



**A Proposal on Nuclear Disarmament and Non-Proliferation Policy
from Japan : 10 Recommendations Based on “Asian Mutually Assured
Dependence (A-MAD)” Concept**

Japan's Cooperative Security Initiative

Research workshop on
Australia-Japan Civil Society Cooperation for Nuclear Disarmament
Nautilus Institute at RMIT,
RMIT University,
Melbourne,
18-19 September 2009

Preliminary draft: not for citation

**A Proposal on Nuclear Disarmament and Non-Proliferation Policy
from Japan : 10 Recommendations Based on “Asian Mutually Assured
Dependence (A-MAD)” Concept**

**September 2009
(DRAFT)
Japan’s Cooperative Security Initiative¹**

Outline

Since President Obama of the United States announced in his April 5, 2009 Prague speech that his administration would work toward “a world without nuclear weapons,” discussions have been continuing in Japan as to how to tackle the challenge of the “abolition of nuclear weapons” while relying on the “nuclear umbrella”, and how to achieve compatibility of the peaceful use of nuclear power with the goals of nonproliferation, as the only country among the nonnuclear weapons states possessing a nuclear fuel cycle. As scholars specializing in peace and disarmament, nuclear power, nuclear nonproliferation, etc., in January 2009 we launched an independent study group with the goal of presenting a realistic policy proposal while aiming at “a world without nuclear weapons”. This proposal is based on the result of the study and consists of 10 concrete policy-recommendations concerning nuclear disarmament and nonproliferation measures in Asia.

We put forward a proposed Asian Mutually Assured Dependence (A-MAD) concept that aims to establish “an Asia without nuclear weapons” through a transition from security based on military power to security based on a framework of mutual dependency. In the nuclear power field, aiming at “nuclear power that does not rely on weapons-usable nuclear materials,” we have proposed a new “multinational control of nuclear fuel cycle” initiative based on “universality”, “transparency (verifiability)”, and “economic viability”.

¹ Independent voluntary study group set up by scholars from universities, research institutions, etc. for the purpose of this study. Coordinator: Tatsujiro Suzuki (Visiting Professor, the Graduate School of Public Policy, the University of Tokyo; Associate Vice President, the Socio-economic Research Center, the Central Research Institute of Electric Power Industry) tatsu@pp.u-tokyo.ac.jp, Please refer to the list at the end for the members.

DRAFT: NOT FOR QUOTE

This study project has been conducted with grants from the Center for Global Partnership (CGP) of the Japan Foundation, the Toshiba International Foundation, Pugwash Japan, and Pugwash USA. Its members participate in the project as individuals and the contents of the proposal do not necessarily represent those of the organizations or institutions that they belong to.

=

10 Policy Recommendations

1. Nuclear no-first-use declaration

To limit the role of nuclear weapons to the scope of the old MAD in the narrow sense, that is, deterrence of the use of nuclear weapons. Japan, which is under the “extended deterrence”, should welcome the nuclear no-first-use declaration by nuclear weapons states in the region.

2. Arms control and disarmament negotiations between the US and China

To call on China to fulfill its obligations under the Nuclear Nonproliferation Treaty (NPT) and work for nuclear reductions under an effective nuclear arms control and disarmament framework in response to the progress of nuclear disarmament between the US and Russia. To maintain and promote close cooperation between Japan and the US for this purpose.

3. Initiation of multinational arms control and disarmament negotiations in Asia

To consult on and aim at agreements on a cooperative security system and an arms control and disarmament framework in the region so that the decrease of the role of nuclear weapons will not lead to expansion of non-nuclear armaments in North East Asia and its surrounding area.

4. Strengthening of Supply Chain Management

With the purpose of preventing illicit trades and nuclear black market trades, etc. in the region and establishing effective measures for nonproliferation policies, to establish measures to secure the integrity and safety of the supply chain from the producers to the end-users without making proliferation behaviors alone the target for nonproliferation policies.

