



SUMMARY  
of the PIR Center Study

**PROSPECTS FOR INTERNATIONAL COOPERATION IN WMD  
NONPROLIFERATION AND NUCLEAR SECURITY<sup>1</sup>**

In 2012 PIR Center set up a Working Group for International Cooperation in WMD Nonproliferation and Nuclear Security. The group, set up under the PIR Center Advisory Board, includes the following experts: **Dauren Aben**, Senior Fellow at the Kazakhstan Institute of Strategic Studies under the President of Kazakhstan; **Robert Berls**, Head of the Moscow office of the Nuclear Threat Initiative (NTI); **Evgeny Buzhinsky**, PIR Center Senior Vice President; **Alexander Cheban**, PIR Center Research Fellow; **Dmitry Kovchegin**, independent consultant; **Vladimir Kuchinov**, Advisor to the Director-General of the Rosatom state nuclear energy corporation; and **Aleksey Ubeyev**, Chief Specialist of the Nuclear Security Office at the IAEA Department for Nuclear Security and Physical Protection.

The Working Group has prepared a PIR Center Study headlined “Prospects for International Cooperation in WMD Nonproliferation and Nuclear Security”. The Study was authored by: Dauren Aben, Artem Blashchanitsa, Evgeny Buzhinsky, Alexander Cheban, Dmitry Kovchegin, and Vladimir Orlov. The [full text](#) of the Study is available (in Russian) on the PIR Center website at: <http://gp.pircenter.org>.

Individual chapters of the Study have passed an external review. The reviewers were: Dmitry Cherkashyn, Vladimir Kuchinov, and Vladimir Rybachenkov.

The Study analyses the lessons that can be learnt from the application of various international mechanisms of countering the proliferation of weapons of mass destruction (WMD) and strengthening nuclear security. The Study also outlines several proposals for improving the effectiveness of these mechanisms.

The Study focuses on those mechanisms of international cooperation in WMD nonproliferation and nuclear security that appear to be the most relevant and promising at this time. In particular, the Study takes an in-depth look at the following issues:

---

<sup>1</sup> Key conclusions and recommendations made in this Study will be explained in greater detail in several articles to be published in the next issues of the *Security Index*.

- The Nunn-Lugar Program and a new format of Russian-U.S. cooperation on nuclear security that has replaced the Program following the signature on June 14, 2013 of a Russian-U.S. intergovernmental agreement on cooperation under the Framework Agreement on a Multilateral Nuclear Environmental Programme in the Russian Federation of May 21, 2003, and the June 14, 2013 Protocol between the Government of the Russian Federation and the Government of the United States on the Framework Agreement on a Multilateral Nuclear Environmental Programme in the Russian Federation of May 21, 2003 (hereinafter referred to as MNEPR, or the June 14, 2013 Agreement);
- The work of the International Science and Technology Center, its results and further outlook;
- The current state and the outlook for bilateral Russian-U.S. and multilateral cooperation in improving nuclear security and countering the proliferation of WMD in third countries (the CIS, the Middle East, and Southeast Asia).

The body of the Study consists of two parts. The first part focuses on analyzing the general principles of bilateral U.S.-Russian and multilateral cooperation in addressing the problem of WMD proliferation and nuclear security. A particular emphasis is made on the experience and outlook for Russian-U.S. nuclear cooperation, which can serve as a template for multilateral initiatives, and which continues to play an important role in resolving the problem of WMD nonproliferation and nuclear security.

The Study opens with a section written by Vladimir Orlov and Alexander Cheban, headlined "**General Principles of Future Russian-U.S. Nuclear Cooperation: 20 Points for New Partnership**". This section contains, in a distilled form, PIR Center's proposals on re-formatting bilateral Russian-U.S. cooperation on nuclear security and WMD nonproliferation. The proposals are phrased as 20 bullet points. The main idea of these points is that Russia and the United States made the right choice when they decided against irreversibly winding down their cooperation following the completion of the Nunn-Lugar Program, and found instead a new equal format of partnership by signing the agreement on cooperation under the MNEPR program. The 20 points emphasize that Russian-U.S. cooperation on nonproliferation and nuclear security must not be limited to that single agreement. The report argues that Russia and the United States must also step up their cooperation in such areas as chemical and biological weapons nonproliferation, and that such bilateral cooperation should primarily focus on third countries. In the opinion of the authors, this approach will enable Moscow and Washington to avoid the difficulties in their bilateral cooperation that arose during the implementation of U.S. projects in Russia in the framework of the Nunn-Lugar Program.

