

THE COMPLIANCE STRUCTURE OF THE NUCLEAR NON-PROLIFERATION REGIME AND JAPAN'S NON-PROLIFERATION POLICY ASSETS*

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Introduction

With the rise in international interest in introducing nuclear energy, proliferation risks are spreading. North Korea initially introduced a nuclear program from the Soviet Union for 'peaceful purposes' and later turned it into a military program. It eventually conducted nuclear tests after expelling international inspectors, and withdrawing from the Nuclear Non-Proliferation Treaty (NPT). Iran is approaching the threshold of nuclear weapons capability while insisting that its nuclear program is exclusively for peaceful purposes, despite behavior to the contrary. Since the spread of civilian nuclear programs may further increase the risk of proliferation, the international community must contain such risks at the lowest level.

The NPT Review Conference in May 2010 was 'successful' in adopting by consensus a final document with 64 items of recommendation. Although public attention focused on the successful adoption of the final document, discussions during the sessions suggested increasing awareness of structural problems of the nuclear non-proliferation regime and widening divergences of views on some important norms/principles.

For example, there are divergent views on the exceptionalism in exempting India from applying the Nuclear Suppliers Group (NSG) guideline for export controls, which require the membership as a Non-Nuclear Weapon State (NNWS) of the NPT to receive nuclear cooperation, and the priority choice between tightening safeguards (or the universalization of the Additional Protocol to the Safeguards Agreement of the International Atomic Energy Agency (IAEA) and emphasis on the 'inalienable right' and sovereign right of a full range of activities of peaceful use of nuclear energy. It also fails to address problems of effective enforcement against cases of non-compliance such as the nuclear weapons program of North Korea as well as Iran's nuclear problem. These questions are related to the fundamental normative structure of the regime and compliance mechanisms for norms, and the effectiveness of the regime might be undermined in shaping an international order of nuclear non-proliferation.

How can Japan affect the non-proliferation regime, and what kinds of sources of power does Japan possess to exert influence?

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The Japanese government has been keen on taking the lead in various international initiatives on nuclear non-proliferation and security. Then Foreign Minister Yasufumi Nakasone at the Liberal Democratic administration announced 11 benchmarks for promoting nuclear disarmament and non-proliferation in 2008¹. After the Democrats took power, Mr. Katsuya Okada, former Foreign Minister, expressed his strong interest in nuclear disarmament and non-proliferation. Although he did not attend the NPT Review Conference in May 2010, the statement of the Japanese government made concrete proposals for achieving the objectives of the NPT. After the NPT, the Japanese government, along with the Australian government, took the lead in formulating a group of ten NNWSs in order to promote the implementation of the outcome of the 2010 NPT Review Conference².

Behind such initiatives, there is a self-identified role that Japan views in nuclear non-proliferation and disarmament. This role can be described as being a 'true' mediator to bridge the interest of nuclear disarmament among NNWSs and the priority of non-proliferation among NWSs, and to balances between pragmatic security needs and the ideal goal of nuclear disarmament, and between "nuclear haves" and "have-nots". The underlying understanding of such a self-identification is that existing norms of the global non-proliferation, or fine-balanced "Grand Bargain" among non-proliferation, disarmament and peaceful use of nuclear energy should be fundamentally acceptable and they should be harnessed by member states of the NPT and IAEA.

This paper therefore discusses how Japan can play a leadership role in nuclear non-proliferation in the era of changing dynamics of the global nuclear non-proliferation regime. Although the interest of the Japanese government in promoting and strengthening global nuclear non-proliferation is genuine in light of both its security interests as well as its national 'manifesto' as a victim of nuclear attacks, due to structural constraints and lack of resources, Japan alone is not able to play a leadership role. In the following part, the paper discusses what kinds of sources Japan possesses that could be utilized for excerpting its influence in global nuclear non-proliferation politics, and which structural characteristics of the non-proliferation regime would shape the influence of Japan's maneuvering in evolving new norms of nuclear non-proliferation.

