THE NUCLEAR FUEL CYCLE AND PROLIFERATION CHALLENGES TO THE NPT REGIME

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The question of the nuclear fuel cycle has been drawing increasing international attention because it can both promote the peaceful use of nuclear energy as well as the proliferation of nuclear weapons. The Korean Peninsula, currently composed of two Koreas, the Republic of Korea (South Korea) and the Democratic Peoples' Republic of Korea (North Korea), provides an almost perfect example of this dilemma. There is no other country in the world besides South Korea that is more in need of a "peaceful" fuel cycle; and there is no better example than North Korea that demonstrates the danger of the proliferation of "peaceful" fuel cycles.

1. The cases of South and North Korea

Let me explain. South Korea depends for over 40% of its electricity on nuclear power. Currently it possesses 20 fully operational commercial reactors and 8 more are under construction within the next 10 years. It ranks 6th in the world in terms of nuclear power production and is first in terms of nuclear power production among nations without a fuel cycle. The other five nations-- the United States, France, the United Kingdom, Russia, and Japan-- each enjoy their own fuel cycle. The upshot is that South Korea buys a large quantity of uranium, sends it to a foreign country for enrichment (the front end of the fuel cycle), imports it to use as fuel, then, domestically accumulates ever increasing quantities of spent fuel because it does not have reprocessing facilities (the back end of the fuel cycle).

Such a country faces several questions, or domestic grumblings, for the following reasons:
-First, economic: Why should we pay the cost of enrichment to a foreign country while we possess the financial capability and technological potential to do this ourselves? (According to an article of the NYT of March 28, 2007, the prices for processed uranium ore have risen from $10 a pound in 2002 to $90 a pound today.)
-Second, environmental: Why should we store rapidly increasing spent fuel stock in a country that is arguably the most densely populated country in the world? (For example, South Korea is slightly larger than Austria in size but has a population of 50 million, six times more than Austria);
-Third, security: Where is the guarantee that we can continue to rely on enrichment in a foreign country if the international environment is unexpectedly strained? ;
-Fourth, political: Why should our country serve as the model for restraining national interests when many other countries seem to freely pursue theirs?

These are not easy questions to answer, especially not from the viewpoint of tradition and narrow national self-interest. But South Korea answers and overcomes these questions because it understands the necessity for an "enlightened" national interest, especially in this era of globalization. Suppose that every country claimed the right to a "peaceful" fuel cycle, and by logical extension, the capability to possess or develop nuclear weapons, the global village would soon become too dangerous a place in which to live. This is the reason why South Korea, the nation most in need of its own fuel cycle, has voluntarily decided not to have it. We do so because we are convinced that we have entered a new era in the 21st Century where "enlightened" national interest better serves our long-term national goals.

It is well known that the current NPT regime has an inherent loophole: Article IV guarantees the right to peaceful uses of nuclear energy, while Article X provides a right of withdrawal. For potential violators, a "peaceful" fuel cycle, which is fundamentally dual-use in nature, can easily be transformed to

military use.

We have known of several such cases, North Korea being the most prominent. It once claimed its reprocessing was intended only for peaceful research and consequently accepted IAEA inspections. But it soon expelled IAEA inspectors and forged ahead with reprocessing in order to accumulate plutonium, which has no civilian use. Finally, in October 2006, it detonated a nuclear device, a direct blow to the NPT regime. Now the Six-Party Talks mechanism and the IAEA are working very hard in order to reverse the DPRK's course.

Iran appears to be another case in point. Indeed, Iran and North Korea represent the two most imminent cases of proliferation danger. Experts define the current configuration of nuclear proliferation as a five+three+two structure. There are the Five Permanent members of the UN Security Council who have been acknowledged as possessors of nuclear weapons within the NPT regime; then we have three countries, namely India, Pakistan and Israel, that either have or are supposed to have developed nuclear weapons outside the NPT regime; then two countries, that is, Iran and North Korea, which have or are suspected of developing nuclear weapons programs, in violation of the NPT.

Iran and North Korea are respectively located in highly sensitive geopolitical centers; the Middle East and Northeast Asia. That resolving the proliferation problems posed by these two countries holds the key for the security of the 21st century is no exaggeration.

2. Complexity surrounding the Fuel Cycle Discussions

Thus, we need to acknowledge the unfortunate reality that the mere acceptance of IAEA safeguards no longer proves that a nation is not seeking nuclear weapons, any more than mere NPT membership does. This suggests the relevance and necessity of the current international discussions on the multilateral control regime of fuel cycle. This regime is meant to help fix the

fatal loophole in the NPT. Yet the discussions on this matter have proven to be extremely complex and highly sensitive.

The right granted in Article IV may be inalienable, but it is neither absolute nor unconditional. This right should be interpreted in the broader context of the Treaty's purpose. The right to nuclear cooperation under Article IV is contingent on compliance with the nonproliferation and safeguards obligations enshrined in Articles II and III. Therefore, this right can be withheld from those State parties found by the IAEA Board of Governors to be in non-compliance with Articles II and III.

The problem remains as to whether all countries in good standing under the NPT are automatically entitled to the entire range of nuclear fuel cycle activities. The question arises when a compliant State attempts to acquire and operate facilities for which its legitimate need is in doubt. If that State's international behavior does not inspire confidence in its nonproliferation commitment, its legal rights under the NPT are likely to become a cause for international security concerns.