Specific proposals for future Russian-U.S. cooperation, provisionally referred to as *New Partnership* by the authors, are as follows:

- Efforts in the area of chemical weapons destruction as part of Russian-U.S. cooperation should be continued in third countries, where Russian experience and expertise can be useful;
- Bilateral efforts in the area of bolstering the security of nuclear ammunition and nuclear industry facilities in Russia using American assistance must

come to an end; all the objectives in this area have been achieved, and there is no scope for further cooperation;

- In the Middle East, one possible area where Russia could help, in cooperation with the United States, is the retraining of nuclear, chemical and biological weapons scientists from Iraq and Libya;
- Another potentially very useful area of cooperation would be to pursue joint programs in Pakistan, where the United States has been working for a long time, providing significant assistance to the country under a program of preventing theft of nuclear materials. In Afghanistan, Russia and the United States could offer a joint program in training specialists in export control and the second line of defense. Russia and the United States could also work to improve the system of radiation monitoring on the Afghan border, and pursue a program of preventing theft of nuclear materials to make sure that these materials are not then smuggled via the Afghan border. Existing experience with the use of the Russian-made *Yantar* radiation detectors could be very relevant here;
- Combating nuclear terrorism, as well as assessment and modeling of nuclear terrorism threats, should also become elements of the New Partnership program. The scope of partnership in this area has already been outlined. The GICNT initiative is one of the most effective instruments of cooperation here;
- Pursuing closer Russian-U.S. nonproliferation partnership in the area of education is probably the least controversial and politicized area of *New Partnership* cooperation, for which there also happens to be an urgent need. Exchanging experience, and joint efforts to pass on the knowledge and expertise to the younger generation are a necessary precondition for the sustainability of bilateral dialogue on nonproliferation and nuclear security problems;
- All the existing projects under the Nunn-Lugar Program that have not yet been completed must be allowed to run their course, without either halting them abruptly or launching any new projects (or new phases of the existing projects);
- The Russian business community and the Russian industry must become one of the main driving forces behind the New Partnership projects, in the same way that the American companies close to the Pentagon or the DoE (Raytheon, Parsons, Halliburton, Bechtel, and others) have been one of the main engines of the Nunn-Lugar Program. U.S. companies continue to act very proactively and energetically; it is important for Russian companies to match that energy and initiative. Russia should work out the principles of public-private partnership that would augment its capability to finance projects in third countries. At some point in the future, Russia must be able to share the burden of projects in third countries (including the financial burden) in equal proportions with the United States – otherwise the very idea of equal partnership will be compromised.

Section 2 is headlined “**Lessons and prospects for bilateral (Russia-U.S.) and multilateral cooperation on nonproliferation: the example of the Nunn-Lugar Program and Global Partnership**”. In this section Evgeny Buzhinsky analyzes the experience of these two nonproliferation mechanisms, and looks at their lessons for further development of bilateral and multilateral cooperation on WMD nonproliferation and nuclear security. In his opinion, the negative aspects of the

Nunn-Lugar Program are sometimes greatly exaggerated. For example, Buzhinsky disputes the opinion of some Russian MoD representatives who argue that thanks to the Nunn-Lugar Program, the Americans have obtained access to lots of classified information about Russian nuclear weapons facilities. Buzhinsky believes that during the U.S.-financed projects to improve the physical protection systems at these facilities, as well as the subsequent inspection visits to check the results, U.S. representatives had access only to the perimeter of the restricted facilities, and were in no position to obtain any sensitive information.

