

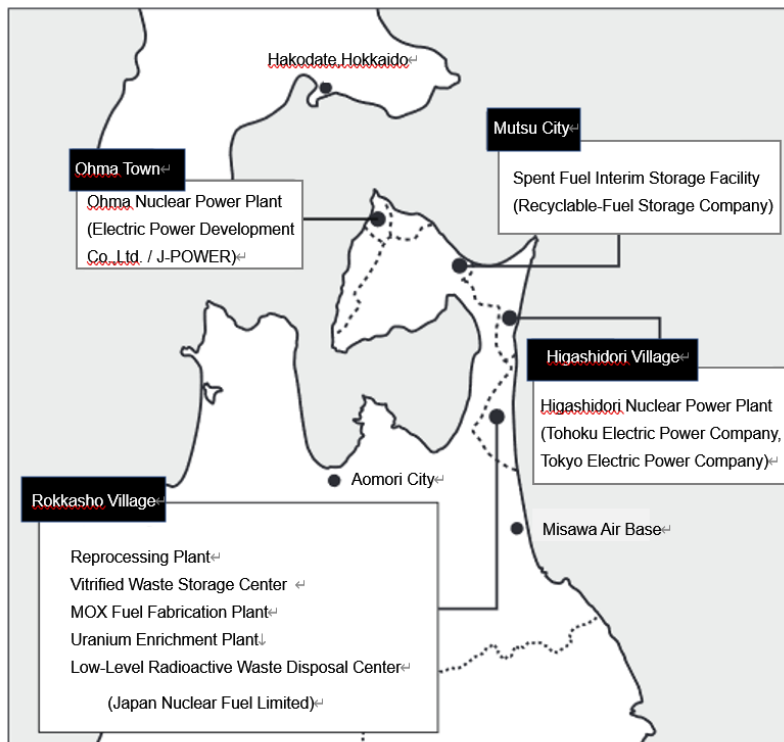
The Capital of Japan’s Nuclear Fuel Cycle : Forgotten Aomori Shimokita Peninsula

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Since the Fukushima Daiichi nuclear disaster in 2011, the anti-nuclear movement has spread throughout Japan. The vast majority of Japanese citizens recognize the existing controversy on the issue and have a position on it. But how many people know about reprocessing? In Japan, nuclear power plants are likened to “condominiums without toilets,” meaning that they are operating without definite solutions for nuclear waste. That being said, how many people know where nuclear waste (spent nuclear fuel) is currently placed?

1. The Burden of Nuclear Fuel Cycle on Aomori

At the end of 2019, I visited the Shimokita Peninsula in Aomori Prefecture to study the area’s nuclear facilities as part of the New Diplomacy Initiative Energy Project. I was motivated to see the area in person as having researched nuclear issues from the perspective of US-Japan relations.



Facilities related to the nuclear fuel cycle and nuclear power plants in Shimokita Peninsula, Aomori Prefecture-

The Shimokita Peninsula is home to a series of nuclear power-related facilities. Starting from the north, there is a Full MOX reactor¹ under construction (suspended and awaiting safety review) in Ohma Town, the northernmost town of Honshu. Down to the southeast, in Higashidori Village, there is a light water reactor

(operations suspended, pending safety review) owned by Tohoku Electric Power Company and a light water reactor (construction suspended) owned by Tokyo Electric Power Company. Further south, in Rokkasho Village, beside the relatively well-known Reprocessing Plant, there is the Uranium Enrichment Plant, the Low-Level Radioactive Waste (LLW) Disposal Center, and the Vitrified Waste or High-Level Radioactive Waste (HLW) Storage Center, as well as the MOX Fuel Fabrication Plant under construction, all owned by Japan Nuclear Fuel Limited. Next to Higashidori Village is Mutsu City where the Recyclable Fuel Storage Center (RFC)—interim storage facility for spent nuclear fuel—was built and is now awaiting the outcome of the Japan’s Nuclear Regulation Authority’s safety checks².

As we see, numerous nuclear facilities concentrate in this area, while their operation and construction were suspended pending safety checks after the Fukushima Daiichi nuclear accident.

Driving around the northernmost point of Honshu, I was in awe of the rich nature of the forest and the sea. If you drive to the coast of Ohma, you can even see the townscape of Hokkaido over the sea. However, with nuclear facilities appearing one after another, it is difficult to enjoy the nature and scenery, and the drive is fraught with mixed feelings.