I. *Structure of the Nuclear Non-Proliferation Regime*

1. Compliance in the Non-Proliferation Regime

On how a state comes to comply with an international norm, Chayes and Chayes (1995) presented two models, namely a 'managerial' model and an 'enforcement' model. The former model follows two logics; the logics of appropriateness and consequence. These two logics and the logic of enforcement constitute three basic rationales behind states' compliance, and how states behave in an international order (Suzuki 2009). As mechanisms of compliance rest on various means, depending on the causes that drive states to pursue the development of nuclear

¹ Yasufumi Nakasone, "Conditions towards Zero: 11 Benchmarks for Global Nuclear Disarmament," <http://www.mofa.go.jp/policy/un/disarmament/arms/state0904.html>

² <http://www.mofa.go.jp/policy/un/disarmament/npt/review2010-4/summary.html>

weapons, ways that Japan can influence/contribute to the strengthening the nuclear non-proliferation regime also vary.

The logic of appropriateness means that countries will spontaneously behave along the norms provided by the regime, because norms are naturally believed as appropriate and legitimate in light of social values. Second, a state would also consider the consequence of compliance, or the cost-benefit calculation in deciding whether to comply with the norms. If a state finds that the benefit of compliance with the norms would be greater than the benefit of non-compliance or the cost of compliance, the state would be willing to behave following the norms. Third, even though a state considers that spontaneous compliance with the norms is neither beneficial nor appropriate, it may comply with the norms, in response to external factors such as military and non-military sanctions as well as political pressures posed by other states in order to avoid the damages that may be caused by such sanctions.

These three patterns of compliance also imply paths of how a state would affect other states' behavior through a regime. When a state tries to exert influence in non-proliferation politics, it is necessary to work on one of these three logics of compliance.

The international order on nuclear non-proliferation consists of three layers. Non-proliferation measures belonging to these layers are categorized based on the degree of universality and affinity with the NPT. Within each layer exists a different mechanism of norm acceptance. First, the foundational layer consists of the NPT and the IAEA safeguards agreement that secures the NPT obligation of non-proliferation of non-nuclear weapon states (NNWSs).³ The NPT and the IAEA safeguards agreement set norms to which each member state to the NPT are expected to comply. The universality of norms would be a source to facilitate voluntary adherence by NNWSs to norms under principles of appropriateness. Countries accept the constraints set by the international obligations under the NPT and the IAEA, and consider that the acceptance of IAEA safeguards and the fulfillment of international pledges hold political significance as a formal certification of adherence to the norms of nuclear non-proliferation⁴.

Policy measures in the second layer are systematically correlated to the norms of the NPT and IAEA. Policy frameworks in this category include the NSG and the Proliferation Security Initiative (PSI) and the United Nations Security Council Resolution 1540. These formally refer to the NPT and the IAEA. For example, NSG has guidelines stipulating that export of nuclear-related materials and equipment would be restricted to NNWS parties to the NPT, which concluded comprehensive safeguards agreement with the IAEA, and this fact indicates that the NPT and the IAEA provide the basic standards for each policy instrument⁵. The measures in

³ On the "international social order" see Bull (1977) and Krasner (1983) on the regime.

⁴ The objectives of the safeguards system are to confirm the strictness and completeness (no concealment, etc.) of the declarations that every nation is obligated to make. Under the comprehensive safeguards agreement, the premise is that each nation's declaration is complete, and the declaration is checked for accuracy. In other words, it is a system of fostering confidence in the resolve to follow through on international pledges via objective IAEA confirmation methods. In a sense, it was an idea based on "good will."

On entering the 1990s, through the experiences of the revelation following the Gulf War that Iraq was covertly developing nuclear capabilities and of the North Korean Nuclear Issue, the IAEA granted more pervasive and robust powers such as full access (entrance to sites) and unannounced inspections, and established optional additional protocols that focused on confirming the assurance of the completeness of declarations. Kikuchi (2008).

⁵ NSG Guideline

these two layers are mostly regulative instruments to work on the supply side, and control and restrict the transfer of technology and material.