Buzhinsky is also critical of the prospects for Russian-U.S. cooperation in combating biological threats. In his opinion, the deep lack of trust between the two countries stands in the way of bilateral cooperation in that area. For example, U.S. representatives tend to suspect Russia of pursuing biological weapons research. Buzhinsky believes that as far as biological threats are concerned, it would make more sense to pursue multilateral rather than bilateral cooperation, including joint efforts as part of the Global Partnership against the Spread of Weapons and Materials of Mass Destruction.

Section 3 is headlined “**Legal Mechanisms of the MNEPR Agreement: Application in the New Russian-U.S. Agreement on Nuclear Cooperation**”. In this section, Alexander Cheban analyzes the legal mechanisms of the agreement on the Multilateral Nuclear Environmental Programme that constitute the core of the new Russian-U.S. nuclear cooperation agreement. He offers an assessment of whether and to what extent these mechanisms are in line with Russia's interests. He concludes that following the signing of the new agreement, cooperation between Russia and the United States has become completely equal - which is its main distinction from the Nunn-Lugar Program. The new agreement takes into account almost every single Russian concern, including the problem of liability and deliberate nuclear damage.

Section 4 is headlined “**Russian-U.S. Cooperation in Nuclear Security: the Experience of the MPC&A Program**”. In this section, Dmitry Kovchegin highlights the following achievements made after 10 years of bilateral cooperation in nuclear security:

1. The Russian nuclear facilities covered by the Program have been equipped with advanced security systems.
2. Two national centers have been set up to prepare specialists in nuclear material protection, control and accounting. Every year these two centers deliver dozens of training courses that focus on various MPC&A aspects, and which are attended by hundreds of specialists working at Russian nuclear facilities.
3. A lot of necessary new regulatory documents have been developed and implemented in the area of MPC&A.

Dmitry Kovchegin also proposes several other specific areas of cooperation in which the Russian and U.S. positions are already quite close:

1. Promoting the notion that while developing nuclear energy is every nation's right, such development also implies certain responsibilities, including the responsibility to ensure adequate levels of nuclear security. According to the NPT, developing a nuclear energy industry is an inalienable right of every country. This is often emphasized by the nations which want to develop their own nuclear infrastructure. But these countries should also clearly realize that such a right implies certain responsibilities. Another thing to note is that a number of international agreements impose obligations with regard to providing security of nuclear materials and facilities, which requires significant spending and access to advanced know-how and expertise. All of this should be taken into account when assessing any individual country's ability to ensure safe and secure operation of the nuclear facilities it wants to build.

2. Nuclear security standards. The regulatory requirements in Russia and the United States are more stringent than the minimum levels recommended in the existing IAEA guidelines. Russia and the United States must work together to make sure that their stringent security standards with regard to nuclear materials and facilities are also applied in other nations that operate nuclear facilities or possess nuclear materials. This area of cooperation also includes shared approaches to assessing threats and evaluating the effectiveness of the systems designed to counter those threats. As already mentioned, the key question that must be answered when designing nuclear materials security systems is what kind of threats these systems may have to face. The requirements to the protection systems are drawn up on the basis of the threats facing each individual facility. Approaches to assessing the threats and the effectiveness of the protection systems – including the methods of analyzing vulnerabilities, assessing effectiveness, and testing the systems' performance – must be coordinated on an international level. Such coordination will help to make sure that the nuclear materials and facilities that possess the same value as potential targets for terrorists are also given the same level of protection from these similar threats, regardless of where these facilities are located.

3. Training centers in Russia and the United States are already being used to train specialists from third countries. Meanwhile, Russian and U.S. experts are taking part in various international training programs organized by the IAEA. These efforts must be continued and strengthened through further development of the existing training centers and through helping other countries to develop their own personnel training infrastructure.

4. In February 2013 the IAEA released a report headlined “Objectives and Essential Elements of a State’s Nuclear Security Regime”. The document can be used by newcomer states (i.e. those at the initial stages of developing a national nuclear energy industry) to build their national nuclear security infrastructure. Given their vast experience in this area, Russia and the United States could work together to provide assistance to third countries in implementing IAEA recommendations.

