

### **The Global Partnership and Submarine Dismantlement**

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In the past year, very substantial commitments have been made to assist Russia in dismantling its decommissioned, general-purpose nuclear-powered submarines and in handling related nuclear and radioactive waste. For example, Italy has pledged €360 million, and ratification of its assistance agreement is currently under consideration in the Italian parliament. Also, a substantial part of France's €750 million Global Partnership pledge will apparently be used for naval projects.

Even more importantly, several countries are already translating their promises into action: the dismantlement of Northern Fleet submarines with funds from Norway and the United Kingdom has already begun, and both nations are helping clean up radioactive contamination and increase security at sites on Northwest Russia's Kola Peninsula. Germany, which has committed €300 million in the naval sphere, refurbished Nerpa Shipyard so that reactor compartments, now temporarily stored in floating units consisting of three submarine compartments, can be prepared for long-term storage in a new land-based facility in nearby Sayda Bay. Germany will also fund construction of this reactor storage facility. In fact, current plans call for its construction to begin in July, although there have been some bureaucratic delays caused by Russia's governmental reorganization. The first reactors are scheduled to enter long-term storage in fall 2005. In its turn, Canada is close to concluding an agreement with Russia on submarine dismantlement and other related projects.

#### **The Real Work Lies Ahead**

The commitments that have been made are clearly steps in the right direction. While Russia and all of its partners are to be congratulated for promising their tax-payers' hard-earned money for this important task, we must all do more to ensure that dismantlement assistance programs are successful. My remarks, therefore, will concentrate on what remains to be done in order to improve coordination, to prioritize needs, to avoid bottlenecks, and to minimize security risks.

#### **Coordination Issues**

There are ongoing efforts to coordinate projects at the highest governmental levels, though more needs to be done. G8 assistance in the realm of chemical weapons is coordinated from the top at informal gatherings of donors on the margins of OPCW meetings, and from below when a single country takes the lead on certain projects (for instance, the United Kingdom is coordinating assistance from other countries in its project near Shchuchye). On the other hand, high-level discussions on coordinating submarine assistance occur at multiple forums, ranging from meetings of the IAEA Contact Expert Group, to meetings of the Nuclear Operations Committee of the European EBRD's Northern Dimension Environmental Partnership (NDEP), as well as to MNEPR Committee meetings and, I assume, to meetings of the G8 SOG. While such gatherings have helped to establish some overall division of responsibilities, coordination at the highest levels remains inconsistent, at the same time that work on coordinating efforts on the ground is problematic, as well.

In May 2002 the United States General Accounting Office issued a report entitled "U.S. Efforts to Help Other Countries Combat Nuclear Smuggling Need Strengthened Coordination and Planning," which found that U.S. assistance was not well coordinated and lacked an overall government-wide plan to guide it. If it is not easy to coordinate one nation's programs, it is clearly even harder to coordinate between different countries. I have recently learned of a case of project duplication this year, brought on by one country not knowing the details of what another was doing. Even though sums of money involved may be quite small, this sort of incident is certainly most unfortunate: it is neither a productive use nor a fair use of assistance money. Worse yet, duplication may lead to negative political consequences for assistance programs.

#### *The Strategic Master Plan*

One endeavor that should help deal with this issue in the long run is the development of a "Strategic Master Plan" for northwest Russia, to be drawn up with the support of the EBRD's Northern Dimension, Environmental Partnership (NDEP) Support Fund. In fact, as you may have already heard, The Russian Academy of Sciences Nuclear Safety Institute's Energy Safety Analysis Center, together with the Kurchatov Institute, and NIKIET (Minatom's R&D Institute of Power Engineering) are already working on the first phase of this plan, which, supposedly, is to be completed in a few months. The final plan is supposed to include detailed information on all relevant facilities and then to investigate their needs, analyze relevant legal and regulatory framework, and finally to identify high-priority tasks.

I hope that the large quantity of detailed information called for, will be quickly compiled and made available to all relevant parties, including non-NDEP members. But this should only be a first step: it would make avoiding duplication or gaps in assistance easier, but by itself not fulfill the task. Each donor country should be expected

and allowed to take on those projects that best serve its own nation's interests. I do not think it likely that we can form a single organization with the powers to coordinate all projects relating to dismantlement: not all countries would be willing to surrender decision-making powers, and such a large umbrella organization could prove frightfully unwieldy. Instead, if individual countries could gain a more meaningful understanding of the overall needs related to submarine dismantlement, they can choose the tasks that best fit their own goals and means. If information about these projects is also made available to other donor countries, then potential duplication or gaps will be more quickly identified. Until this information becomes available, however, each donor country must make certain those who carry out their projects have been instructed to *actively* seek out and share information with project managers from all other countries undertaking projects in nearby locations. Such sharing of information is already occurring at many sites, but not everywhere, although it is the best way to avoid duplication in the near-term.

