While there is an intense debate on the technical feasibility and the security implications of the U.S. National Missile Defense (NMD) program, the nonproliferation and disarmament of ballistic missiles has been largely neglected. This article discusses options for preventing an arms race by improving the international control of ballistic missiles.

Dangers of a Missile Arms Race
Since ballistic missiles were first used by Germany in World War II, missile proliferation has been of great concern to many nations. Ballistic missiles allow aggressors to strike distant targets quickly, with little warning, and with a high probability of penetration. They played a destabilizing role and wasted enormous resources during the Cold War. Grave concerns have been raised about the spread of ballistic missile systems and technologies, in particular, to the Middle East, South Asia and the Korean Peninsula. The use of ballistic missiles in the two Gulf Wars demonstrated their political significance in regional conflicts, while their military utility is rather questionable. There are good arguments why a world with fewer or no ballistic missiles would be a better place.

While the enormous Cold War missile arsenals have declined, the government of the United States perceives new threats from emerging missile capabilities in Iraq, Iran, and North Korea, which are now called states of concern. While the substance of this threat is still doubted by many experts, influential political circles in the United States promote the early deployment of NMD. Opponents argue that such a system could be easily overcome by countermeasures, would undermine international stability and may even increase the missile threat.

The Current Missile Control Regime is Insufficient
There is still time to prevent a destabilizing and costly arms race between offensive and defensive missiles. This assumes that the development of intercontinental-range ballistic missiles (ICBMs) is a complex and time-consuming task and NMD deployment would be delayed by technical difficulties (especially after the failure of the July 7 test). Although the preamble of the nuclear Non-Proliferation Treaty (NPT) demands “the elimination from national arsenals of nuclear weapons and the means of their delivery,” ballistic missiles in the past have been largely ignored in international arms control and disarmament negotiations. In his speech to the House of Commons in London on July 3, U.N. Under-Secretary-General for Disarmament Affairs Jayantha Dhanapala raised the question “Why is public debate mired today in a duel between deterrence and defence, with scant attention to missile disarmament?”

Previous efforts have focused on export control by the major suppliers of missile technology and bilateral arms control and disarmament of the former superpowers (INF Treaty, START Treaties). The current restrictions on the transfer of missilerelated technology are embodied in the Missile Technology Control Regime (MTCR), created by the G-7 States in 1987. Although membership has grown from seven to 28 countries and some missile programs could be delayed, the effectiveness of the regime is limited by fundamental problems and shortcomings. The MTCR is a voluntary, non-binding agreement with restricted membership. It does not address the already existing ballistic missile arsenals, and ignores the asymmetry between “haves” and “have nots.” Various shorter-range missiles are already deployed in developing countries, and the MTCR has no specific verification and enforcement mechanisms. Furthermore, rigid export control of dual-use goods impedes civil technology cooperation.
To improve the present control regime, a few countries have made preliminary proposals within the limits of the MTCR. At an MTCR meeting in Paris April 23-24, 2000 the United States, Britain, and France offered steps to reinforce MTCR export controls by an increased dialogue with non-MTCR parties, prelaunch notification for missile and space launches, and international standards in the missile field. The proposals will be discussed at a meeting in September to prepare for the MTCR October 2000 plenary session.

**New political initiatives**

Some governmental levels are now considering options for a stronger missile non-proliferation regime as an alternative to missile defense. The former Russian President Boris Yeltsin at the June, 1999 G-8 summit in Germany proposed a Global Control System for the Non-Proliferation of Missiles and Missile Technology (GCS). In his statement at the NPT 2000 Conference on April 25, the Russian Foreign Minister Igor Ivanov urged consideration of a Russian proposal for a global missile confidence-building and non-proliferation regime. The GCS proposal was discussed on March 16 at an expert-level meeting in Moscow, attended by representatives from 46 countries and the United Nations, including Iran and large delegations from China, India, and Egypt. The United States sent an observer but did not participate.

A goal of the GCS is to increase transparency and reduce the risk of miscalculation or misunderstanding. Nations would be required to provide notification of missile or space-launch vehicle (SLV) test launches. To discourage proliferation, the GCS would offer incentives to members of the regime that forswore the use of missiles to deliver weapons of mass destruction, including security assurances against the use of missile systems, assistance from the U.N. Security Council if such weapons were used, and assistance in the peaceful uses of space for members that gave up missiles as weapons. Despite strong criticism, U.S. officials expressed interest in discussion of the GCS. The Russian government has stated its intention to open the proposal for debate at the “millennium session” of the U.N. General Assembly.

The GCS proposal is valuable in opening the international debate on missile control, but still is confined to a rather narrow non-proliferation regime, comparable in some respects with the NPT but without the disarmament obligation of Article VI. In this form it is improbable that major developing countries would accept another "discriminatory" regime with the five declared nuclear weapon states as the only missile powers. If, on the other hand, all of the current missile owners were allowed to keep their missile arsenals, then the effectiveness of the regime would be severely limited.

The only way to deal with asymmetries between countries would be to create an international norm against ballistic missiles that would allow the same rights to any country. As the Canadian Foreign Minister, Lloyd Axworthy, explained in his speech at the 2000 NPT Review Conference on April 25, “there exists no treaty, no code of conduct, no set of guidelines defining responsible behavior in these areas. This is a matter that must be addressed."