The measures in the third layer are mainly applied to the recipient states' demand or needs. The third layer consists of policy instruments that are mostly conducted on a bilateral basis, without much formal reference to the norms and rules of the NPT-IAEA regime, although individual policy frameworks exist on the two layers. They include the offers of security benefits such as extended deterrence including conventional and nuclear deterrence, bilateral nuclear cooperation including fuel supply assurance and nuclear cooperation without involving the transfer of sensitive technology. They incentivize recipient states to follow the norms by changing the calculation of the cost-benefit balance for compliance. Also included are enforcement via sanctions based on either UN Security Council Resolutions or unilateral decisions of individual states to change decisions of proliferators in cases of proliferation or non-compliance, and *ad hoc* consultative bodies such as the EU-3 *plus* 3 for negotiating with Iran and the Six-Party Talks on the resolution of the North Korean nuclear issue. Deals offered through such *ad hoc* consultative bodies and bilateral nuclear cooperation deals are sometimes contrary to the norms and rules provided by the NPT-IAEA regime.

2. "Grand Bargain" as a Critical Background of Compliance Politics

Why do states participate in the non-proliferation regime? The primary objective of the regime is supposed "*to not increase the number of nations possessing nuclear weapons.*" Thus, it can be said that the most fundamental significance of the non-proliferation regime is in assuring national security through preventing the rise of nuclear threats by realizing non-proliferation. In other words, it can be said that the "nuclear non-proliferation regime" is that of security. However, this equivalence is not universally valid. The actual values that each state prioritizes and pursues through participating in the regime would differ according to individual circumstances. For example, if a neighboring nation possesses nuclear weapons and no security assurances are provided, the norms cannot be accepted by the principles of appropriateness or consequence of compliance. Some countries may not be so much eager to enhance its security through the regime, but be more interested in promoting or receiving cooperation in peaceful use of nuclear energy.

"Nuclear non-proliferation" is merely one of the "three pillars" of the value system of NPT together with "nuclear disarmament" and "the peaceful use of nuclear energy." These three values constitute the "Grand Bargain," which is the fundamental deal of rights and obligations between Nuclear Weapons States (NWSs) and NNWSs.

The Grand Bargain, due to political circumstances during the negotiation process of the NPT, has a crucial significance in encouraging non-nuclear weapon states to adhere to the norms of the NPT.⁶ The IAEA Statute also states the primary duties of the IAEA to lay equally both in encouraging the peaceful use of nuclear energy as well as promoting international cooperation, and in implementing safeguards to ensure that the peaceful use of nuclear energy is not diverted to military purposes. In other words, the IAEA grants an equal status (importance) to both nuclear non-proliferation and peaceful use. In short, in terms of the reciprocal relationship between the two value norms of "nuclear non-proliferation" and "the

⁶ On the formation of the NPT, see Kurosawa (1978), Kurosawa (1984a), Kurosawa (1984b), Shaker (1980) et al.

promotion of peaceful use,” it is not politically and systematically permissible for one state to be sacrificed for the sake of another. However, due to the dual-use nature of nuclear technology (nuclear fuel cycle technology), it is impossible to completely eradicate the risk of military diversion of facilities and materials, thus an increased risk of nuclear proliferation accompanies the promotion of peaceful use.⁷ An increased interest in peaceful use in other words signifies an increased ratio of the so-called “principle of consequence” of enjoying economic, scientific and social benefits of peaceful use, and hence an elevated potential for collision with the norms of non-proliferation.

Furthermore, if there is little tangible nuclear threat in the regional security environment where a state exists, the norm of non-proliferation will become relative to other values for that state. They would become more interested in the inalienable right of peaceful use in a different context. For those states posing little tangible nuclear threat, the question of the “inalienable right” is sometimes viewed not in the context of the cost-benefit balance between the security merit of prevention of proliferation and the cost of the consequence of failure of non-proliferation, but in the context of whether the restriction to a state’s ability to exercise its sovereign right (or the “inalienable right” to peaceful use) is an appropriate measure.

3. Interpretation of Article IV of the NPT

Article IV of the NPT stipulates that all state parties have an ‘inalienable right’ of peaceful use of nuclear energy. But there is no consensus on the interpretation of this article. Differences in the interpretation may reflect perceptions of threats of nuclear proliferation, and their implication for the international strategic environment.

Some argue that the ‘inalienable right’ must be absolutely observed in taking any measures of nuclear non-proliferation. Obviously, for them, the pursuit of national nuclear fuel cycle technology should be unconditionally accepted as a sovereign right. In many cases, those who are in this camp claim that the safeguards under the Additional Protocol arrangement may not be acceptable as it could be too intrusive and supersede the inalienable right, or national sovereignty.