5. Strengthening of nuclear disarmament and nonproliferation education

To show leadership in promoting nuclear disarmament and nonproliferation education for spreading the understanding about the threat of nuclear weapons, including the experience of survivors of the bombings of Hiroshima and Nagasaki, among others.

6. Reduction of surplus weapons-usable nuclear materials

To propose three points: 1) reduction of existing stock of plutonium before further reprocessing, 2) international plutonium disposition programs should be established,

and 3) the principle of "zero surplus" should become a global norm, so that expansion of civilian nuclear programs will not lead to the increase of weapons-usable nuclear materials

7. Internationalization of the nuclear fuel cycle facilities and establishment of joint stockpile

To make all the enrichment and reprocessing facilities "international" (multinational) without exception and establish joint stockpile (so-called international fuel banks) for the purpose of reducing the incentives for having such domestic facilities with the joint participation of supplier and recipient countries.

8. Voluntary code of conduct of the nuclear industry and foundation of a nuclear nonproliferation and disarmament fund

The nuclear industries should, as its code of conduct, establish the three principles of (1) not to participate in the research and development, production, acquisition or use of nuclear weapons, (2) not to transfer sensitive technologies, (3) to aim at the best practice for securing nuclear material control and safety as the "nuclear nonproliferation and disarmament code of conduct." And Japan should establish a "nonproliferation and disarmament fund" which will accord priority to the companies observing the norm when giving loans..

9. Reexamination of Japan's nuclear fuel cycle policy

Concerning the future of the Rokkasho reprocessing facility, which is out of operation now, either (1) to continue the project after considering the possibility of internationalization (2) to have a fundamental review of the project with the possibility of shutting down the plant. Concerning the enrichment facility, to consider internationalization upon strengthening of its competitiveness.

10. Research and development initiative for a nuclear power generation system which does not utilize weapons-usable nuclear materials

In the long term, aiming at the development of a system of peaceful use of nuclear energy that does not utilize highly enriched uranium or plutonium, Japan should assume the leadership in promoting the development in the fields such as the chemical uranium enrichment process, uranium extraction from seawater, thorium fuel, etc., for example.

A. Proposals for denuclearization of Asia

1. Nuclear no-first-use declaration

To limit the role of nuclear weapons to the scope of the old MAD in the narrow sense, that is, deterrence of the use of nuclear weapons. Japan, which is under the “extended deterrence”, should welcome the nuclear no-first-use declaration by nuclear weapons states in the region.

(1) When the balance of conventional weapons in North East Asia is taken into consideration, it could be said that the ability by Japan and the US to retaliate against an attack by North Korea at present is guaranteed by conventional weapons. In order to overcome the strategic mutual distrust, it is necessary to do away with the strategic ambiguity of the US and eliminate the possibility of nuclear buildup and intimidation diplomacies with nuclear weapons by China through political means.

(2) Japan should make efforts to concretize the negative security assurance stipulated in the Security Council Resolution 984 in North East Asia. Japan should aim at the establishment of measures (including a treaty) to the effect that there shall be no nuclear attack under any circumstances against non-nuclear weapon states in North East Asia that are parties to the Nuclear Nonproliferation Treaty (NPT) (Japan and the Republic of Korea at present). With these measures established, there is no need to exercise options that would destabilize the region (such as review of the three non-nuclear principles).

2. Arms control and disarmament negotiations between the US and China

To call on China to fulfill its obligations under the Nuclear Nonproliferation Treaty (NPT) and work for nuclear reductions under an effective nuclear arms control and disarmament framework in response to the progress of nuclear disarmament between the US and Russia. To maintain and promote close cooperation between Japan and the US for this purpose.

(1) The US and China should promote strategic and arms control dialogue such as negotiations on a treaty of nuclear no-first-use between the two countries since China has an official policy of nuclear no-first-use.

