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Remaking Local Commons after Radiological Contamination by H-Bomb Tests,

Abstract:

This paper is an anthropological study focusing on Rongelap community in the Marshall Islands recovering its commons after radiological contamination from nuclear bomb testing. Pursuing registration as a world heritage and reproduction of traditional local food is important to reconstruct their commons and to overcome the tragedy,

Keywords: Atomic bomb test, Radiological contamination, Risk, Reconstruction, sublimation of the tragedy, Reproduction of tradition.

1. Introduction

As of February 18, 2013, a total of 57,135 persons have evacuated from Fukushima Prefecture to the other prefectures in Japan following the nuclear accident created by a massive tsunami on March 11, 2011¹. Residents of six municipalities along with minor towns in Fukushima Prefecture, which have a current population of 64,535, were relocated from their homes.² These evacuees

¹ Fukushima prefecture official site 福島県ホームページより

<http://wwwcms.pref.fukushima.jp/download/1/kengaihinanuchiwake250218.pdf>
(access date: February 26, 2013)

² Futaba-machi is 6,950 people. Futaba-machi Official Homepage (双葉町ホームページ 臨時サイト【災害版】) URL: <http://www.town.futaba.fukushima.jp/>(access date: Feb. 1, 2003);

Tomioka-machi is 15,839 people(January 31, 2011) Naraha-machi Official Homepage Welcome to Tomioka(福島県・富岡町公式サイト) URL: <http://www.tomioka-town.org/> (access date: February 26, 2013);

Ookuma-machi is 11,351people(January 31, 2011)Ookuma-machi Official Homepage (大熊町役場ホームページ臨時サイト) URL: <http://www.town.okuma.fukushima.jp/> (access date: February 26, 2013);

Namie-machi is 21,170 people(January 31, 2011). Namie-machi Official Homepage(浪江町ホームページ トップページ) URL: <http://www.town.namie.fukushima.jp/>(access date: February 26, 2013)

Katsurao-mura is 1,515 people(January 15, 2013) Katsurao-mura Official Homepage(福島県葛尾村公式サイト) URL:

<http://www.katsurao.org/forms/top/top.aspx>(access date: February 26, 2013)

Naraha-machi is 7,710 people(December 22, 2011). Naraha-machi Official Homepage

will not be able to return nor can their home municipalities embark on reconstructing plans for their communities for the foreseeable future. Many lost their native places; some committed suicide out of desperation. Radiological contamination devastates the commons, producing tragedy upon tragedy. Although victims will likely not forget the cataclysm, keeping their community alive through a shared commons or human relationships by cooking and eating, talking about grief, telling stories of their hometowns, and building memorials together help to ease the pain of displacement. Of course, compensation claims will be necessary to rebuild their lives financially, but money alone cannot help the community emerge from grief. Other ways of working through loss are also critical.

The purpose of this study is to investigate how tragedy caused by radiological contamination can be overcome by victims and how a devastated commons can be reconstructed. To achieve commons restoration, exploring how communities deal with the risks inherent in this endeavor can provide helpful perspectives and contribute to reconstruction plans. There are two ways of approaching risk: One is the Risk Society Theory, a representative study of which is by U. Beck³: The other is the Cultural Theory of Risk by anthropologist Mary Douglas. The former theory criticizes the risk produced by modernization. The latter theory focuses on selection of risks by the risk taker. The Risk Society Theory attempts to explain how risks destroy the commons. On the other hand, the Cultural Theory of Risk is suitable for investigating how risk takers struggle with their challenges to reconstruct their commons.

My work is an anthropological study focusing on a community recovering its commons after radiological contamination from nuclear bomb testing. I focus on the Rongelap community, which is one of the 24 municipalities in the Marshall Islands located in the middle of the Pacific Ocean. The Rongelap Atoll suffered radiological contamination due to testing of the Hydrogen Bomb by the United States government that was conducted 58 years ago. The people of the Rongelap community were evacuated from their home atoll. Radiological contamination devastated the commons there. It remains difficult to discern and communicate their risk from radiation exposure. This paper discusses two ways the community is working positively to reconstruct their commons and to overcome the tragedy. One is through sublimation of the tragedy by pursuing registration as a world

(檜葉町町公式ホームページ (災害版))

URL:<http://www.naraha.net/wp-content/uploads/2012/02/22.pdf> (access date: February 26, 2013)

³ ウルリヒ・ベック 『危険社会－新しい近代への道』 東廉・伊藤美登里訳、法政大学出版局、1998年。

heritage; the other is by reproduction of traditional local food that evokes their home place symbolically. These two ways can overcome the two side of radiation risk: one is physical risk toward health, the other is living risk by loss of home from radiation contamination.