Others insist that the risk of nuclear proliferation would be so serious that the international community should make best efforts to prevent nuclear proliferation. As President Barak Obama stated in his speech in Prague in April 2009, the risk of nuclear attack, if not a nuclear war, has global implications, affecting “our global safety, our security, our society, our economy, and ultimately our survival,” if “one nuclear weapon exploded in one city — be it New York or Moscow, Islamabad or Mumbai, Tokyo or Tel Aviv, Paris or Prague — could kill hundreds of thousands of people.”⁸ For those who share this concern, the effectiveness of non-proliferation measures can be prioritized over the principle of ‘inalienable right,’ or other values within the regime, including the universality of norms. They insist that no state should be allowed to newly possess nuclear fuel cycle capabilities as the most critical risk of nuclear proliferation derives from civilian nuclear activities. They claim that the ‘inalienable right’ of peaceful use of nuclear energy should be applied to the benefit of utilizing nuclear energy, but not to the

⁷ This contradiction did not become manifest until this point due to the limit to the supplying nations ability to provide technology, and also because of stagnancy in the international atomic energy market.

⁸ http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/

'process' and 'methods' of utilization. In other words, countries may give up their national fuel cycle activities as long as the supply of fuel is securely guaranteed.

However, this thinking is not acceptable to many non-nuclear weapons states as it would fix their status as nuclear 'have-nots' in civilian nuclear activities, in addition to the military dimension of nuclear activities, which has already been stipulated in the NPT. It would only result in wider inequality between NWS and NNWS.

The current interpretation of Article IV of the NPT does not categorically deny access to fuel cycle technology. Any state may conduct peaceful nuclear activities under the condition of full compliance with Articles I, II, and III of the NPT. However, there are serious concerns of risks of nuclear proliferation from civilian nuclear activities, which must be minimized. In particular, as perceptions on the global security environment have changed and threats of nuclear terrorism and nuclear proliferation have now come to be perceived as primary security concerns for many countries, it is extremely important to properly address this issue, and try to minimize such risks by taking existing and even new measures. We need to go beyond conventional discourse on the supremacy of sovereignty for simply denying more intrusive verification measures under the Additional Protocol, and to avoid total denial of fuel cycle technology in non-nuclear weapons state.

First, indigenous development of fuel cycle technology cannot be prevented as information on such technology would be relatively easily accessible. Second, clandestine acquisition of technology would occur, of dual use items in particular. Such concerns remind us of the difficulty in containing proliferation risks at the entry point of the proliferation cycle. Third, intensifying restrictions on technology transfer through such a 'technology access denial' approach might cause a serious political polarization and create more nuclear 'haves' and 'have-nots,' which could undermine the reliability and credibility of the existing non-proliferation regime.

II. *Influencing in Non-proliferation Politics: Defining Power and Sources*

If Japan wanted to take a lead in nuclear non-proliferation under the circumstance described above, how could Japan excerpt its influence in promoting global nuclear non-proliferation efforts?

There are various definitions of power and influence. Power is the ability to get others to do what others otherwise would not do (Dahl 1962). But through the lens of international institutions, it is not so simple to define power, or influence. A state may bind other states behavior through compliance with the norms and rules of the regime. If a state is able to shape and formulate such a set of norms and rules, it is also the ability to get others to do so.

Strange (1988) defines two different types of power in terms of the level at which a state may affect international politics; structural power and relational power. Structural power works to shape the way the modality of a political game on a specific issue is set. It could also be understood as shaping the norms and principles, as well as the rules, of the regime. Also a state might become sufficiently powerful to shape the incentive structure by providing economic, political and security incentives. In other words, a state could provide public goods, and maintain this global common.

Relational power is the capability to influence the consequence of bilateral or multilateral

political games between nations over a specific issue within a given framework provided by the set of norms, rules and standard operating procedures (SOPs) of the regime, whilst not affecting the structure of the regime itself (Krasner 1983).

In cases of inducing compliance through the regime, the relationship between those who want to influence others and those who are influenced is not driven by power, and the result of the game is not necessarily a zero-sum game. According to the logic of appropriateness, states would be willing to follow the rule, because they come to believe that it is the right thing to do or the natural thing to do. Alternatively, states could provide a new account for cost-benefit calculation of compliance, or create a new formula of cost-benefit calculation. If states' behavior is changed into these ways by interaction with other states that try to influence others to come to comply with the norms, the result of this political game is 'win-win.' If it were possible, states might exercise their influence in consolidating the international order by strengthening norms, and confirm the logic of appropriateness even though they do not possess power to "shape" the international order.