(2) The US and China should work on ratification of the Comprehensive Test Ban Treaty (CTBT) in tandem. The two countries should also cooperate on early conclusion of a Fissile Material Cut Off Treaty(FMCT).

(3) The negotiations of a treaty banning weapons in outer space, on which the US and China have had a standoff, should be started early and concluded. Concerning the

missile defense systems too, the US and China, with the participation of Japan and the Republic of Korea, should develop an agreement to increase the “predictability”. (?)

(4) Japan and the US should propose a Cooperative Threat Reduction program in order to prevent leakage of nuclear technology and materials considered in the denuclearization process of North Korea and ask for participation of other relevant countries. The two countries should promote strategic dialogue with China to avoid conflicts between the US and China concerning the maritime strategy

3. Initiation of multinational arms control and disarmament negotiations in Asia

To consult on and conclude agreements on a cooperative security system and an arms control and disarmament framework in the region so that the decrease of the role of nuclear weapons will not lead to expansion of non-nuclear armaments in North East Asia and its surrounding area.

(1) In reducing the role of nuclear weapons while maintaining the security order in the region, it is necessary to maintain the deterrence and defense capability with conventional weapons through the Japan-US alliance as the main pillar. Such maintenance of military capability should not be achieved as a result of an arms race.

(2) In arms control and disarmament, the Treaty on Conventional Forces in Europe (CFE) should be the model and the following should be included: increased transparency of the defense budgets (development of unified calculation standards), release of information on acquisition of equipments, mutual notification of the deployment of the military (including movements), mutual inspection of military exercises, and conclusion of an agreement on the prevention of marine incidents on and over the high seas, etc.

(3) The nuclear arms control and disarmament between the US and China should be prevented from leading to an increase of anxiety in the region. For that, Japan should support the various measures that the Obama administration is considering for the purpose of assuring regional security and actively contribute to their promotion. Further, as disarmament proceeds, the missile defense programs of various countries should be examined in connection with it.

4. Strengthening of Supply Chain Management

With the purpose of preventing illicit trades and nuclear black market trades, etc. in the region and establishing effective measures for nonproliferation policies, to establish measures to secure the integrity and safety of the supply chain from the producers to the end-users without making proliferation behaviors alone the target for nonproliferation

policies.

(1) In order to secure legal legitimacy of the nonproliferation measures stipulated in the UNSCR 1540, new international measures including treaties should be considered at the United Nations Security Council or the United Nations General Assembly.

(2) A framework for collection and sharing of information related to the end-users located at the final stage of the supply chain should be established. With regard to the punishment of the users and intermediate distributors engaged in illegal activities, out-of-region application of domestic laws should be examined. In this regard, it is preferable to establish a system where the same principle can also be invoked for out-of-region application concerning transfers to a third country.

(3) Concerning inspection on the high seas, a follow-on measure of PSI should be considered in accordance with the international laws with Japan and the US playing a central role. In the follow-on measure for PSI, connection with other nonproliferation measures should be strengthened and a universal participation of the countries in the region should be called for.

5. Strengthening of nuclear disarmament and nonproliferation education

To show leadership in promoting nuclear disarmament and nonproliferation education for spreading the understanding about the threat of nuclear weapons, including the experience of survivors of the bombings of Hiroshima and Nagasaki, among others.

(1) The experience of the survivors of the atomic bombings is increasingly fading and the understanding about the threat of nuclear weapons is declining. It is necessary to develop a program of education about the threat of nuclear weapons with accuracy and material easy to understand, including further transmission of the testimonies of the survivors of the atomic bombings.

(2) It is also necessary to engage more actively than ever in the nuclear disarmament and nonproliferation education, crossing the boundaries of the natural sciences and social sciences. It is important for Japan as the only country ever attacked with nuclear weapons to exercise leadership in this field. As one of the financial sources for this, the “Nuclear Disarmament and Nonproliferation Fund” which will be discussed later should be utilized.

