

Nonproliferation and Nuclear Energy: The Case of Vietnam

Notwithstanding the Fukushima disaster, a number of threshold countries are planning to start programs for the peaceful use of nuclear energy, including in Asia. In its program, Vietnam is already at a relatively advanced stage. Currently, however, there is no evidence of a Vietnamese atomic weapons program. But a more aggressive policy of China could increase Hanoi's interest in creating its own nuclear deterrent.

By Oliver Thränert

For many years, the international nuclear non-proliferation regime has been in deep crisis. This became apparent most recently when the ninth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in May 2015 ended without a common final document. At the same time, a number of threshold countries are planning to begin using nuclear energy for peaceful purposes. In a time of increasing international tensions, some of them might build on know-how acquired through their civilian programs to safeguard their national security needs through a nuclear weapons program in the near future. Vietnam is an interesting case in point. Irrespective of certain delays in the development of its peaceful nuclear program, the country has progressed quite far. At the same time, it is engaged in an increasingly precarious conflict with its main neighbor, nuclear-armed China. Currently, there are no signs of a Vietnamese nuclear weapons program. In the framework of the nuclear non-proliferation regime, the country is a model of transparency and cooperation. But it is uncertain whether this will always remain the case. On the contrary, Hanoi might change its policy if the conflict with China should come to a head while the NPT continues to be weakened.



Yukiya Amano (C), director general of the International Atomic Energy Agency (IAEA) visiting the Nuclear Medicine and Oncology Centre of Bach Mai hospital in Hanoi (9.1.2014). *Kham/Reuters*

Vietnam's Strategic Situation

Vietnam might complete its first nuclear reactor within a few years, ahead of ambitious neighbors such as Indonesia or Malaysia. The country's main motivations are its growing energy requirements and the desire to diversify its energy sources. Considera-

tions of prestige may also be a factor. As a threshold nation, Vietnam aims to achieve the same level as Asia's developed nations. With a view to China, Hanoi probably also wishes to demonstrate the high level of global confidence that the country enjoys in sensitive matters of security policy.

Recommended Further Reading

Tanya Ogilvie-White, *Nuclear Power in Vietnam: International Responses and Future Prospects* (Cambridge 2014).

Erwin Schweishelm, *Eine schwierige Nachbarschaft: China, Vietnam und der Konflikt im Südchinesischen Meer* (Berlin 2014).

Mary Beth D. Nikitin et al., *U.S.-Vietnam Nuclear Cooperation Agreement: Issues for Congress* (Washington 2014).

At the same time, Vietnam's strategic environment is rapidly changing. This is especially true for Vietnam's relations with China. While the Communist parties of the two countries regard each other as brother parties and economic relations run deep, the two countries also have disputes over certain small islands in the South China Sea and over the mutual demarcation of exclusive economic zones in these waters. The extent of widespread anti-Chinese feeling among the general public became evident in May 2014, when a Chinese oil platform was discovered in an area claimed by Vietnam. Subsequently, there were not only skirmishes between Chinese and Vietnamese vessels, but also demonstrations in several Vietnamese cities that escalated into violence in which several people were killed.

With an increasingly aggressive China next door, Vietnam, like most of the riparian states, is seeking closer engagement with the US. Washington has become one of Vietnam's main trading partners. Military relations, too, have been intensified. In July 2013, speaking in Washington, D.C., US President Barack Obama and Vietnamese President Truong Tan Sang announced a comprehensive bilateral partnership. One important step towards the closer development of ties was the passing in Congress of a 123 Agreement in September 2014, which paved the way for future cooperation in the peaceful use of the atom.

Despite the interest in improving cooperation with the US across the board, however, the leadership in Vietnam must be aware that issues such as the country's single-party system, together with a human-rights situation that the US continues to regard as problematic, are certain to resurface time and again in relations with Washington. Against this background, US security

guarantees such as Japan and South Korea have been given can hardly be expected by Vietnam. At the same time, there is the danger that an overly evident rapprochement with Washington might provoke reactions by China. Thus, Hanoi is forced to perform a difficult tightrope walk, balancing out its relations with China on the one hand against those with the US on the other.

It is impossible to say today whether this strategic context may one day lead to the creation of a Vietnamese nuclear weapons program. However, if the conflict with China should escalate in the coming years, the option of nuclear weapons might become more important for Vietnam. Moreover, if the nuclear non-proliferation regime should continue to deteriorate to the point where further countries in the region would decide to seek nuclear weapons as the backbone of their national security, this would be a further important argument for the leadership of Vietnam to consider when contemplating a nuclear arms program of their own. A Vietnamese Communist party acting decisively would then have little to fear – on the one hand, because it still has the reins of state firmly in hand; on the other, because a nuclear weapons capability would be easy to legitimize domestically in defense of national independence against China. However, on the downside, a Vietnamese nuclear arms program would cause a massive rift in relations with the US. At the same time, it is questionable whether a relatively small country like Vietnam could build up a credible nuclear deterrent capability vis-à-vis China. Any Vietnamese nuclear weapons program might therefore destabilize the difficult balance Vietnam is attempting to strike between the US and China.