2. The Rongelap community as commons

Land is considered by the Marshallese to be their most valuable asset⁴. The Rongelap Community has land rights regulations as strict as other communities in the Marshall Islands do. They also have a wide network beyond their atolls or islands that are maintained through family and hierarchical relationships, with which they share resources that they directly gather and hunt.

Geographical setting of the Marshall Islands and the Rongelap Atoll

The Republic of the Marshall Islands (RMI) is composed of 1,300 low-lying coral islands in the center of the Pacific Ocean midway between Hawaii and Australia. These islands are not scattered equally around the ocean: some islands come together and form atolls. An atoll consists of small coral islets forming a ring, which are surrounded by an inland sea (lagoon). There are 29 atolls and 5 isolated coral islands in the Marshall Islands. Their land Area is 181 sq km (70 sq miles), and their exclusive economic zone makes up 2,131,000 sq km. The population is 53,158 persons⁵. Only two areas, Majuro and Ebeye, are relatively densely populated areas, whose combined populations total 39,337 people (74 percent of RMI's population); other atolls and islands are rural areas , including outer islands, making up only a population of 13,812 persons.

The area has been governed by Germany, Japan, and the United States one after another since the beginning of 19th century. The United States ruled the Marshall Islands as a Trusted Territory of the United Nations from 1947 until 1986, and during this period, it conducted atomic bomb tests and missile experiments in the Marshall Islands. In 1986, the Marshall Islands gained independence, and became the Republic of the Marshall Islands. While the atomic bomb tests terminated at this point, missile experiments continued, and have been continuously conducted in the islands by the United Stated several times per year until now. Several military bases for this purpose still exist in the Marshall Islands. The United States regards the Marshall Islands as one of its military bases even

⁴ Jack Adair Tobin, *The Resettlement of the Enewetak People: A Study of a Displaced Community in the Marshall Islands*, p.73.

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<http://www.doi.gov/archive/oia/reports/PDF/RMI%202011%20Census%20Summary%20Report%20on%20Population%20and%20Housing.pdf>

after the country became independent and the US gives economic aid to the Marshall Islands as compensation. The details of this agreement between the two countries are clearly stated in a bilateral treaty between the United States and the Marshall Islands, which is called the Free Association Compact.

The Rongelap Atoll is located in the northernmost part of the Marshall Islands. There are few plants because of limited rainfall: coconuts, pandanus, breadfruit, arrowroot are the main flora in the area. This severe geological situation had made the residents proficient at navigating by canoe to reach more fertile areas to their south.

Land Rights and Lineage

The subsistence economy of rural areas existed everywhere before colonization. "The Marshallese derives almost all of their sustenance from the products of the terrestrial and the marine environment," including gathering food and medicine, building houses, making canoes⁶. They live only on one or two islets in their atoll, but each inhabitant lives with resources derived from everywhere on the atoll.

The person who has rights to derive natural resources primarily from the land is the member of a land holding lineage or their spouse or children. Having land rights is an ascribed status. Land rights are inherited from mothers and are strictly regulated through matrilineal lineage members. Almost all land in the Marshall Islands is divided by line from the outside to the inside of an atoll. Each plot divided by such lines is called a "wato." The matrilineal lineage holds wato⁷. This is why a Marshallese proverb says that no one can live far away from their matrilineal family members. Matrilineal members have land right called a "home land," which is called "kapijuknen" in Marshallese, meaning eternal land. Their spouses and fathers' children, through achieved status, have a right to get food on this land. However, if their spouse or mother or father who have land rights ran away or pass away, they do not have any right to the land. Matrilineal family members, their spouses and children make up the daily living areas of the atolls or islands.

They also share the knowledge requisite to make a living in such areas such as knowing the currents in the ocean, the niches of plant and shells, and how to make preserved food. Some of knowledge such as the niches of turtle, medicine and currents is kept secret from residents of other atolls. They derive a feeling of

⁶ Jack Adair Tobin, *The Resettlement of the Enewetak People: A Study of a Displaced Community in the Marshall Islands*, p.71.

