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Working Group 1: Nuclear Disarmament and Nonproliferation (after the 2010 NPT Review Conference)

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During the 59th Pugwash Conference on Science and World Affairs held in Berlin, Germany, Working Group 1 convened to address a broad set of issues related to Nuclear Disarmament and Nonproliferation after the 2010 Nonproliferation Treaty (NPT) Review Conference. The group comprised 50 participants, from 21 countries, and met over three days in five sessions. The working group observed Chatham House Rules to allow the participants to express their ideas in an off-the-record environment conducive to the free and open exchange of information. The report focuses on four areas: 1. The NPT after the 2010 review conference; 2. Nuclear Weapons, the Middle East, and the proposed 2012 meeting on a Middle East Zone Free of Weapons of Mass Destruction; 3. Obstacles for further deep cuts and nuclear disarmament; and 4. The intersection of nuclear power and nonproliferation. The report focuses on novel ideas raised by the members of the working group under these four themes for consideration by the Pugwash Council and the entire Pugwash community but represents the personal interpretation of the discussion by the rapporteur.

1. The NPT after the 2010 review conference

There was general consensus that the 2010 NPT Review Conference was a success and that this success strengthens the nonproliferation regime. The agreed 64-point action plan shows that the three pillars of the NPT - nonproliferation, disarmament, and peaceful use of nuclear energy - remain strong. However, much remains to be done on disarmament and to create a level playing field so that all NPT parties can enjoy the benefits of peaceful use.

Although the international community derives great benefit from the NPT and its associated measures, it is not a substitute for further action. The Treaty is only one of a family of treaties on nuclear weapons that all serve to advance nonproliferation and arms control and eventually achieve a nuclear weapon-free world.

Although the treaty enjoys almost universal membership in some respects, the NPT can be characterized as a relatively “poor” treaty in comparison with the support and financial backing that many other multilateral agreements receive. Thus, the Treaty suffers from a lack of supporting infrastructure to assist with implementation and offers no opportunity to meet in emergency session. Modest steps to eliminate these weaknesses could include: 1. Create a circle of former chairs to provide continuity and advice to the current chair; and 2. Create professional staff positions in the Office of Disarmament Affairs dedicated to the Treaty beyond the one staff member added after the 2010 review conference. Participants were divided on the utility of establishing annual meetings of states parties vs. strengthening the review conference structure. Some countries would find it very difficult to support annual meetings and noted that P-5 countries would be in position to dominate the discussion as they have greater resources to submit papers and allocate staff to advocate their positions.

Support for the NPT is not uniform enough to allow much stricter application of the withdrawal clause (Article X). While withdrawal is a right that parties enjoy under the Treaty, no party should be able to exercise that right if it is found to be in non-compliance before giving notice of withdrawal. Only one country – the DPRK – has exercised the right to withdraw. After the DPRK withdrew in January 2003, it tested a nuclear explosive in October 2006 and another in May 2009. Today, the DPRK considers itself outside of the Treaty.

2. Nuclear Weapons, the Middle East, and the proposed 2012 meeting on a Middle East Zone Free of Weapons of Mass Destruction

Participants noted that during the 2010 review conference something had to be done about weapons of mass destruction in the Middle East, and about nuclear weapons first of all. If nothing was done the conference would have failed. Since little could be achieved on substance, the conference focused on procedure, agreeing to call a meeting on the issue in 2012. The group agreed that it is critically important to adhere to this agreed timetable.

Finding a high ranking facilitator, possibly from a state willing to host the meeting, turned out to be difficult. A trust fund has been set up for the conference, but nothing will be contributed until the logistics are set. Although the July 1, 2011 Joint Statement on the First P-5 Follow-Up Meeting to the NPT Review Conference¹ emphasizes the importance of the 2012 date, and an agenda and venue for the Middle East conference might be agreed to soon, the conference may slip to 2013.