One of the unique assets for Japan's non-proliferation policy is Japan's identity as the only victim of nuclear attacks. It could strengthen its legitimacy and serve as a foundation of Japan's advocacy of a 'world free of nuclear weapons.'

Japan and the Japanese people generally stress the fact that Japan was the only victim of nuclear attacks during the Second World War, and the public sentiment against nuclear weapons constitutes a firm foundation of Japan's nuclear disarmament and non-proliferation policy. It may provide Japan with a moral advantage or strong legitimacy for promoting the idea of nuclear non-proliferation and disarmament. It may be often mentioned to place Japan on the moral high ground in the discourse of nuclear non-proliferation.

Another normative asset is the 'three non-nuclear principles' (or *hikaku sangensoku*), namely not to possess, not to produce, and not to introduce nuclear weapons. These principles were adopted as a Diet resolution in 1968. They are supposed to be a strong non-nuclear commitment by Japan. However, there had been persistent questioning of the 'no-introduction' commitment, which had been denied by the government. Finally, the recent investigation of the Ministry of Foreign Affairs revealed that a secret agreement on the introduction of nuclear weapons in Okinawa in cases of contingencies was concluded between the governments of Japan and the United States in 1968 (although the Japanese government did not recognize it as a 'secret agreement' as this agreement was not transferred to successive cabinets from the Sato Cabinet, which originally concluded this secret agreement with the Nixon Administration. However, the current government reassured the principles for Japan's nuclear policy.

In the meantime, the legitimacy of claiming such declaratory non-nuclear commitments could be undermined by Japan's reliance for its security on extended nuclear deterrence provided by the United States. Some claim that advocating nuclear disarmament under the U.S. nuclear umbrella is inconsistent behavior.

Despite Japan's absolute moral legitimacy of claiming nuclear disarmament as a victim of nuclear attack, it is questionable to what extent these declaratory commitments actually carry the power of persuasion for others changing their policies. The moral position does not effectively provide Japan with a tangible advantage in promoting its leadership in non-proliferation diplomacy.

Japan also has a seemingly contradictory stance in the peaceful use of nuclear energy. Japan is the only NNWS that possesses a full-scale fuel cycle program including enrichment

and reprocessing capabilities, both of which could be used for producing fissile materials for nuclear weapons. It could constitute a part of latent nuclear weapon capability. Japan also has a sophisticated space program with liquid-fuel type H2A, H2B type rockets, whose records of successful launches are significant. Combined with such capabilities, Japan's fuel cycle program may be perceived as a potential threat by its neighboring countries if the risk of nuclear non-proliferation is assessed solely on a capability basis.

In the meantime, based on the norms and rules of the regime, Japan's potential proliferation threat should not be evaluated only on capability. Rather, Japan wanted to be considered as a 'best practice' example of compliance with the norms and rules of non-proliferation. Japan has been faithful to the IAEA safeguards agreement. Japanese nuclear facilities with some exceptions are put under integrated safeguards as a result of the full compliance with the safeguards agreement and additional protocol.

While Iran sometimes refers to Japan as a model for NNWSs, which wishes to have the full range nuclear activities, and expresses its desire to follow this 'Japanese model,' it intentionally ignores the past record of somewhat 'painstaking' history of Japanese full compliance with the IAEA safeguards and adherence to the Additional Protocol. Some states in the Non-Aligned Movement (NAM) also expressed disapproval to the Additional Protocol since inspections under the Additional Protocol allow IAEA inspectors more intrusive inspection and verification activities, which may, as these countries claim, disclose state secrets, and interfere with state sovereignty. Key states in the NAM including Brazil and Egypt expressed their intention not to sign the Additional Protocol. Therefore, establishing the Additional Protocol as a verification standard⁹ will not be realized in the near term. This is a difference in perceptions on policy priority.