Reactors for Power Generation

In January 2014, Vietnam's Prime Minister Nguyen Tan Dung announced that work on the first two nuclear reactors (Ninh Thuan 1) would begin in 2020. The completion of the first plant, he said, was expected for 2025. The Russian state company Atomstroyexport has been commissioned to deliver the reactors as a turnkey project to the state-owned "Electricity of Vietnam" company. Atomstroyexport has also agreed to build two further reactor blocks on the same installation. Moreover, a Japanese consortium will build four reactors at the Ninh Thuan 2 site.

Any nuclear reactors Vietnam might build in the future could be under threat from natural disasters such as earthquakes or tsunamis. Sea levels rising due to persistent climate change might also become a serious hazard. Apart from these imponderabilities, the Vietnamese government takes the issue of nuclear safety quite seriously. Since 2008, Hanoi has continuously developed its legal and regulatory nuclear framework. Moreover, Vietnam works very closely together with the International Atomic Energy Agency (IAEA).

The Politics of the Fuel Cycle

As far as the question of misusing peaceful nuclear programs for military purposes is concerned, the overwhelming majority of experts agrees that commercial light-water reactors are very badly suited, if at all, for extracting weapons-grade material. Rather, the question of a nuclear program's dual-purpose potential becomes virulent mainly when a country not only builds a light-water reactor, but aspires to develop a complete nuclear fuel cycle. This includes ura-

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nium enrichment, which may be used for producing low-enriched uranium used in fuel rods, or for producing highly-enriched uranium used for building nuclear weapons, as well as reprocessing plants that can be used to process fissile material for reuse in fuel elements or for extracting weapons-grade plutonium.

Thus, international efforts have been made for many years to limit access to dual-use technologies such as uranium enrichment and reprocessing. In this regard, the US essentially has the greater leverage: Nuclear material delivered or produced using nuclear installations purchased from the US or even using parts originating with US companies may only be enriched or reprocessed by other states if the US has agreed in the context of a 123 Agreement. For potential purchasers of nuclear installations, therefore, it is important to come to such an arrangement with the US because suppliers such as Japan or South Korea use technologies derived from the US. Building on this circumstance, Washington aims to convince countries with which it has concluded 123 Agreements to commit

themselves to a fundamental rejection of uranium enrichment and reprocessing. For example, this was successfully achieved in 2009 as part of a 123 Agreement with the United Arab Emirates (UAE). Subsequently, this type of arrangement came to be known in US discourse as the “gold standard” for nuclear cooperation with other countries. Soon, however, it transpired that this “gold standard” was not suitable as a benchmark for new 123 Agreements. In particular, the US Department of Energy perceived the risk that potential partners might rather forgo a 123 Agreement and focus their nuclear cooperation on supplier countries like Russia or China that use no US technology whatsoever (cf. [CSS Analysis No.151](#)).

In the course of negotiations, Vietnam turned into a case in point. While Hanoi sought to negotiate a 123 Agreement with the US, it was vehemently opposed from the start to the idea of renouncing certain sensitive technologies in a legally binding manner, as demanded under the “gold standard”. Instead, Vietnam aimed to keep all its options on the table with regard to potential future uranium enrichment and reprocessing activities. The Vietnamese side was merely prepared to undertake a political commitment to rely on the international markets for its fuel supply rather than to acquire sensitive technologies for itself. Hanoi aimed to conclude the 123 Agreement in order to be able to do business with as many nuclear supplier countries as possible, including those that use US technology. However, Vietnam, unlike the UAE for example, was in a strong negotiating position, having already secured Russian support for the first nuclear power plants in an intergovernmental agreement concluded before Vietnam took up negotiations with the US. For the US, this meant a risk of US companies being sidelined in the lucrative Vietnamese nuclear business if the negotiations on the 123 Agreement should fail.

The US-Vietnamese 123 Agreement entered into force on 3 October 2014. In accordance with Vietnamese interests, the

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agreement merely notes in its preamble Vietnam’s political undertaking to forgo uranium enrichment and reprocessing. One can only speculate on the reasons why Vi-



etnam rebuffed US efforts to secure a “gold standard” agreement. Currently, there is nothing to indicate a nexus with considerations of potential future fissile-material production capabilities for military purposes; instead, it is likely that economic concerns were paramount. The issue here is the supply of fuel to Vietnamese nuclear reactors. These power plants constitute a significant investment, which is why secure fuel supplies are a matter of strategic importance. Apparently, the political elites are concerned about the reliability of supplier countries for nuclear fuel (in the case of Ninh Thuan I, that would be Russia) and the ability of the IAEA to remain impartial in case of disputes.