On March 30-31, 2000, ballistic missile experts from Canada, United Kingdom, Germany, Norway, Russia, and the United States met with Axworthy for a roundtable in Ottawa to examine options for a multilateral approach to more effective ballistic missile control, international monitoring, and early warning. Their first priority was the public defense of the value and need for the Anti-Ballistic Missile Treaty, which they believed should be expanded and strengthened. To prevent instabilities and accidents, they suggested risk-reduction and confidence-building measures should be developed (such as de-alerting, improved ballistic missile early warning and launch notification). In addition, they determined that the concept of no-first use could be extended to ballistic missiles. The monitoring and surveillance of missile and space-related activities, and the exchange of technical data, would
be a key to building a verification system of missile control.

The link between space and missile control was seen as crucial. The experts suggested there was a need to negotiate and clarify multilateral space regulations and reserve the use of space for commercial rather than military uses. Steps to pursue would include a Canberra-style commission on “Cooperative Security in Space,” expert meetings on space surveillance and regulations, and the involvement of the commercial space business.

It was suggested that Canada should play a lead role in elaborating a multilateral action plan on ballistic missiles, by including key NATO countries. They also thought Russia and China should be involved in multilateral cooperation, addressing their broader security concerns. For the long-term success of a missile control regime it is important to “de-rogue” relations with countries such as North Korea and Iran and better understand their reasons for pursuing their missile programs. Recent political developments in these two countries have been positive (to mention the North-South-Korean summit). This clearly shows that the chances for a new missile control regime could be best served by creating regional security environments that could reduce the demand for ballistic missiles.

International organizations would play an important role in facilitating this process. One potential forum to discuss and negotiate multilateral missile control would be a conference of MTCR member states and the U.N. Conference on Disarmament. Alternatively, an international conference of the crucial countries with ballistic missile capabilities could be considered.

**Missile Ban and Missile Freeze - Two Sides of One Coin**

According to the Ottawa expert group, the long-term goals include “demilitarization, the elimination of non-civilian ballistic missiles, and the elimination of nuclear weapons.” While the report did not go into detail about how these goals might be achieved, some experts referred to the Reykjavik talks between Presidents Gorbachev and Reagan of 1986, and to proposals made by independent researchers. A model for the elimination of ballistic missiles is the ZBM (Zero Ballistic Missile) regime, which was developed and discussed by the Federation of American Scientists (FAS) in 1992, with Paul Nitze and Alton Frye as strong supporters.

Such a regime would aim at the complete elimination of offensive ballistic missiles and combine unilateral declarations with regional and global multilateral agreements. The ZBM proposal suggested a step-by-step approach, including bilateral cuts between the United States and Russia, ballistic missile-free zones, an international missile conference, the creation of an International Agency for Ballistic Missile Disarmament, and finally agreement on the varying schedules to zero ballistic missile capability. To implement ballistic missile elimination, the FAS proposal presented a complete draft treaty. Such a Ballistic Missile Convention would aim at global non-proliferation and elimination of offensive ballistic missiles, in conjunction with conventions on the elimination of all weapons of mass destruction.

While global missile disarmament is a long-term goal, action is needed now. The best way to prevent an arms race and buy more time for political initiatives would be a moratorium on the further development, testing and deployment of ballistic missiles. Such a “missile freeze” would institute a break in the arms race, during which countries could consider and negotiate the next steps without time pressure. A key element would be a ballistic missile flight test ban that would preclude the testing of new missiles and reduce the chance of accidental or intentional war. To address concerns about asymmetries and discrimination, a test ban would have a contemporary character and would need to be accompanied by negotiations on missile reductions. To minimize incentives for missile development, the missile freeze should be extended to missile defense systems. Regional
security initiatives, to include the whole range of delivery systems, could help to overcome asymmetries.

**Verification of Missile Disarmament**

A crucial aspect of missile control would be verification. Most important would be measures to prevent the application of space launched technologies to ballistic missiles. Despite their inherent similarity, differences in basing mode, testing procedures, payload, flight trajectory, guidance systems and re-entry could be used as indicators to distinguish between space launchers and ballistic missiles. During testing, production and deployment, national technical means of verification (sensors, intelligence) would focus on observable rocket characteristics (number, size, range, payload, deployment mode, launch preparations, flight trajectory). Most visible is the infrastructure, which includes production facilities, development programs and test ranges, tracking and communication facilities, missile containers and missile-carrying vehicles. A ballistic missile flight test ban would be not very difficult to verify since missile launches are visible using early warning satellites and ground- or air-based radar.

To limit the risk of using space launchers for ballistic missile development, technical means of verification would need to be accompanied by measures of cooperative verification and confidence building. Most important would be inspections, using non-intrusive devices and techniques, to reliably detect evidence of non-compliance and help provide assurance that no military ballistic missiles were being developed under a civilian space program. A safeguards system for space launchers could place some of the “most critical” items under supervision by an international organization. International cooperation in civilian space programs would also be important in containing the use of space technology for missile development.

**The Role of Citizens and the Public**

As with nuclear disarmament, citizens and non-governmental organizations would play an important role in promoting and implementing missile control. To increase public awareness, a greater public discourse on the missile problem and its resolution is needed. By building a network of information exchange and debate, experts, officials, and civil society would be jointly engaged in this process. Activities could include meetings and conferences with scientists and technicians, as well as protests and citizen inspections of critical facilities. Only by such a joint endeavor is there a chance that ballistic missiles will not stimulate a new arms race and undermine the prospects for nuclear disarmament.

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