Japan as a role model for full compliance with the non-proliferation norms of the regime, would require further clarification and clear definition, emphasizing the safeguards element, with the adherence to the Additional Protocol, stringent export controls mechanism in force, and active contribution to various international non-proliferation policy initiatives. Based on Japan's experience, contrary to the claim made by some NAM states, accepting robust and intrusive safeguards under the Additional Protocol does not undermine sovereignty, but rather played a role in strengthening the legitimacy of the nuclear program of Japan. It was helpful in gaining confidence from the international community regarding the peaceful nature of Japan's nuclear program, which serves the peace and stability of Northeast Asia.

On the other hand, Japan's extensive fuel cycle program may negatively affect Japan's willingness to be a role model for non-proliferation, because the Japanese model set a higher (sometimes prohibitively high) standard for developing states to achieve.

III. *Promoting Non-Proliferation through International Nuclear Cooperation*

1. **Competing in Nuclear Cooperation**

Recently, despite of the Fukushima nuclear accident, nuclear technology countries have

⁹ Under the existing rule and interpretation, in order to verify the compliance by NNWSs with Article II of the NPT, NNWSs are required to accept comprehensive safeguards of the IAEA, as stipulated in Article III of the NPT.

been scrambling to conclude bilateral nuclear cooperation agreements with various countries. With the rise of a 'nuclear renaissance' before the accident the Japanese nuclear industry along with its U.S. partners, has strong interests in foreign markets, while it faces severe competition with Russian, French and Korean industries. Although the Fukushima nuclear accident certainly slowed international nuclear business, needs for new nuclear energy programs in developing states and potential future needs for replacing old reactors remain persistent. Bilateral nuclear cooperation agreements are important foundations for promoting bilateral nuclear business, as they would guarantee governments' commitment to nuclear deals.

One of the characteristics of Japan's bilateral nuclear cooperation agreements, which the Japanese government emphasizes, is that the Japanese government requires its counterparts to ratify and implement the Additional Protocol to the IAEA Comprehensive Safeguards Agreement. With the exception of one with India, all bilateral agreements were concluded based on the pledge by partners of ratification of the Additional Protocol¹⁰. In multilateral forums, Japan has also been strongly advocating the idea of universalization of the Additional Protocol and making it the verification standard.

That demonstrates how the Japanese government puts high priority on nuclear non-proliferation. However, in the industrial sector, there are voices that Japan should not pose strict conditionalities on safeguards/non-proliferation regulations, as it may become a disadvantage to foreign competitors who do not set such conditionalities in business. Some countries such as France or Russia do not require ratification of the Additional Protocol for signing a bilateral cooperation agreement.

If some supplier states are not interested in setting a condition of complying with the Additional Protocol in concluding nuclear cooperation agreements, states receiving cooperation would choose these states as partners since lower conditionalities would lower the cost of regulation. In such cases, if Japan does not have a dominant share in the market of technology related to nuclear power plants, or overwhelming technological advantage, Japan's influence in shaping international norms and rules would be limited¹¹. Therefore, Japan's strategy to overcome such disadvantage is to strengthen cooperation with like-minded countries in setting a global standard of the international nuclear business, and setting some standardized non-proliferation criteria as universal conditions of export in the nuclear business. For this purpose, Japan launched a concept of "3S," which represent Safety, Security and Safeguards, as the principles for developing infrastructure for introducing nuclear energy¹².

The nuclear industry has undergone a period of restructuring on a global level. Japanese companies have been important players in this trend. Toshiba merged the nuclear industry

¹⁰ Negotiation with Brazil on a bilateral cooperation agreement faces a dilemma as well since Brazil has expressed its intention to not sign the Additional Protocol. Instead, it tries to acquire an international approval of recognizing safeguards under the ABACC as an equivalent of the Additional Protocol. Safeguards under the ABACC are not so intrusive or comprehensive as those of the Additional Protocol.

¹¹ The importance of influence in the market is demonstrated by the case of the United States losing its 'structural power' in the 1970s. In that period, a change occurred in the structure of the international nuclear energy market. In the 1970s, levels of technological competence in various states increased, and a remarkable decline in the US' share of the nuclear energy market occurred. What had been a 66% US share of world power reactors in the 1960s had fallen to 44% by the 1970s. As a result, the US share in the world enriched uranium market also dropped, signifying a decline in the US' influence over not only the market but also its influence on the maintenance of the international social order.