Section 5 of the Study is headlined “**The ISTC as an Example of Multilateral Science and Technical Cooperation in Addressing the WMD and Nuclear Security Problems**”. In this section, Alexander Cheban analyzes the experience of the International Science and Technology Center in addressing the WMD nonproliferation and nuclear security problems, as well as the prospects for further

international science and technical cooperation in this area. The author concludes that the ISTC has the potential to help address nonproliferation and nuclear security problems in third countries. The ISTC has made some miscalculations that have led to the Russian decision to quit the organization. Nevertheless, the author believes that on balance, the center's work has been a success. Besides, the ISTC is already reforming and adapting itself to reflect the new situation. It is turning into a kind of organization in which Russia and other member states are unlikely to develop the same concerns that emerged during the period when there was a patently unequal "donor-recipient" ISTC financing arrangement in place. The center is now moving away from such an arrangement; this will help it to become more effective in dealing with the problems of nonproliferation and nuclear security.

Alexander Cheban believes that the ISTC has an especially significant potential in addressing these problems in third countries. Russia should also maintain cooperation with the center, after deciding on a new format of interaction with that organization.

The second part of the Study focuses on the most pressing issues on the agenda of international nuclear cooperation – namely, addressing the WMD and nuclear security problems in third countries. The definition of these “third countries” includes states that possess stockpiles of nuclear or other radioactive materials, require more reliable physical protection arrangements, and could potentially benefit from the experience of bilateral Russian-U.S. cooperation in WMD nonproliferation and nuclear security. The list includes those countries that still have some remaining chemical or biological weapons stockpiles that must be destroyed. It also includes nations that do not have any WMD or materials for WMD production, but which pose a certain risk as potential transit routes for nuclear or other radioactive materials that can be used by terrorists.

Section 6 of the Study is headlined “**Prospects for International Cooperation in WMD Nonproliferation and Nuclear Security in the CIS**”. In this section Dauren Aben and Alexander Cheban outline the prospects for international cooperation in addressing the problems of Soviet nuclear legacy and other WMD nonproliferation issues in the CIS states. They conclude that the potential for Russia's participation in international cooperation projects in some of the CIS countries (Ukraine, Belarus, and Armenia) is not that great, and for two simple reasons. Either these countries don't have any major problems in this area that would require large-scale international efforts, or – as is the case with Ukraine – they have long been successfully addressing these problems without Russian involvement. At the same time, there is scope for international cooperation in combating the threat of illegal circulation of nuclear and other radioactive materials via Azerbaijan and especially Georgia.

The problems with the WMD nonproliferation and nuclear security situation are especially numerous in Central Asia. The need for continued international (especially Russian-U.S.) cooperation on WMD nonproliferation and nuclear security in Central Asia is dictated by a whole number of factors. First and foremost, the region has many unresolved problems related to Soviet heritage of WMD development programs. There are also some new challenges and threats, the most pressing one being illegal circulation of materials, technologies and equipment related to WMD

and their delivery systems, as well as the threat of WMD terrorism. Yet another factor that cannot be discounted is plans by some nations in the region to develop their own nuclear industry and a nuclear energy sector. One further argument in favor of continued international cooperation is the adoption of the decision by the Global Partnership Against the Spread of Weapons and Materials and Mass Destruction to expand the program's geographic scope by accepting Kazakhstan as the 24<sup>th</sup> member state and a recipient country. It is worth emphasizing that Kazakhstan is the world's largest producer of uranium, and plans to host an international bank of low-enriched nuclear fuel on its territory.

In the opinion of Dauren Aben, the main areas for international cooperation in WMD nonproliferation and nuclear security in Central Asia must include: improving nuclear security systems at nuclear infrastructure facilities; continued cooperation at the former Semipalatinsk nuclear testing range; countering radiological security threats; bolstering export controls and border security; cooperation in the framework of the nuclear weapons-free zone in Central Asia; strengthening cybersecurity arrangements in the nuclear industry; facilitating joint research projects; and promoting education projects in the area of disarmament and nonproliferation.