Opposition in Civil Society

In a country with single-party rule such as Vietnam, no major public protest movements against the construction of nuclear reactors are to be expected. There is no freedom of speech or press. Moreover, there are no reliable public opinion polls. While the government’s nuclear intentions are given more coverage in the state-controlled Vietnamese media, debates on this topic remain limited in the broader society – not least because social media are under government

surveillance in Vietnam. Nevertheless, it is reasonable to assume that the government’s plans for nuclear power are certainly viewed very critically at least among parts of the population.

Sporadically, resistance has even surfaced to public visibility. This has been the case first of all with the Muslim minority of the Cham who mainly live in Ninh Thuan province. Secondly, local authorities have registered their protests against the planned construction of a new research reactor on the premises of the nuclear research center Dalat, arguing that the construction of this reactor could even have a negative influence on tourism in the region.

Arms Control Policy

When it comes to nuclear arms control, Vietnam is behaving in exemplary fashion and trying from the start to dispel any fears that the country might one day abuse its peaceful nuclear program. Indeed, Vietnam has so far shown no discernible interest in nuclear weapons or other weapons of mass destruction. Its law on the use of nuclear energy of June 2008 bans the development of nuclear weapons as well as any form of nuclear proliferation.

Vietnam joined the NPT in 1982 and enacted a comprehensive safeguards agreement with the IAEA in 1990. In August 2007, the country signed an additional protocol to this safeguards agreement that has been implemented since September 2007. Under the terms of this additional protocol, Vietnam has agreed to expanded declaration requirements and grants IAEA inspectors improved access to nuclear installations. As such, Vietnam meets the highest verification standards in the nuclear sphere. The IAEA has so far not had any reason for complaint.

Vietnam has been a member of the IAEA since 1978. Between 2013 and 2015, it was also a member of the IAEA’s Board of Governors, which it chaired in 2013–2014. What is more, Vietnam has also since 1997 been a member of the Bangkok Treaty on a Southeast Asian Nuclear-Weapon-Free Zone and ratified the Comprehensive Nuclear Test Ban Treaty in 2006.

In the area of export controls, too, Vietnam is a paragon, having developed its export control and border security programs with help from the US. In 2010, the country passed a body of legislation outlawing any form of nuclear trade. Moreover, Vietnam is collaborating on the Proliferation Secu-

rity Initiative, which was initiated by the US during the administration of George W. Bush. This is aimed at improving international cooperation between various state organs such as the police, intelligence, border guard, and military services in the sphere of combating the illegal movement of goods that can be used for building nuclear, biological, and chemical weapons or the associated delivery systems.

In terms of its position within the nuclear non-proliferation regime, Vietnam emphasizes the equal importance of the three pillars of non-proliferation, nuclear disarmament, and peaceful use of nuclear energy; however, like the majority of countries in

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the Non-Aligned Movement (NAM), it often places an emphasis on disarmament. During the ninth Review Conference of the NPT in April/May 2015, Vietnam joined forces with the over 100 state parties to the treaty, mostly from the NAM group, in signing the Humanitarian Pledge, which calls for legal measures for the destruction and banning of nuclear weapons. The nu-

clear-armed states and the majority of Western countries oppose the Humanitarian Pledge.

All Clear for Now

Vietnam, like a number of other threshold countries, has decided to use nuclear energy for power generation as well as a number of other civilian applications. Since the country is currently behaving in a thoroughly transparent and cooperative fashion within the framework of the nuclear non-proliferation regime, there is no indication whatsoever that it might misuse the nuclear program for military purposes. Hanoi's refusal to permanently renounce, as the UAE did, uranium enrichment and reprocessing – technologies that can easily be redirected for military purposes – under a 123 Agreement does not necessarily contradict this assessment. There is nothing to suggest at present that Vietnam does intend to build up such capabilities. If such a decision should be made somewhere down the road, it would take Vietnam years to master the enrichment of uranium or reprocessing.

Vietnam will advance the development of its nuclear infrastructure in the coming years. It will continue to attempt to balance its position between China on the one

hand and the US on the other. This will also include adhering to the rules of the NPT, as to do otherwise would damage relations with the US and China alike. However, to the extent that China could develop into a growing threat from Vietnam's point of view, interests may increase in Vietnam's leadership circles in the military use of the atom as a way of ensuring the nation's security and independence. For Vietnam has no US security guarantees to fall back on. Should the nuclear non-proliferation regime be weakened and lose its international cohesive force or even fail altogether, that might be an additional aspect to influence decisionmaking processes in Hanoi in favor of the bomb.

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