#### *Commercial Funding of Submarine Dismantlement?*

In addition to bringing together those persons already involved in implementing assistance projects, it is very important that there are other arenas for discussion, such as today's conference. On the one hand, this conference gives all of us a chance to introduce important issues to those not yet involved in providing assistance, and to show them what work remains to be done. On the other hand, I hope that we will also find the opportunity to explore new avenues of cooperation – and make certain that we are all privy to new proposals, so that we may take them into account and coordinate our efforts with theirs. I recently became aware of one new proposal (by Carnegie Senior Associate Rose Gottemoeller and Jack Edlow, of Edlow International Co.) to use commercial profits to fund submarine dismantlement. Having sought new sources of funding for dealing with Russia's decommissioned nuclear navy for many years, Rose and Jack have come up with a proposal to take funds earned from sales of blended-down highly-enriched uranium, which the Russians derive from reprocessing spent submarine fuel, to finance the dismantling of submarines in Kamchatka.

#### *Securing the Russian Far East*

The Russian Far East is in dire need of assistance, for environmental, security, and safety reasons. While Japan appears ready to commit substantial funds to scrapping submarines in the Pacific, it has no plans to build long-term reactor storage, as Germany is doing in the North, or deal with the spent fuel and contaminated nuclear service ships in the region. Besides, Japan has not shown the political will, to date, to push forward with its projects. With Japanese financing alone, decommissioned submarines are likely to remain rusting at their piers for many years to come. Fortunately, Russia itself has made particular efforts to clean up the worst nuclear service ships in the Pacific, and has invested in dismantlement infrastructure in Kamchatka. But much remains to be done—and a plan, like the Strategic Master Plan for the Northwest, should be drawn up.

Surely, it would make sense for Russia to handle some of the most difficult dismantlement problems on its own, such as constructing a sarcophagus around three damaged nuclear submarines in Primorye, near Vladivostok, due to the liability issues involved. This sort of activity is extremely expensive, unfortunately, and therefore will not leave Russia with large resources for other tasks. But the United States, perhaps, now that SSBN dismantlement is winding down, might consider expanding its assistance into new areas, or at the very least, instruct our Defense Threat Reduction Agency to facilitate other donor projects. For instance, it should be possible to scrap several SSNs with Japanese funding between work on the larger submarines funded by the U.S. Cooperative Threat Reduction. Simply assisting this scheduling could help move Japanese efforts along. In addition, I understand that the United States and its partners in the AMEC (Arctic Military Environmental Cooperation) Program—Norway, Russia, and the United Kingdom—are considering an expansion of their activities to Russia's Pacific coast. On the U.S. side, such a decision is evidently awaiting the conclusion of a GAO report on AMEC activities. I hope that AMEC will get a go-ahead soon, because, I would argue, security risks in the Pacific, given the countries it borders, are greater than in the North.

If we cannot get more donor assistance—and to date the efforts of the United States and Canada, both Pacific nations, are concentrated on the Kola Peninsula—then new ideas like the Gottemoeller/Edlow proposal deserve further analysis. This latter proposal is only in the early stages, and raises several questions. Nonetheless, I do hope that Rose will have a chance to speak with all interested persons about the proposal. I myself would like to know what the Russian response will be towards this proposal, and whether the amounts of HEU resulting from the reprocessing of submarine fuel will in fact bring enough profits to scrap submarines. On the other hand, I want to mention that Russia is keenly interested in promoting the reprocessing of nuclear materials, even if few other nations are interested in promoting this enterprise. Instead, such nations may prefer to see spent fuel safely and securely stored. Unquestionably, a decision must be made on reprocessing before storage facilities are built, lest such construction go to waste. Thus, I have come full circle, back to the need for coordination.

#### **Prioritization**

Now I would like to take up the second problem I wish to address today: prioritization. To begin with, I mention, as you know, President Vladimir Putin's identification of submarine dismantlement to be a top Russian priority. I believe that this assertion is chiefly prompted by environmental concerns. While many of us share these concerns, they are not necessarily our only, or even our top, priority—although the Kananaskis documents do not mention physical protection, for several donors this is their chief concern. Others would also highlight the efficient use of resources. Therefore, Russia's own prioritization of tasks within the dismantlement area may not always reflect donor priorities. Although Russian priorities are of paramount importance, I would

contend that they should be considered in tandem with other priorities, leading to decisions to the benefit of all.