In Japan, the prefectures where nuclear plants are located have accepted them under the condition that the spent nuclear fuel is transported outside of their prefecture. The final destination for nuclear fuel from all over the country is Aomori Prefecture.

No prefecture in Japan is willing to accept highly radioactive nuclear waste. Aomori Prefecture accepts the waste under the premise that the spent nuclear fuel will be reprocessed and used again as an energy source. However, the Rokkasho Reprocessing Plant has been facing multiple problems, and its completion was delayed 25 times (as of May 2021) with no clear date to start operations. Meanwhile, spent nuclear fuel will be stored at each nuclear power plant sites or in an interim storage facility in Mutsu. At the moment, Mutsu is the only city which has contractually consented to temporarily store spent fuel from nuclear power plants owned by Tokyo Electric Power Co., Inc and the Japan Atomic Power Company. The current plan states that the storage period of “interim” facility in Mutsu City will be up to 50 years, but many people are afraid that it will actually become the “final” repository site.

Although there are other prefectures with nuclear plants, Shimokita Peninsula is the only place with a full suite of nuclear fuel cycle facilities. Here, there are facilities to produce nuclear fuel (Uranium Enrichment Plant, Rokkasho), use it (Higashidori Nuclear Power Plants), store spent nuclear fuel (Interim Storage Facility, Mutsu), manage radioactive wastes (Low-level Radioactive Waste Burial Center and High-level Radioactive Waste Storage Center, Rokkasho), reprocess spent fuel (Reprocessing Plant, Rokkasho) and reuse extracted plutonium for electricity generation (Ohma Full-Mox Nuclear Power Plant).

2. Voices of the Opposition—Silent or Silenced?

One would think that there would be strong local opposition to such a concentration of nuclear facilities, but in reality, this is not the case. In Rokkasho Village’s last mayoral election (June 2018), the pro-nuclear fuel cycle incumbent was re-elected with 5021 votes. Despite the race being between two candidates, the

contender lost the election with only 323 votes. More than half of the electoral constituencies were related to Japan Nuclear Fuel Limited or their family members. The medical doctor who ran on an anti-nuclear fuel cycle platform said, “I only ran because I knew I was not going to be elected. My life would be in danger if I were to be elected”. Also in Mutsu City, which is about to begin accepting spent nuclear fuel into the interim storage facility there, some say that “it’s just storing the spent fuel, this is safer than having a nuclear power plant,” and therefore it is not easy for people to speak out against the acceptance of the spent fuel.

There is one person who opposes the construction of the Ohma Nuclear Power Plant and refuses to comply with the eviction demands, remaining on her own land ever after others have been displaced. Atsuko Kumagai, the daughter of late Asako Kumagai, who succeeded the “Asako House” located on the proposed Ohma plant site, experienced harassment and was isolated in the village. She ran for town mayor, but received only 34 votes, or 0.9% of the total votes, and together with another anti-nuclear candidate, they only had 113 votes (3%).

3. History of Aomori and the anti-Nuclear Fuel Cycle movement

The Shimokita Peninsula used to be a poor region as its main industries were fishing and animal husbandry, and also for its cold climate. In the 1960s, the Japanese government launched the development plan, Mutsu-Ogawara Industrial Park, in the hopes of benefiting the region from the high economic growth that Japan was experiencing at that time.

This plan failed due to the first oil crisis in 1973. Later on, when the second development plan was raised in the center of Rokkasho Village, the villagers who accepted eviction built new houses near the proposed site using the money they received, hoping for the establishment of a large-scale industrial complex.

The second oil shock, however, prevented the plan from succeeding. Even though Japan’s first national petroleum stockpiling base was constructed there, the owner, Mutsu Ogawara Development Co., Ltd. (whose principal investor was Aomori Prefecture) was left with huge debt from land acquisition, and local people were obliged to engage migrant labor in Tokyo.

This is where the nuclear fuel cycle program comes in. In 1984, an exclusive from Nikkei Newspaper revealed that the construction of a nuclear fuel cycle base in Mutsu-Ogawara was on the table. In 1985, Aomori Prefecture and Rokkasho Village quickly decided to accept the nuclear fuel cycle base as a solution to the debt-heavy Mutsu-Ogawara Development Project and formally announced their decision. The nuclear fuel cycle project was expected to be a solution to the enormous amount of idle land and debt of about 130 billion yen, which had already been accumulated due to the notorious legacy of the industrial park.