⁷ Some plots are maintained by member deriving from a male in an extinct matriline. This is permitted when the female member of matrilineal lineage dies and the man of the matrilineal member inherits land rights in a restricted way.

closeness by sharing resources within their living area. The land holding system is a form of social security⁸.

Making Networks—Openness in an Island Society

The custom of sharing resources beyond a daily living area is encouraged in the Marshall Islands. Residents also use networks made up of members of matrilineal lineages living in areas other than the home land. These involve clan members and the hierarchy system, despite the fact that land rights are strictly limited to matrilineal groups in the daily living areas.

Someone who moves to another atoll for marriage has attachment to the home land, this is particularly the case for women who move away from their home land. Even descendants moving two or three generations prior, have strong attachment to their “kapijukunen”. They sometimes visit with large quantities of food such as preserved food, fresh and fruits, particularly on Christmas, in summer season, at funerals or for one-year-olds' birthday celebrations.

Sharing involves clan networks. The clan is a social category composed matrilineal lineages that have names such as “People in the Namu Atoll,” or “Shark People”. There are many different lineage groups all over the Marshall Islands that have the same name. They are definitely different lineages, but are thought to be related⁹. There is less relationships in everyday life between people who are the same clan and have different lineages. Clan relationships, however, become important at the time of natural disaster such as typhoon, drought, or plague outbreaks¹⁰. When a clan member visits another atoll, the clan member in that distant location has to host their visiting clan member¹¹. The clans practice exogamy. They have to marry different clan's members, so they try to search for a spouse on another atoll.

There is also are sharing within the hierarchical system. There are two hierarchical ranks: commoners and aristocracy. The head of the 14 aristocratic families is chief and governs the Marshall Islands at present. “First fruits, choice cuts of large fish, porpoises, and turtles, particular species of fish, and all driftwood and other valued objects brought by the ocean currents to the atoll, were the

⁸ Jack Adair Tobin, *The Resettlement of the Enewetak People: A Study of a Displaced Community in the Marshall Islands*, p.72.

⁹ Robert C. Kiste, *The Bikinians—A Study in Forced Migration*, Cummings Publishing Company, p.88.

¹⁰ Michael Rynkiewich, *Adoption and land tenure among Arno Marshallese*. In *Transactions in Kinship*. Ivan Brandy, Honolulu: University Press of Hawaii, 1972, pp. 93-119.

¹¹ Robert C. Kiste, *Ibid.*, 1974, p.37; Jack A. Tobin, *The Resettlement of the Enewetak People: A Study of a Displaced Community in the Marshall Islands*. Ph. D. diss., University of California, Berkeley, 1967, p.90.

special prerogatives of the chief¹². Chiefs comply with obligations to redistribute to their commoners.

These three networks cannot automatically exist; they meet each other at prescribed times for exchange and sharing, eating together, going to funerals, associating on one-year-olds' celebrations and at adoptions. Adoption is quite common in the Marshall Islands, which helps address the crisis created by biological parents living away from their children on another atoll¹³. At least one-third of the Rongelapese were adopted as children. Adoption is usually by sisters or brothers. Adoption by far relative (five or six generation before) also occurs. These three face-to-face relationships led to form two big networks in the Marshall Islands: Ralik(western island chain), Ratak(eastern island chain)¹⁴. This network sometimes goes to Kosrae Island, which has a different culture and language.

The custom of sharing resources is encouraged in the Marshall Islands. On the other hand, knowledge about how to live on the atoll or island is strictly limited within the family members or atoll inhabitants.

3. Tragedy led by H-bombs

Bravo and after

From 1947 to 1986, the islands were under U.S. administration of as the United Nation's Trust Territory of the Pacific Islands. The U.S. used Bikini and Eniwetok Atoll for conducting 67 nuclear and H-bomb tests between 1946 and 1958. Particularly, the H-bomb, whose code name is "Bravo", made a tremendous impact not only on Bikini, Rongelap, and Utorik, but also on all inhabitants of the Marshall Islands. The degree long-term effects such as land contamination, thyroid and other cancers will emerge is still largely unknown. Damage claims are still in the courts to this day. The missile tests began just after the termination of nuclear test and have continued over the years.

In late January 1946, the U.S. announced that Bikini Atoll had been selected as a site for atomic bomb tests. The U.S. conducted 67 nuclear tests on Bikini Atoll and Enewetak Atoll between the years 1946 and 1958. The inhabitants of these atolls were evacuated prior to the tests. The Rongelap¹⁵ people were not evacuated

¹² Jack Adair Tobin, *The Resettlement of the Enewetak People: A Study of a Displaced Community in the Marshall Islands*, p.82.