Section 7 is headlined “**Prospects for Resolving Nuclear Security and WMD Nonproliferation Problems in the Middle East: the Experience of the Global Partnership**”. In this section, Artem Blashchanitsa analyzes the prospects for addressing WMD and nuclear security problems in the Middle East via the Global Partnership mechanisms. The author offers the following recommendations for further development of the Global Partnership program in the region:

1. He believes that the program should focus on the following areas:
  - Export and border controls (supplying advanced equipment, training personnel at the EU CBRN Centre of Excellence in Jordan, and expert legal assistance in harmonizing national laws with international legislation);
  - Reorientation of Iraqi, Libyan and Syrian weapons scientists (using the experience already accumulated by the EU, Italy, and the United States);
  - Engaging researchers currently working on dual-use technology projects in Libya, Syria, Iraq, Iran, Jordan, and the UAE in international research projects;
  - Assistance in chemical weapons destruction (retrieval of damaged chemical weapons from two bunkers at Al Muthanna in Iraq; extension of financing of chemical weapons destruction in Libya until the scheduled completion of the program in 2016; and destruction of the Syrian chemical weapons in accordance with Phase 4 of the Russian Foreign Ministry's initiative to place Syrian chemical weapons under international control);
  - Improving the nonproliferation culture and training in the essentials of nuclear security (training future specialists in nuclear material protection, control and accounting for Egypt, Jordan, Turkey, Libya, the UAE, and Morocco);
  - Technical and expert assistance in strengthening nuclear security systems (Turkey, Egypt, Jordan, Algeria, Libya, Morocco); protection of chemical agents and precursors (Libya, the UAE); and bio-security at laboratories and facilities (Iraq, Egypt, the UAE);

- Disposal of radioactive waste in Iraq (providing financial assistance to the EU project)

2. It is necessary to adopt a differential approach to the financing of GP projects in the Middle Eastern states, taking their different levels of prosperity into account. Projects in the countries undergoing a period of instability and facing serious economic problems (Iraq, Libya, and Syria) should be conducted in the form of donor assistance. The project proposed by Russia to place Syrian chemical weapons under international control and then to eliminate them at some point should be financed by Russia and the United States at part of the New Partnership program, as well as by other donor countries in an extended format as part of the Global Partnership. Projects in other Middle Eastern states – especially the ones that want to develop a nuclear energy industry, such as the UAE, Jordan, Turkey, Saudi Arabia, Morocco, Algeria, and Egypt – should be financed primarily by these countries themselves.

3. Because the implementation of GP projects opens up the market for certain services and products, the Russian government should make sure to take part in the kind of projects that could involve Russian companies (such as NPTs Aspect, the maker of radiation detectors; or the MEPhI university, which trains nuclear materials protection, control and accounting specialists).

Section 8 is headlined “**Prospects for Russian Participation in International Cooperation to Address WMD Nonproliferation and Nuclear Security Problems in Southeast Asia**”. In this section, Alexander Cheban argues that the problems discussed in the Study are becoming relevant for Southeast Asia now that several countries in the region (Vietnam, Malaysia, Indonesia, and Thailand) have announced plans to develop a nuclear energy industry. These plans will inevitably entail nonproliferation and nuclear security risks.

An analysis of the nuclear problems faced by Southeast Asian countries, as well as their possible solutions, leads to the following conclusions.

First, even though Southeast Asian countries don't have any substantial nuclear infrastructure in place, they are already facing problems with the security of nuclear materials in the research reactors, as well as problems with other radioactive materials used for medical, agricultural, industrial, and other non-energy purposes. These materials require more reliable physical protection systems.

Second, the Southeast Asian countries – even those that don't possess any large quantities of nuclear or radioactive materials – will have to improve their export control systems, which will require international assistance. The problem is especially pressing for those countries in the region that have a long coastline, but don't have enough radiation detectors at their ports and customs checkpoints. That is why Southeast Asian countries are particularly vulnerable to being used for illicit circulation of nuclear and other radioactive materials.