A movement against the construction of nuclear fuel cycle facilities immediately sprang up, and at its peak in 1989, 50 agricultural cooperatives out of 92 in the prefecture passed the resolution to oppose the plan. In addition, the movement led the secretary general of local apple farmers union, who stood on the opposition side, to win a seat in the national House of Councilors.

However, the opposition movement lost strength when it was unable to convince local people to withdraw

their acceptance of nuclear fuel cycle project. By that time, land had already been acquired under the second Mutsu-Ogawara Development Plan, compensation to local fishers for accepting the national petroleum stockpile base had been accomplished, and the region's economy had been ravaged by previously failed plans for an industrial complex. The proponents pushed the nuclear fuel cycle project and made it a fait accompli by moving ahead with the construction process.

4. National Policy Swept Away Different Voices

Aomori Prefecture, which had been repeatedly swayed by national policy, became known among the nuclear industry as a prefecture that is proactive in accepting nuclear facilities.

Thereafter, the construction of Rokkasho reprocessing plant has been beset by various problems, and even though it has been over 35 years since Aomori Prefecture decided to accept the plant, it has remained incomplete. During those years, the Fukushima Daiichi nuclear disaster occurred and nuclear power became a controversial topic that has divided public opinion into two camps. Now, the issue is discussed during every national election, in political parties' manifestos and individual candidates' policies. However, in Aomori Prefecture that bears the back-end of the Japan's nuclear program, the pros and cons of the nuclear fuel cycle are no longer even a point of contention during elections.

Money from the nuclear industry enriches local governments in areas where nuclear facilities are located. According to statistics from Aomori Prefecture, in the fiscal year 2016, the average income per capita of Rokkasho Village, where the reprocessing plant and other facilities are located, was 16.56 million yen (note: this is calculated by dividing the total number of municipal incomes, including corporate profits, of the total population, and is not an indicator of individual income levels), indeed 6.5 times more than the prefectural average of 2.56 million yen per capita.

When a company or a state policy holds major influence over a community, it has a transformative effect on local people's will. For example, the Japanese Self-Defense Forces (SDF) were deployed to Yonaguni Island in Okinawa, Japan's westernmost island, amid divided opinion over this issue among the islanders. Now, more than 250 SDF personnel have begun to live on the island of 1700 people, accounting for 15% of the local population. This led some to say that they cannot discuss the issue anymore³.

It is said that the US must go to war every few years to keep the country going. The reason behind this is the military industry. The military and the military industry have permeated every corner of society, and a significant number of people work in jobs related directly or indirectly to the military to earn a living. It is extremely difficult to change the nature of the global military power United States. Structurally, Aomori Prefecture has a similar problem with the nuclear industry.

5. Fate of Japan's Nuclear Policy Tied to Aomori

In September 2012, one and a half years after the Fukushima Daiichi Nuclear accident, the Democratic Party of Japan (DPJ) administration was about to reach a cabinet decision of "no-nuclear power and reprocessing in the 2030s." However, "no-reprocessing" was dropped due to opposition from the governor of Aomori Prefecture and the heads of the four municipalities in the Shimokita Peninsula where nuclear facilities are

located. This led the US to question, “If Japan continuing reprocessing, while exiting from nuclear power, does it mean not using the extracted plutonium (which can be used to make nuclear weapons) for fueling nuclear power plants, but accumulating it?” In the end, the decision on zero-nuclear power in the 2030s was also withdrawn. As a result, Japan maintains a policy for keeping nuclear power plants until today. Thus the fate of the nuclear reprocessing plant in Aomori closely ties to the fate of nuclear power itself in Japan, as Japan holds a policy of reprocessing all spent fuels.

6. Forgotten Aomori?

At major tourist sites and in motorway service areas throughout Aomori, you will find well-made promotional pamphlets appealing that “the nuclear fuel cycle is wonderful.” They say nuclear energy is a clean energy that does not emit CO₂, protects the earth, while saving forests and animals.

Entangled in national policy, Aomori has been deprived of choices and cannot even raise voice against the nuclear problem. Okinawa’s US military bases and the Fukushima nuclear disaster are also serious matters, but at least those are acknowledged as matters.

Forgotten Aomori. That is what I felt through this research. We are using electricity everyday while overlooking the problem of Aomori. Is this all right as it is?

*Article was modified since it was first published in Imidas in May 2020.

Note:

1. A nuclear reactor that runs on a full-MOX fuel load.
2. <https://www.pref.aomori.lg.jp/sangyo/energy/0001rokasyo.html>
3. <https://www.sankei.com/premium/news/170703/prm1707030009-n3.html>