¹² http://www.mofa.go.jp/policy/economy/summit/2008/doc/pdf/nuclear_0705.pdf

section of Westinghouse, and Hitachi and General Electric established a joint company for operating the international nuclear business. Mitsubishi Heavy Industry sought a partnership with a French company, AREVA, to establish a joint venture. Further, in 2010 a new company to promote the international nuclear business was established jointly by electricity vendors, nuclear manufacturers and others, which was strongly backed by the Japanese government. Promotion of international nuclear business was incorporated as one of the important measures to promote 'package-type' infrastructure export business¹³ into government's "New Growth Strategy¹⁴." Promoting nuclear business was expected to strengthen Japan's position in the international nuclear order while there may be a risk that the non-proliferation norm could be exposed to higher pressure driven by business interests. However, due to the nuclear accident, this strategy was ruined, at least for the time being. As of February 2013, it is not clear whether international nuclear cooperation would be revitalized.

2. Influencing Discourse on Multilateral Fuel Cycle Control

Another non-proliferation initiative that has emerged recently is a multilateral fuel cycle control approach. It is an arrangement of the incentive to forego the national nuclear fuel cycle by combining assurance of fuel supply and voluntary restraints of possession of a national fuel cycle program¹⁵. By assuring the nuclear fuel supply in the case of interruption of fuel delivery, this mechanism tries to provide states that participate in the scheme with an incentive to give up the national fuel cycle.

NPT Article IV stipulates an "inalienable right" of peaceful use of nuclear energy. However, there are variations in the interpretation of what constitutes 'peaceful use,' and to what extent 'inalienable right' could be restricted by the treaty or other international provisions including safeguards agreements with IAEA.

However, there is a broad consensus that, even if a multilateral fuel cycle control mechanism is to be established, it is impossible to force all states that are interested in nuclear energy to join such an arrangement. In this case, such an arrangement would remain as a voluntary mechanism, and function as an incentive to induce renunciation of the national nuclear fuel cycle.

Furthermore, if the membership of such a mechanism remained voluntary, it is not likely that countries with higher proliferation concerns would not participate in the mechanism. In this case, the question is that a deal between the assurance of fuel supply and giving up of the potential to possess national fuel cycle capabilities is better for NNWSs.

Japan's position on this idea can be characterized as cautiously supportive. A Japanese proposal, 'standby arrangement,' which encouraged all states to register what they could offer for a multilateral mechanism, was a mixture of general support on the idea and reservation on some specific points¹⁶.

¹³ Refer Tadashi Maeda "Oogata project wo meguru kokkakann kyouso to nihon no senryaku (Competition among states over large-scale projects and Japan's strategy)," *Kokusai Mondai* (International Affairs) No.598, January/February 2011, pp.41-50.

¹⁴ <http://www.kantei.go.jp/jp/sinseichousenryaku/sinseichou01.pdf>

¹⁵ INFCIRC/640, *Multilateral Approaches to the Nuclear Fuel Cycle: Expert Group Report submitted to the Director General of the International Atomic Energy Agency*, February 22, 2005.

¹⁶ INFCIRC/683, "Japan's Proposal: IAEA Standby Arrangements System for the Assurance of Nuclear Fuel

There are four major determinant factors for Japan's position. First is a concern over the future of Japan's own fuel cycle program. If Japan were to support a multilateral control over fuel cycle, the Japanese nuclear community has been fearing that it might have to give up its national fuel cycle program as well, which means that it would lose a tool for energy security.

Second is a question on the feasibility of the idea. Japan has a clear position on the 'inalienable right' of the peaceful use of nuclear energy, and it understands that nuclear fuel cycle technology should be included among the subjects of the inalienable right. As long as this interpretation remains viable and dominant in the international community, it is impossible to establish a multilateral mechanism with the mandatory membership that would be the *de facto* amendment of the NPT Article IV.

Third, before the Fukushima accident, it has been said that, although Japan has enrichment and reprocessing facilities, the capacities of these facilities cannot fulfill even domestic needs, and therefore, it was impossible for them to provide service to foreign customers. This means that Japan could not shape the international nuclear fuel market, nor provide an incentive to those who consider breaking out from the regime to stay.