¹³ Michael Rynkieswich, *Adoption and land tenure among Arno Marshallese, Transatons in Kinship*, Ivan Brady, 1972

¹⁴ Dirk HR Spennemann, "Traditional nineteenth century communication patterns in the Marshall Islands," *Micronesian, Journal of the Humanities and Social Sciences*.

¹⁵ Rongelap atoll is the northernmost atoll in the Ralik Chain (Western islands

from their home atoll, which is located 210 kilometers from Bikini ground zero.

The U.S. detonated a hydrogen bomb whose code name is Bravo on March 1 1954, which was about 1,000 times more powerful than the atomic bombs that were dropped on Hiroshima and Nagasaki during World War II. After the hydrogen bomb it rained radioactive ash from atmospheric nuclear weapons testing on the Rongelap Atoll around noon that day. Land had was contaminated by radioactive fallout and the 82 residents and four babies still in the womb were exposed to radiation. Some people developed acute radiation damage such as headaches, dizziness, and loss of hair. They were evacuated to a military base in the Marshall Islands by the US military. They spent three months there, and were moved to an uninhabited tiny island, Ejij Island in the Majuro Atoll. Some woman's pregnancies miscarried.

In 1957, the Atomic Energy Commission (AEC) recommended that people return to Rongelap Atoll. Victims believed the U.S. safety declaration regarding Rongelap Atoll, and returned. Two-hundred and fifty people, including those most stricken by radiation and people holding land rights on the Rongelap Atoll went back to the Rongelap. The AEC recommended not eating food from the northern part of the Rongelap Atoll where the Rongelap people had gathered food traditionally. They cannot live there without food from the northern part of Rongelap Atoll.

After that, people started showing symptoms of thyroid disorder, cancer and leukemia, which are considered to be the effects from radiation. At this time, the Rongelapese leave the Rongelap Atoll and moved to the Mejjatto Island in the Kwajalein Atoll. Mejjatto Island has been established as the central place of residence for the Rongelap community by the Rongelap government. In addition, people are continuing to live on Mejjatto Island, getting some food assistance since local food is possibly contaminated.

The Tragedy of Radioactive Contamination

The greatest tragedy of radioactive contamination is cultural breakdown manifesting as looseness of lifestyle and challenged values. Residents could live on Rongelap between 1957 to 1985, but no without American assistance and fear from illness caused by radiation. The land that should bring social security makes it difficult for the community to make a living due to contamination.

Their lifeway was totally damaged after moving to Mejjatto Island. One reason is because their traditional relationship with a particular area's geography and environment have broken down or been disrupted. They do not know the geography and environment of Mejjatto Island, which was unknown to them since it did not

chain) of the Marshall Islands. It consists of 63 islets.

belong to the victims of the atomic and nuclear tests. For example, one young man drowned in a river, after he managed to reach a ship to get food in the stormy sea right after reevaluation. This type of accident cannot occur in Rongelap, because they know the environment of their homeland.

With each passing moment, elderly persons depart from their main community as as they need to move to town to easily access hospitals. Another tragedy involves miscommunication between victims (natives) and the U.S. government. To take an example seen before 1957, some considered eczema an illness caused by radiation, which Department of the Interior (DOI) of the U.S. considered an allergy. A second example is that DOI considers miscarriage and stillbirth as not connected with radiation, although many women complained that these problems are being caused by radiation. Many tried to hide such problems. Evidence that this cover-up is on purpose can be seen in statement at Senate¹⁶. From 1957 to the beginning 1970's on the Rongelap Atoll, the residents complained about diarrhea and leukemia, but the U.S. has not accepted the relationship between illness and radiation until now.

As we have seen in this subsection, radioactive contamination is a comprehensive and persisting tragedy against this community. This tragedy can perhaps be overcome by the community itself.

4. The Visualization of Tragedy — Evacuation, World Heritage and Peace Museum

In this section, we focus on using risk of radiation as a resource for the future, achieved through making appeals about contamination.

The damage by radiation to these islands and their inhabitants was huge. The hardship caused by radiation contamination, however, has been hidden from the outside world. What we need to consider next is how the Rongelap people have been struggling with this hardship. We can point out three major ways they can tackle their hardship. While the damage by radiation has been neglected and is seemingly invisible to the U.S., the Rongelap people needed to show radiation damage to get the U.S. to decontaminate their land. They need to relocate from their home atoll. They also plan to build a Peace Museum and seek registration as a World Heritage site.