As a result, at the heart of the whole debate on the right granted in Article IV lies the issue of tightening controls on transnational transfers of sensitive fuel cycle technologies related to enrichment and reprocessing. But focusing only on the necessity of control is tantamount to attempting to further divide nuclear have-nots from haves on static criteria, which constitutes another congenital flaw inherent in NPT regime.

Thus, for such a regime to succeed, it is essential for the export control regime to be based on objective and sensible criteria. We can thus minimize controversies over the political legitimacy of the controls. This is the crux of the matter. Two critical points should be underscored:
-First, an international regime to control nuclear fuel cycles is an idea whose time has come. Currently, this sensitive matter enjoys no international framework. Now that the specter of nuclear proliferation constitutes, along

with climate change, the two most acute and urgent issues of the 21st century-- especially in our age of international terrorism-- a nuclear fuel cycle control regime has the potential to benefit humanity;
-Second, such a regime, to be successful, must be based on the concept of "enlightened" national interest as opposed to classic narrow national self-interest. Some may consider this concept unrealistic or philosophical. But I remain convinced, on the contrary, that this concept is not only realistic and practical but relevant and necessary. Otherwise, it is difficult to explain the complete international stalemate of disarmament discussions, and it will be difficult to expect any meaningful result from our current discussions on the multilateral fuel cycle control regimes.

Most of the multilateral regime proposals for fuel cycles have emerged from current or potential fuel suppliers. If these proposals are designed from the vantage of narrow national self-interest, none of them will succeed since all the participants to the discussion will pursue their own narrow national concerns. Only pursuing one's national self-interest in a multilateral setting demanding compromise is the surest route to failure. To succeed, proposals must be based and negotiated from the viewpoint of enlightened national interests in which nations take into account not only their own self-interests but those of other nations.

I understand this is what ElBaradei warned about when he said that the emerging international framework governing the nuclear fuel cycle "must not attempt to divide the nuclear community into suppliers and recipients." I also understand this is what motivated those generous donors of NTI and Warren Buffet when they proposed $50 million for the establishment of a fuel bank under the authority of the IAEA.

Whether a nation is acting in accordance with its enlightened national interest can best be judged by examining the critical question of whether the common interest is ensured when all other countries follow the same example. So, the first premise for formulating a nuclear fuel cycle regime must be "leadership

by example." For instance, if fuel cycle proposals focus on nonproliferation at the expense of the peaceful use of atomic energy, or, on the contrary, if they focus on the right of peaceful use at the expense of nonproliferation, they are in violation of the basic "common interest" premise and, consequently, can not succeed.

3. Enlightened National Interest as a Guiding Principle for the Fuel Cycle Negotiations.

This is the most difficult part because nations are accustomed to treating their own national interests as having the most sacred and highest value. Indeed, ever since the Westphalia Treaty of 1648, nations have thrived on this concept of the national self-interest. There has not been, and there need not be, a higher concept to replace it. But now we live in a different world. National self-interests could only be pursued with impunity in an "open" world where expansion remained possible for the purposes of annexation, colonization, exploitation and exploration.

But now in the 21st Century, as a result of the past pursuit of expansion and exploration, the world has become "closed"; there is no more space to expand or explore. And in this closed world, the pursuit of classic national self-interest does not serve any nation's long-term goals nor its ultimate survival. Why? Because in our closed world, a new set of problems has emerged to replace the traditional and perennial challenges of war and peace. These new problems we call "transnational issues." The most conspicuous ones are nuclear proliferation, global warming, overpopulation, international terrorism, and communicable diseases. Individual nations, however powerful or rich, need to work with other nations in order to cope with these emerging challenges of the 21st century.

In the face of transnational issues, if each nation resorts to its classic national interests, these problems will be aggravated, eventually threatening each country's own national stability. Such is the nature of transnational issues. In

facing them, nations need to pursue the principle of a new "enlightened" national interest. This is not based on altruism but is a necessity to ensure a nation's larger interests and, indeed, its long-term survival. We are in the midst of a fundamental paradigm shift without fully taking it into account.

The concepts of "enlightened national interest" and its corollary, "leadership by example" are also inextricably linked to questions of disarmament and nonproliferation. Currently, these critical issues are in complete stalemate because each nation resorts to its own self-interest. The nuclear haves want to focus on non-proliferation while the nuclear have-nots focus on disarmament. This stalemate can only be broken when the nations involved forgo narrow self-interest for the sake of the larger common good. In this regard, I would like to pay tribute to the Middle Powers Initiative because it aims to break the deadlock through the very concepts of enlightened national interest and leadership by example on the part of nuclear states.

It goes without saying that if we do not make enlightened national interest the prevailing dynamic of international relations, replacing classic national self-interest, we will eventually all march hand in hand towards our common demise. The emerging transnational issues of the 21st Century will not condone our continuing indulgence in the pursuit of our national self-interests.

Yet accepting the new concepts of enlightened national interest and leadership by example will not happen overnight. It may take a crisis, or worse, a catastrophe, for us to realize the importance and urgency of these principles. But it must happen if we are to ensure a dependable nuclear fuel cycle control regime buttressing the NPT, and beyond that, secure our own survival and prosperity.

Thank you.