The group felt that Pugwash should use its influence to encourage the meeting to take place in 2012 in order to build momentum for adoption of substantive bilateral and multilateral arms control measures in the region. Progress or lack of progress will have ramifications far beyond the region. If nothing happens before the next review conference in 2015 it will be a major problem for the NPT and the legitimacy of the nonproliferation regime.

3. Obstacles to further Deep Cuts and Nuclear Disarmament

Although the START III talks never happened, some feel that the high water mark for U.S.-Russian relations was the Yeltsin-Clinton summit in 1997 that proposed the START III framework. From 1998 to 2008, important factions in the United States turned against arms control of any kind. They tried to dismantle arms control gains that had been earned during the Cold War, helped defeat the CTBT, and let START I lapse. With the exception of the continuation of Cooperative Threat Reduction programs, the lost decade on bilateral and multilateral arms control lasted until the New Start negotiations began in the Obama Administration. The New START ratification was eventually successful and did produce a modest reduction of deployed warheads and a more significant cut in delivery vehicles. Hopefully, it represents the beginning of a new process of cooperation by the U.S. and Russia and the start of further arms control and disarmament efforts by the parties and other members of the P-5.

A realistic limit for the next round of bilateral arms control might be 1000 deployed weapons with a ceiling of no more than 3000 warheads per side, strategic and tactical, deployed and reserves. The technology to verify a ceiling on warheads exists but must be politically supported and jointly developed by the U.S and Russia if it is to be ready for inclusion as part of a future treaty.

¹ See: <http://www.state.gov/r/pa/prs/ps/2011/07/167492.htm>

Missile Defense

The balance between offensive and defensive systems remains the major obstacle to achieving further reductions between the U.S. and Russia. From the Russian perspective the problem is compounded by uncertainties regarding the future capability of U.S. systems and by potential changes to U.S. missile defense policy under a future administration.

Although Russian and the U.S. have agreed to explore the possibility of cooperation on a joint missile defense system in Europe and have undergone a limited exchange of data, it is unclear how each side will contribute to the system. Some stress the confidence building potential of a cooperative arrangement, believing that cooperative missile defense could help fundamentally change the U.S.-Russian relationship for the better. Others believe that missile defense will become a technically impossible, financially wasteful and militarily unnecessary game spoiler that undermines efforts to set US-Russian relations on a course of confidence-building and cooperation.

Tactical Nuclear Weapons

The tactical nuclear weapons stationed in Europe are an additional obstacle preventing further bilateral reductions between the U.S. and Russia. The group did not debate whether they should be withdrawn but when and how. They noted that the U.S. is the only state with nuclear weapons deployed in other countries, Russia withdrew its weapons from the former Soviet states, and some NATO countries have already removed U.S. weapons, so withdrawal is not without precedent. It is also not illogical to ask for withdrawal before negotiation on deeper cuts although some suggested working with Russia to delink negotiations to remove the small number of U.S. tactical weapons from negotiations to reduce the much larger number of Russian tactical weapons. Participants noted that Western European NATO allies could facilitate further U.S.-Russian reductions by allowing for the removal of the U.S. weapons. The majority of western European citizens want the weapons withdrawn, so it is up to their political leaderships to make their case in NATO.

Multilateral Reductions

Further bilateral arms control will not be easy and may require new ways to ensure strategic stability between the U.S. and Russia as force levels drop, but arms control will eventually transition into a multilateral process that involves the other P-5 members. The Chinese view New START as a step in the right direction, but feel that its cuts are too cautious. Russia and the U.S. still maintain stockpiles that go far beyond any rational assessment of security needs, and large numbers of weapons are still on hair trigger alert. The U.S. and Russian governments should, moreover, restructure their capabilities to make the reductions irreversible. The Chinese government will continue to maintain a no first use policy, stores warheads and delivery vehicles separately, and invites other nuclear weapon states to do the same. China is pushing for a convention on nuclear weapons that would create an international framework for progress toward a world free of nuclear weapons. It is open to participating in future disarmament negotiations, but would not take part in the next round of negotiations between Russia and the U.S. Any future negotiation that involves China would have to address U.S. missile defense and prompt global strike systems.