Evacuation from their Home Atoll

Desolation of their home atoll and evacuation from the Rongelap shows how dangerous it is in the Rongelap area.

The U.S. Department of Energy (formerly AEC) published a report in 1981 which shows the contamination level of radiation in the northern Marshall Islands.

¹⁶ NACP, Box 417, RG 126, May 23 or 24, 1963

This book shows that residents on the Rongelap atoll receive 400mSv per year of internal exposure, which caused death from 0.1 to 0.6 people in 233 people¹⁷. The people knew that the level of the radiation in Rongelap Atoll is the same as in Bikini Atoll. The U.S. government however did not accept the risks radiation presents to the human body.

The Rongelap people appealed the Marshall Island senator from their district about the risk of living in the Rongelap. The senator said that the residents need to relocate from Rongelap in future generations. The Rongelap community has had difficulty asking for compensation and decontamination. They need to show the land is contaminated by presentation of evidence from Rongelap Atoll, where no one lives.

But residents of Rongelap did not want to agree to evacuation. The senator persuaded them to evacuate. One of the Rongelap residents who moved from Rongelap Atoll said:

Nobody wanted to leave but Rongelap Senator said that leaving Rongelap Atoll would make it easy to negotiate with the U.S. This is a gamble.

At last, in 1985, the Rongelap people moved to the Mejatto Islets in the Kwajalein Atoll. The risk of radiation is a long-term effect, which is most acute for children. The senator persuaded residents on Rongelap not only for future generations but also as a way to make claims against the US more easily. The logic that they expected the U.S. to employ is that if someone lives there, the place is safe to live. In short, the Rongelap people evacuated from their home atoll not only because of risk of radiation but also due to their visualization or expectations of the risks.

Peace Museum

Members of The Japan Council Against Atomic and Hydrogen Bomb created a support group to build the Rongelap Peace Museum in May 2002. The group launched a fundraising campaign, which reached 8,500,000 Yen¹⁸. In 2003 a groundbreaking ceremony was held when the goal of 10 million yen was reached¹⁹. Building materials were bought. Unfortunately, due to trouble with land holders in the planned location, they had to choose another site. The Museum has not been

¹⁷ U.S. Department of Energy 1982, *Melelen Radiation Ilo Ailin ko Ituion Ilo Majol, ko Rar Eali Ilo 1978* (The Meaning of Radiation for Those Atolls in the Northern Part of the Marshall Islands That Were Surveyed in 1978), p.39.

¹⁸ Homepage of support group of Rongelap Peace Museum
<http://www9.plala.or.jp/jojoi/html/Japanese/level%202/jhome.htm> (March 27, 2013)

¹⁹ <http://www9.plala.or.jp/jojoi/html/Japanese/level%202/jnews4.htm> (March 27, 2013)

built.

Being halfway complete, the Rongelap Museum has an important role in teaching the negative side of security by atomic bombs. We fear atomic war. We can see that atomic or nuclear bombs are dangerous even without war.

World Heritage

In Rongelap the local government has determined that the Rongelap Atoll and Ailinginae Atoll should be designated officially as natural and historical assets of world heritage. The Rongelap government opened the Rongelap area for tourists, built bungalows, offering diving training to Rongelap people, and purchased ferry boats for routes between Rongelap the capital Majuro. Bikini Atoll, which is an atomic bomb site, was designated as a historical assets of world heritage in 2010; but Rongelap has not yet been designated²⁰.

The reason Bikini first became a world heritage site hinges on the name value of Bikini and its historical importance. As the women all across the world wear “Bikini” swimwear than this came from the Bikini atoll, it is easy to be designated as World heritage site. Bikini Atoll is ground zero, the center of bomb test for the most powerful kind of bomb, the hydrogen bomb. There are big craters made by the hydrogen bomb on the Bikini Atoll. On the other hand, the name of Rongelap does not have name value nor status as ground zero. It is therefore not easy for it to evoke the disaster of the atomic bomb.

The plan to make Rongelap a world heritage site has, however, some aspects unique relative to Bikini. Bikini stresses the site of the atomic bomb test and its historical importance. On the other hand, Rongelap and Ailinginae Atolls stress richness of natural resources in addition to the ecological disaster created by the atomic bomb tests. Ailinginae Atoll has been well studied and has broad support for nomination as a World Heritage site. The risk of radiation can become a resource to get financial support with potential to transform tragedy into meaning.