Fourth is its relationship with the United States. Japan shares concerns with the United States regarding proliferators such as North Korea, Iran and non-state actors such as terrorist networks and a common objective of strengthening the global nuclear non-proliferation regime. Japan is in a partnership, in a broad sense, with the United States in the field of nuclear non-proliferation, and its approach toward non-proliferation is generally consistent with the United States.

Here is a dilemma. The first three factors are contrary to a multilateral approach, and the last factor pushes Japan to support it. Japan's ambiguous position on the multilateral fuel cycle approach is a result of these factors combined. Such an ambiguity weakens Japan's influence in shaping this new policy framework, although the idea itself contains a controversial element regarding the "inalienable right" or peaceful use of nuclear energy, which undermines the support for the idea.

Now the situation has drastically changed after the accident. As the size of Japan's nuclear power production shrinks, and concerns over nuclear safety dramatically rise, the legitimacy of the nuclear fuel cycle program has become questioned by the public. The domestic social and political environment surrounding the fuel cycle program is now harsh. Internationally, however, needs for cooperation in spent fuel management are rising for reasons of nuclear security and non-proliferation. Whatever Japan's decision on its nuclear fuel cycle would be, Japan needs to remain committed to nuclear non-proliferation as a responsible, technologically capable state, for achieving a safer and more secure international non-proliferation and security regime.

Conclusion

Japan by itself is not capable of exerting its power to shape the international order on nuclear non-proliferation as its influence in the international nuclear market is limited, and its security against nuclear threats largely depends on the U.S. extended deterrence. In addition,

Supply, " September 15, 2006.

due to the lack of relational power toward India and Brazil or other modestly large states (with large potential markets), Japan is not able to influence others' attitude towards adherence to the Additional Protocol through bilateral cooperation agreement negotiations.

However, Japan's position on some non-proliferation policy initiatives is considered a key factor. In any new policy initiatives, Japan's position may affect the feasibility and plausibility of these policy initiatives. This is partly because with its extensive nuclear fuel cycle program as well as full acceptance of the Additional Protocol, Japan would represent best practice and present a model of achieving both stringent compliance at the highest level with the norms and rules of non-proliferation and promoting peaceful use of nuclear energy.

Behind this, there is the structural characteristic of the non-proliferation regime, namely balancing non-proliferation with the peaceful use of nuclear energy as a political manifesto destined to the regime. As long as the existing interpretation of the "inalienable right" is maintained, Japan's posture toward the regime is consistent with its nuclear energy policy. And the "Japanese model" may set a high standard for compliance to be aimed at by emerging nuclear energy states. Due to the example of Japan, it becomes difficult for other states to delegitimize the claim that stringent compliance with non-proliferation norms and rules would hinder the development of peaceful use of nuclear energy. In this sense, Japan is contributing to shaping the logic of appropriateness, which would help promote nuclear non-proliferation.

At the same time, there are exceptional elements in Japan's policy. In the U.S.-Japan Nuclear Cooperation Agreement, Japan has been granted 'programmatic consent' from the United States, which allows Japan to operate its full-scale fuel cycle activities without applying for U.S. approval for each project, which differs from US-ROK and US-UAE agreements. In this regard, Japan is an exception. The proximity to the United States and the regional security environment might determine the difference in status, which is against the universality principle of the regime.

Therefore, Japan's non-proliferation policy should aim at establishing a set of criteria for international transfer of nuclear fuel cycle technology and possession of a nuclear fuel cycle program, in combination with strengthened safeguard mechanisms for detection, verification, and enforcement against non-compliance. In particular, measures to strengthen IAEA's capabilities of assuring correctness and completeness of declaration must be universally endorsed and pursued.

The criteria-based approach would allow states that meet predetermined criteria to possess a nuclear fuel cycle. While the criteria-based approach has a restrictive nature, it does not categorically deny access to fuel cycle technology. It should be universally applicable, not only to non-nuclear weapons states but also to nuclear weapons states, to supply-side states as well as demand-side ones. The NSG has already been moving toward a criteria-based approach for transfer of enrichment and reprocessing facilities/equipment and technology. What is important is decoupling, to the extent possible, the promotion of peaceful use from the risks of nuclear terrorism, diversion of nuclear materials and technology to military purposes and clandestine activities as well as nuclear accidents, without relaxing the conditions for nuclear trade.

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