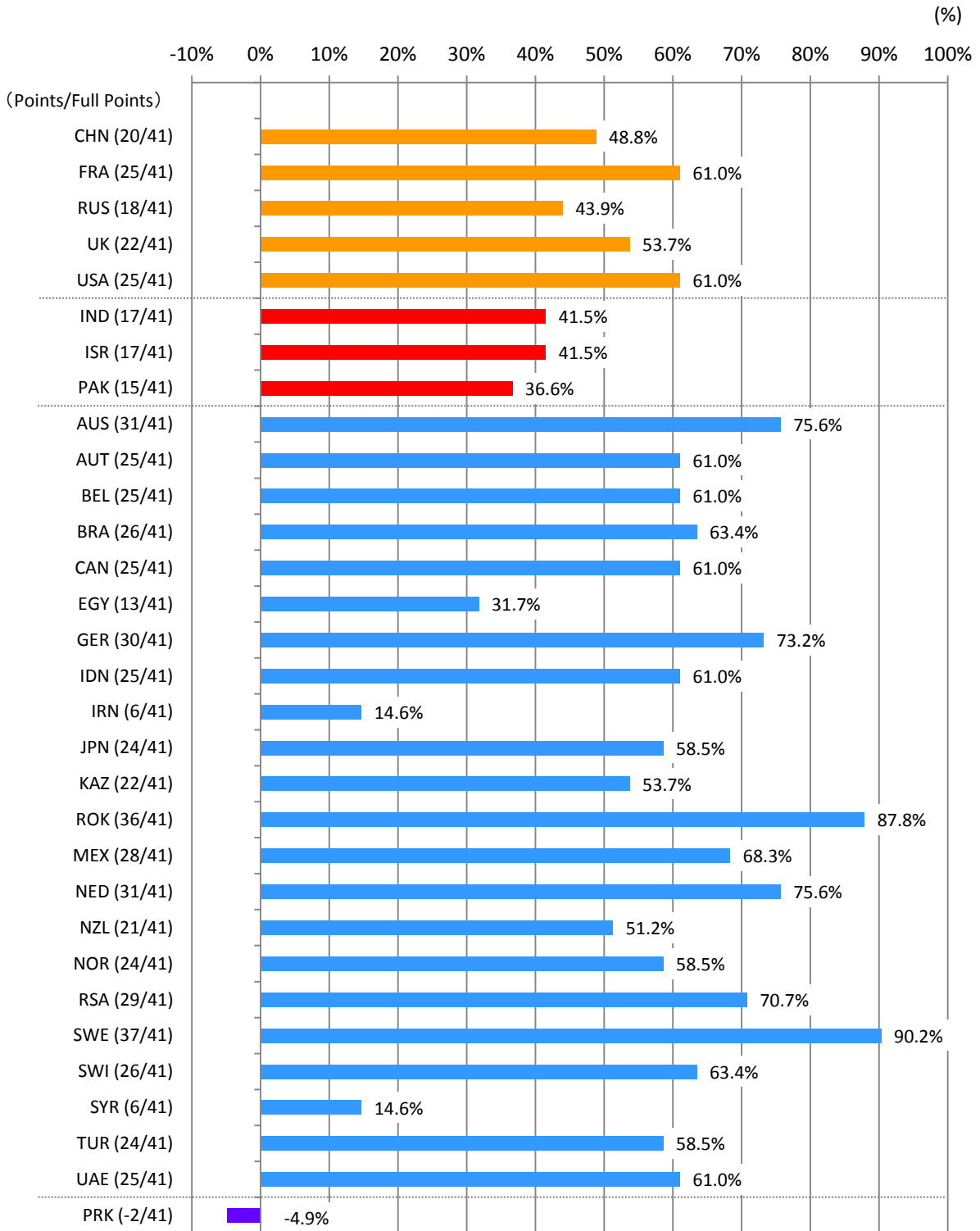
- Many countries surveyed in this project have acceded to most of the treaties on nuclear security and safety.
- One of the challenges is to promote ratification of the Amendment of the Convention on the Physical Protection of Nuclear Material (CPPNM).
- Implementing INFCIRC/225/Rev.5 is key for strengthening nuclear security. Countries with advanced civil nuclear program have been in the process of incorporating it into their nuclear security regulations.
- Countries of proliferation concern have neither joined the several treaties on nuclear security and safety nor applied INFCIRC/225/Rev.5 to their national security systems. In order to prevent nuclear terrorism, improvement of their activities on nuclear security is the urgent

challenge.

#### (3) Efforts to Maintain and Improve the Highest Level of Nuclear Security

- Efforts for minimizing HEU in civilian use have continued to be promoted under, among others, the Global Threat Reduction Initiative (GTRI) aiming to returning Russian- or U.S.-origin HEU located in civilian sites in the world to its respective origins.
- The number of countries with advanced civil nuclear programs, which have accepted the IAEA’s advisory services, such as International Physical Protection Advisory Service (IPPAS) reviewing and recommending nuclear security of the recipients, has increased.
- International cooperation has been promoted for research and development of nuclear forensics, whose role is to investigate the original location, history, and transport path of any seized material, and the intent of its removal, by analyzing its composition and physical and chemical form.
- In response to increased awareness about the importance of nuclear security capacity building and international cooperation in this area, many states with advanced civil nuclear programs have established or are establishing Centers of Excellence (COE) for nuclear security training.

# Nuclear Security



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