Third, the terrorist threat and the problem of piracy in Southeast Asia increase the nuclear security risks in the region. This calls for energetic international cooperation



to minimize those risks since Southeast Asian countries are unlikely to cope with them on their own, especially given their lack of relevant experience.

The resolution of all these problems facing the Southeast Asian countries requires international cooperation. But there are some obvious obstacles to such cooperation because the countries that are capable of providing the necessary assistance in addressing the region's nuclear problems must first be persuaded that doing so would be in their own best interests. To make this happen, the following considerations must be taken into account:

1. An emphasis should be made on nuclear education. In providing nuclear security, the human factor is even more important than advanced protection systems or radiation detectors. That is why to address the nuclear problems facing the Southeast Asian countries, it is necessary to train export control and physical protection specialists for these countries. Nuclear education is one of the foremost requirements for resolving the region's nuclear problems.
2. Local projects should aim to make the best possible use of local specialists and local technologists. This recommendation is linked to the previous one concerning nuclear education. The point of training nuclear specialists from Southeast Asian countries is to give these countries the capability to address their nuclear problems using their own specialists and resources.
3. In addition to augmenting the human potential in the Southeast Asian countries, it is necessary to undertake certain technical measures. That includes improving the national export control systems by supplying radiation detectors to these countries.

Russia is especially interested in providing assistance to Southeast Asian nations in addressing their nuclear problems because it wants a share of the future regional market for nuclear services. In order to strengthen its positions in these markets, Russia has a clear interest in helping these countries to improve their export control systems and train their nuclear specialists.

Each individual section of the Study offers a number of conclusions and recommendations. Based on these conclusions, we can highlight several key trends that characterize the current state of the bilateral and multilateral mechanisms of cooperation in WMD nonproliferation and nuclear security:

- Russia and the United States continue their nuclear cooperation; the two countries have signed a new framework agreement in that area. It is, however, quite obvious that in the new circumstances, the scale of that cooperation will inevitably be smaller compared to the period when the Nunn-Lugar Program was in effect. Russia remains ready for nuclear cooperation with the United States on the basis of equality. But it is unlikely to pursue similar cooperation with Washington in the area of bio-security (which is just as important) for as long as Washington continues to regard Russia as a potential proliferator of biological weapons.
- Now that Russia is no longer a member of the ISTC, the effectiveness of that organization's further programs is in doubt. As the same time, it is obvious that the ISTC will continue to exist after its headquarters are moved from

Moscow to Astana. It is important that the ISTC leadership intends to conduct an internal reform, and use its accumulated experience to increase the number of the organization's members, improve its effectiveness, and increase the scale of its programs. There are reasons to believe that once the reforms have been implemented, and provided that there is adequate political support from the Kazakh leadership (especially from President Nazrbayev, who has proposed several important WMD nonproliferation initiatives) the ISTC may yet become an even more influential anti-proliferation instrument than it was previously.

- The need for international cooperation in addressing nuclear and radiation security problems in third countries is becoming ever more pressing. Back in the 1990s and even 2000s the main focus of cooperation in this area was Russia and other CIS countries. Now, however, problems in these countries have for the most part been resolved. That is why the focus of the international community's nonproliferation efforts is shifting towards the Middle East, Southeast Asia, and Africa. Many countries in these regions don't have any substantial nuclear infrastructure. Nevertheless, there are mounting concerns over their plans to develop a nuclear energy industry while many of their internal problems remain unresolved – including outbreaks of separatism, terrorist activity, and internal political instability. Such problems raise serious questions about these countries' ability to provide adequate levels of nuclear security and safety at their nuclear facilities.