B. Proposals for a new international framework for nuclear fuel cycle

6. Reduction of surplus weapons-usable nuclear materials

To propose three points: 1) reduction of existing stock of plutonium before further reprocessing, 2) international plutonium disposition programs should be established, and 3) the principle of "zero surplus" should become a global norm, so that expansion of civilian nuclear programs will not lead to the increase of weapons-usable nuclear materials

(1) The reduction of the existing stock of plutonium should be given priority. Until then, the spent fuel should not be reprocessed and the onsite dry storage, which has a lower risk of proliferation, should be given priority.

(2) In order to accelerate the reduction of the existing stock of plutonium, electric utilities can voluntarily offer their "surplus plutonium" to the International Atomic Energy Agency and the plutonium possessing countries should jointly establish a "plutonium disposition program". Utilities would receive low enriched uranium with the equivalent energy content from the international joint stockpile proposed in 7. Disposition should be dealt with through an international bidding system and the order is to be placed with a disposition enterprise (consortium) with the principles of "minimum transportation, minimum cost, and minimum period." The cost should be shared by the plutonium possessing countries.

(3) In order to make the "principle of zero surplus" an international norm, there should be an international norm that, for enrichment service and reprocessing service, the "demand (the reactor and period for using the fuel and the relevant amount) must be stipulated and that no service be rendered unless the demand is stipulated (to be adopted as an IAEA guideline.

7. Internationalization of the nuclear fuel cycle facilities and establishment of joint stockpile

To make all the enrichment and reprocessing facilities "international" (multinational) without exception and establish joint stockpile (so-called international fuel banks) for the purpose of reducing the incentives for having such domestic facilities with the joint participation of supplier and recipient countries.

(1) Concerning the fuel cycle (enrichment and reprocessing) facilities, operators should choose from the following three options: (A) to establish a facility inside the country but make it an international one asking for investment from other countries; (B)

not to establish a facility inside the country but become a joint owner by investing in a facility in another country; (C) not to invest in any facility in any country and purchase the service on the international market. A similar guideline should be applied to research and development facilities.

(2) The supplier and user countries of low enriched uranium and natural uranium shall jointly establish an international stockpile. “Jointly” means that (A) and (B) mentioned above shall donate the necessary stock cost and that the physical stockpile should be established with the priority given to (C) first and then to (B). (C) shall have the top priority for withdrawal from the stockpile. When a shortage of fuel arises, IAEA shall act as arbitrator and countries with surplus reserves shall provide fuel to the countries suffering from a shortage at the market prices. (A) shall guarantee provision of emergency storage capacity for spent fuel from the fuel provided by it.

8. Voluntary code of conduct of the nuclear industry and foundation of a nuclear nonproliferation and disarmament fund

The nuclear industries should, as its code of conduct, establish the three principles of (1) not to participate in the research and development, production, acquisition or use of nuclear weapons, (2) not to transfer sensitive technologies, (3) to aim at the best practice for securing nuclear material control and safety as the “nuclear nonproliferation and disarmament code of conduct.” And Japan should establish a “nonproliferation and disarmament fund” which will accord priority to the companies observing the norm when giving loans..

(1) Japan should call on the countries possessing nuclear industry inside the country to, working with private banks, establish a “Nuclear Nonproliferation and Disarmament Fund” which can invest in the companies that observe the abovementioned three principles. The Fund shall provide support to the developing countries to contribute to capacity building for the observance of the three principles.

(2) An international joint network to monitor the observance of the abovementioned shall be established with the participation of citizens’ organizations and nuclear nonproliferation experts.

9. Reexamination of Japan’s nuclear fuel cycle policy

Concerning the future of the Rokkasho reprocessing facility, which is out of operation now, either (1) to continue the project after considering the possibility of internationalization (2) to have a fundamental review of the project with the possibility of shutting down the plant. Concerning the enrichment facility, to consider

internationalization upon strengthening of its competitiveness.