#### *Security and Efficiency Must Also be Priorities*

The Strategic Master Plan mentions prioritizing projects “with a focus on safety for personnel, public and environment.” Clearly, this is a focus that should not be overlooked, and there are tasks that must be urgently taken on to avoid tragedies of safety and environment. However, I suggest that we also consider security and efficiency issues, which may conflict at times with safety considerations. Consider, for instance: spent nuclear fuel is very difficult to remove from a submarine, and is therefore quite secure before it is unloaded. From the point of view of security, we should secure all unloaded, spent fuel before further defueling. As for efficiency, we should consider the order in which projects are undertaken, so that overall goals are met as quickly and cheaply as possible. Such planning might mean, for instance, that we undertake several projects in a row, using the same equipment at the same site, instead of constructing multiple facilities to simultaneously undertake similar tasks. It may also be better to delay the dismantling of submarines that are in no danger of sinking – the sort of submarines that are currently being scrapped, in most cases – until Germany’s construction of long-term storage facilities for dismantled Northern Fleet reactors has been completed. Otherwise, we will not be able to immediately cut out the reactors, and will instead have to cut out three-compartment sections from the submarine, so that the reactors can be maintained in short-term floating storage until a long-term solution is ready. Such poor planning creates a need for extra towing, special heavy-duty cranes, and other equipment that might never be needed if projects were undertaken in a different sequence. The model for dismantlement at this time does not increase security or safety, but increases costs as it extends the overall timetable. Instead, we should shift some dismantlement money to securing spent nuclear fuel, cleaning-up, and creating reactor storage in the Russian Pacific.

#### *The G8 Must Be Wary of Potential Bottlenecks*

An examination of how to achieve our overall goals efficiently also involves making certain that dismantlement programs do not run into bottlenecks. At present, we do not know enough about final projects that various donor countries have selected to know if there are gaps or potential bottlenecks. In addition to coordinating projects to avoid bottlenecks, moreover, we must also make provisions for what will happen if some projects are slowed down. After all, there are some that are critical to the success of other projects. It is important, therefore, that Global Partnership legislators—all of you—understand the importance of the role their countries are playing and make certain that their national assistance programs move forward from promises to action. It may also make sense make some provisions to assist in critical projects if they are threatened with delays.

#### *The Greatest Security Risk: Spent Fuel and RTGs*

While our Russian friends have made great efforts to make certain that the security of sensitive materials is ensured at naval sites, and have been given a great deal of assistance in upgrading site protection through the MPC&A program of the U.S. Department of Energy, there is still more that can and should be done. First, as I just mentioned, particular attention should be paid to spent nuclear fuel storage, since storage at on-land facilities like Andreyeva Bay and Gremikha (in the North), and Sysoyeva Bay (in the Pacific) not to overlook on-board service vessels, is much less safe and secure than fuel storage within submarines awaiting dismantlement. In addition, spent fuel is presently stored at shipyards, and at Atomflot, Russia’s nuclear-powered icebreaker base (located near the city of Murmansk - where icebreaker fresh and spent nuclear fuel, as well as SNF from submarines defueled at Nerpa Shipyard, is stored). Finally, such fuel is periodically transported to far-off Mayak, in the Urals, for reprocessing. Before donors undertake new projects, therefore, they should be certain that all new work increases the security of nuclear materials, and does not add to existing risks, even temporarily. The Strategic Master Plan should help in this regard, but only if donors make certain to examine carefully how their projects fit in with other ones. While Russia will certainly try to “take up the slack” where there are gaps not filled by donor projects, it is incumbent on all to ensure that gaps do not become too numerous, or that Russia becomes unable to close them in a timely fashion. In short, priority attention must be given to security issues, along with safety.

In this connection, I would like to mention one project that is not strictly related to submarines, but is another radioactive risk on Russia’s shores. In question are the Russian lighthouses powered by Strontium-90. In fact, there are an estimated 829 such lighthouses, radio beacons, and meteorological stations on Russia’s shores, and they are not well protected. Each generator has a radioactivity level of around 40,000 curies, making them some of the most powerful radioactive sources in the world. This material would make a more powerful radiological dispersal device, or “dirty bomb,” than most of the material at Russian naval sites. Norway and the United States have programs to remove this radioactive material, but at the current rate it would take several decades to eliminate the radioactive materials in all of these lighthouses. It is critical that this program be accelerated, lest this vulnerable material find its way into the wrong hands.

#### **Conclusion**

I think that we can rest assured that a great deal of progress has been made since Kananaskis, but that the significant commitments that have been made must be followed by action. We must all leverage Russia’s interest by quickly getting submarine dismantlement and related projects onto a firm footing. Solutions to this dangerous problem can and must finally make headway. Among many others I hope that Russia will help in providing the information donors need to make wise decisions. It is critical that the Strategic Master Plan be

concluded in a timely fashion, with all necessary details spelled out, and that all donors have access to this document. I hope, in addition, that it will indeed be used not only to coordinate NDEP work, but also other assistance projects. And you must all keep in mind both short-term safety and security and long-term efficiency, so that assistance money is wisely spent and donor countries are not beset, a few years down the road, with "donor fatigue." We do not want our children to ask some day why we did not take full advantage of the opportunities to cooperate that we see before us today.