Based on the Study 's conclusions, the following proposals can be made:

1. Russia and the United States need to develop detailed agreements about the specific areas of cooperation outlined in the framework Agreement of June 14, 2013. Clearly, more detailed documents are required for further development of such multilateral mechanisms as the Global Partnership. Of all the areas of Russian-U.S. cooperation outlined in the Agreement of June 14, 2013, the following appear to be the most promising and the least controversial:

- Border controls for nuclear and other radioactive materials
- Retrieval, storage and disposal of dangerous sources of radiation

2. Other areas of cooperation outlined in the Agreement of June 14 (MPC&A, HEU consolidation, and conversion of research reactors) are quite sensitive and can cause differences between the United States and Russia. Nevertheless, cooperation in these areas can be entirely feasible in third countries (the Middle East, Southeast Asia, and the CIS).

3. Russian-U.S. cooperation on WMD nonproliferation and nuclear security must not be limited to the Agreement of June 14, 2013. It would be very useful to implement another document - *Agreement between the Government of the Russian Federation and the Government of the United States on Cooperation in Nuclear- and Energy-Related Scientific Research and Development* which was signed on September 16, 2013 in Vienna.

4. In developing international science and technology cooperation, it is extremely important to make use of the ISTC's experience and potential, which has yet to be fully utilized. Even though Russia has quit the organization, it should consider the options for continued cooperation with the ISTC.

5. International cooperation on nonproliferation issues but not be limited to nuclear weapons and materials. The destruction of chemical weapons and bio-security are just as important. Russia and the United States could cooperate in the destruction of Syrian chemical weapons as part of the New Partnership and the Global Partnership. Russian-U.S. cooperation on bio-security will only become possible once Russia joins the Australia Group, which will enable this problem to be addressed via other multilateral formats, such as the Global Partnership.

6. As a first step towards cooperation on bio-security, the parties must develop a common set of principles in this area. To that end it would make sense to establish an international working group of experts, which would not only formulate these principles, but also develop a commonly accepted list of biological threats.

7. In parallel with measures against bio-threats, the parties must pursue international cooperation in fighting infections. This area of cooperation can be relatively free of political and economic differences related to military bio-security. Cooperation in fighting infections will make it possible to strengthen international monitoring and controls over dangerous weapons-usable pathogens. As a result, cooperation in fighting infections, which seemingly has little to do with nonproliferation or politics, could make a tangible contribution to reducing the risks of biological weapons proliferation.

8. Education - technical as well as humanitarian - has an important role to play in countering the spread of various types of WMD and strengthening nuclear security. Specialists with a technical education are responsible for the actual implementation of nuclear security measures. It is important to provide adequate financial incentives to students and young technical specialists in order to attract the young talent to the nuclear industry. Without such incentives, we are going to see a continuation of the trend whereby nuclear security increasingly becomes the domain of ageing specialists, who are not being succeeded by the younger generation. WMD nonproliferation training is also a necessary component of humanitarian education for those students who will work in the Foreign Ministry and other government agencies, and become directly involved in nonproliferation policymaking. That is why Russian-U.S. or multilateral cooperation in this area should include the roll-out of joint WMD-nonproliferation training programs at the leading schools of international relations. These programs must be offered to students from all over the world.

9. Humanitarian as well as technical education in the area of nonproliferation and nuclear security must nurture a nonproliferation and nuclear security culture among the young specialists. To establish a clearer definition of the term "nonproliferation and nuclear security culture" and to develop the principles of that term's practical implementation, it would make sense to ask a group of reputable experts from several countries to produce a research paper on this subject.

10. It is a matter of extreme importance that the cooperating parties must have a tangible interest in the areas of cooperation being pursued. Determining such areas of tangible interest is not an easy task. That is why there seems to be a clear need for a new mechanism of coordinating interests, analyzing the problems, and determining possible areas of cooperation. That mechanism could be set up in the form of another specialized working group within the Global Partnership program. The workgroup should be tasked with conducting a detailed analysis of the proposals outlined in this Study, and presenting these proposals to the relevant governments in a more polished and detailed form.

On the whole, this Study by PIR Center is an opportunity to undertake a critical analysis of the current state of international cooperation in WMD nonproliferation and nuclear security; identify the obstacles facing such cooperation; and propose possible ways of overcoming those obstacles.