The working group discussed several novel international disarmament treaty concepts:

1. Arctic Nuclear Weapons Free Zone. The resource grab in the Arctic is underway and an ice free polar route is opening up. Now is the time to negotiate a nuclear weapon free zone in the Arctic. Such a zone should be verifiable and of unlimited duration. The UN should set the rules to be flexible enough to be implemented in stages since the zone would affect the Russian northern fleet and other longstanding nuclear facilities in the region. Significant support will have to be built in the First Committee of the UN. **2. Nuclear Weapons Convention.** Since the International Court of Justice issued its advisory opinion on the

illegality of the threat or use of nuclear weapons, the UN GA has adopted a resolution every year endorsing multilateral negotiations leading to the development of a nuclear weapons convention. Although the necessary conditions for adopting such a convention do not yet exist, it is important to map a path that includes a phased disarmament process, inspection and verification mechanisms, and a dispute resolution and enforcement mechanism. While it was noted that present step by step approaches are not inconsistent with a process leading to a convention and that it is important to work in parallel, there were some reservations on the utility of these concepts and how they improve the prospects of ongoing nonproliferation, arms control and disarmament efforts.

4. The Intersection of Nuclear Power and Nonproliferation

Fissile material control

There have been many proposals over the previous decades to internationalize aspects of the nuclear fuel cycle. The agreement signed in March of 2010 between the IAEA and Russia to create an international Low Enriched Uranium (LEU) fuel bank represents the farthest the international community has come towards internationalization. It is important to start the bank with a large stock of fuel to ensure that it has enough fuel to encourage member states to join and then supply those states with an uninterrupted supply; to date the IAEA has received pledges worth 150 million U.S. dollars from both states and private organizations to fund a reserve of LEU corresponding to one fuel load of a standard Light Water Reactor. Other efforts to encourage the multilateral production and supply of enriched uranium are underway; they include the UK led Nuclear Fuel Assurance (NFA) program and the Russian International Uranium Enrichment Center (IUEC) in Angarsk. Germany has proposed a Multilateral Enrichment Sanctuary Project (MESP) at an extra territorial location owned by all the partners in the project.

The NPT review conference was a success story in 2010 because the parties agreed to language on all three pillars of the treaty although participants noted that the language on the peaceful use of nuclear technology was rather weak. The legal establishment of a nuclear fuel bank is more significant than the NPT review conference result on the third pillar. The IAEA fuel bank and future assured supply efforts coupled with guarantees to take back and store spent fuel by consortium may prove critical to solving future dual use nuclear problems related to Article IV.

Nuclear Safety and Security

The earthquake and tsunami that struck Japan and devastated the Fukushima-1 nuclear power facility was an unprecedented event. As of June 2011, fifteen thousand people are dead and seven thousand remain missing. A 20 kilometer zone around the Fukushima site remains off limits to the Japanese population and radioactive contamination continues to be detected off site.

The accident may have an impact on the future of nuclear power and possibly the perception of nuclear weapons around the world, but the long term consequences are not clear. After Chernobyl, Poland and Italy abandoned nuclear energy and it took decades to reconsider nuclear power for energy production. Now, some countries like Germany intend to abandon nuclear power production completely and others are reevaluating their reliance on nuclear power. Turkey continues to work on nuclear energy projects in partnership with Russia and France has not changed course. It seems that the IAEA and the majority of the nuclear energy industry think that the world will eventually forget about the accident and return to business as usual.

Will the accident and its devastating consequences eventually lead to a reevaluation of the utility of nuclear technology in society and for tolerating other high risk systems? The need for energy and climate change mitigation would seem to favor nuclear power production but the vulnerability of facilities to accident and

attack and the need to prevent proliferation indicate that the hazards may be too great. Pugwash should continue to focus on minimizing the risks inherent in complex nuclear systems by emphasizing the importance of universal standards for nuclear safety, security, and proliferation prevention until suitable alternate renewable energy systems can be found.