(1) The nuclear fuel cycle policies of Japan are in a chaotic situation. This should be taken as an opportunity to conduct a fundamental review. In particular, the Rokkasho reprocessing plant, which is out of operation now, is not needed from the viewpoint of plutonium demand. Its future should be examined with the possibilities of either turning it into an international facility increasing its spent fuel storage capacity or shutting it down. .

(2) Concerning the enrichment facility, if an increase of demand in Asia can be expected, its international competitiveness should be strengthened with the aim of internationalizing it.

10. Research and development initiative for a nuclear power generation system which does not utilize weapons-usable nuclear materials

In the long term, aiming at the development of a system of peaceful use of nuclear energy that does not utilize highly enriched uranium or plutonium, Japan should assume the leadership in promoting the development in the fields such as the chemical uranium enrichment process, uranium extraction from seawater, thorium fuel, etc., for example.

(1) With regard to uranium enrichment, the research and development of the “chemical enrichment process”, with which production of highly enriched uranium is virtually impossible, has been proceeding in Japan. Japan is also leading in the development of the technology of recovering uranium from the seawater. Combining these, a nuclear power system that is not constrained by limitation of resources without the use of plutonium and that does not produce weapons-usable materials will become possible in the long term.

(2) With regard to plutonium disposition technology, the use of MOX fuel with thorium and plutonium mixed in it will greatly improve the plutonium reduction amount. The research and development on this is being conducted with the money provided by the Norwegian government. Japan should participate in it and promote the development of the technology as a “plutonium disposition technology”.

Japan Cooperative Security Initiative: Members profile

Tatsujiro SUZUKI (Leader) [email: tatsu@pp.u-tokyo.ac.jp]

Tatsujiro SUZUKI is currently Associate Vice President of the Central Research institute of Electric Power Industry in Japan as well as Senior Research Fellow at the Institute of Energy Economics of Japan and Visiting Professor of Graduate School of Public Policy, University of Tokyo. Tatsu has a Ph.D. in nuclear engineering from the University of Tokyo.

Heigo SATO [email: hsatou@ner.takushoku-u.ac.jpp]

Heigo SATO is currently Professor at Institute of World Studies of Takushoku University. He has a Ph.D. in Law from Hitotsubashi University.

Nobumasa AKIYAMA [email: QWR04165@nifty.com]

Nobumasa AKIYAMA is Associate Professor at School of International and Public Policy at Hitotsubashi University. He is also a visiting researcher at the Center for Disarmament and Nonproliferation, Japan Institute of International Affairs.

Tomohiro INAGAKI [email: inagaki@hiroshima-u.ac.jp]

Tomohiro INAGAKI is currently Associate Professor of Information Media Center at Hiroshima University. He received his Ph.D. in Science from Hiroshima University.

Tadahiro KATSUTA [email: tkatsuta@kisc.meiji.ac.jp]

Tadahiro KATSUTA is currently Assistant Professor at Meiji University. He is also a representative of Nongovernmental Organization Peaceful Energy in Japan. Tadahiro received his Ph.D. in Experimental nuclear fusion physics from Hiroshima University.

Akira KUROSAKI [email: kuroasakiakira@hotmail.com]

Akira KUROSAKI is currently Part-time Lecturer at Rikkyo University. He has a Ph.D. in Law from Tohoku University.

Takao TAKAHARA [email: taka@k.meijigakuin.ac.jp]

Takao TAKAHARA is currently Vice Dean as well as Professor of International Politics and Peace Research, Faculty of International Studies at Meijigakuin University. He is also a member of the International Peace Research Institute Meijigakuin University and the Institute of International Studies.

Wakana MUKAI [email: wakanam33@hotmail.com]

Wakana MUKAI is currently a Ph.D. candidate at the University of Tokyo Graduate Schools for Law and Politics. She has a M.P.P. from the University of Tokyo.

We are planning to upload working papers, suggestions etc. on A-MAD's original website.
Please check <http://www.a-mad.org> (currently under construction) for more information.