5. Resurgence of local commons by Dry Pandanus.

In this section, we discuss risk of the loss of the home atoll. Traditional preserved food is important for the reconstruction Rongelap identity and networks. Many kinds of preserved food have been made on Mejjatto recently. There is the example of resurgence in interest and manufacture of Dry Pandanus.

Risk in the Rongelap Resettlement Project

²⁰ This is the nomination for world heritage site status:
<http://www.bikiniatoll.com/history.html>

The Rongelap local government accelerates the Rongelap Resettlement Project that forces all residents on Mejjatto Island go back to their home atoll. This project, however, has a big problem with respect to the risk of radiation it would entail. Mejjatto people do not think that the Rongelap is safe and do not believe that the U.S. government is reliable. There is also the risk that when residents return to their home atoll, they may reevaluate their move as the risk of radiation comes to light. The concentration of risks is dangerous.

Rongelap resettlement has accelerated and residents of the temporary island have picked a "second home" island. Rongelap people can enter the Rongelap Atoll even though they cannot stay long on the grounds that there is excessive radiation. Mejjatto residents vary in their opinions regarding the island they want to live on the near future. Some want to continue to live on Mejjatto Island, some want to move to the other island or to the United States, and some want to move to towns in the Marshall Islands, while some want to go back to their home atoll. They share radiation risk with in the community aware that "divided we stand, united we fall"¹.

Resurgence of Traditional Life from Rongelap

In August, 2010, the author visited my host family in the Marshall Islands living in the capital, and saw the preserved food "Dried Pandanus" (jaankun) once made in the home atoll. This is a traditional preserved food made from the fruits of Pandanus. Making dried Pandanus is time-consuming and troublesome task. First, Pandanus fruit, which is from twenty to thirty centimeters in diameter, is torn apart into small pieces and is boiled for one or two hours. Next, the orange portion is grated until it becomes paste-like and thin, then, it is dried in the sun. It takes from two weeks to one month depending on the weather. Once dried, it is made into something that resembles sweet cake rolls and is wrapped in the leaf of dry Pandanus and bound with thread so that it stays together. Not using of Sugar and a seasoning, it is additive-free and is only fruits. In this way, a cylindrical preserved food that is eight centimeters in diameter and twenty to thirty centimeters long is completed. It tastes like sweet bean paste with the added acidity to the dried persimmon.

Pandanus, which is raised throughout the Marshall Island, is usually boiled and eaten, which avoids the hard work of making preserved food. The preserved food form is popular in the northern part of the island. According to the Marshallese, the preserved Pandanus has a shelf life of at least 10 years. It was once used as food for ocean navigation by a canoe over long distances. It remains in places where ocean navigation is indispensable due to the severe environment.

The Dried Pandanus I saw was made by people on the temporary island who brought it to a relative living in the capital. The temporary island was uninhabited

before relocation, and Pandanus had not been grown there before relocation.

Pandanus had only been grown in specific places on the eastern half of the island in 1997 when I visited for the first time. By the time of my visit in 2002, some residents were burning down unwanted trees and planting coconut palms in the yards of their houses. Apparently they were trying to increase the numbers of Pandanus trees.

In 2002, after the yard maintenance, they started making Dry Pandanus with an eye to the longer range future. Marae emigrated to a temporary island from the town in 2002. Marae asked her uncle to teach her to make preserved food, remembering that he made Dry Pandanus back on the Rongelap Atoll. Marae carried out the cutting of all the Pandanus trees in her yard. Seeing Marae planting trees and making Dry Pandanus, not only those in the neighborhood but also all other residents ended up planting trees.

The Meaning of Dry Pandanus

Making Dry Pandanus has two meanings: recovery of a community with one's own resources and recovery of a tool for making connections within the community.

The first meaning is traditional reproduction, since Dry Pandanus was a specialty of their homeland. Dry Pandanus achieved the function of a tool which transfigured Mejatto Island into "our island" from the status of "temporary island". It is expressed by the narrative style and smiling faces people have when they talk about Dry Pandanus.

For instance, in August, 2011, a fiftyish man who usually lives on the temporary island came to the capital city by a Rongelap government-chartered boat during his summer vacation. He told the author with a bright smile and shining eyes about the wonderfulness of the temporary island and the difficulty of manufacturing Dry Pandanus. As Marae said, "People from Mejatto Island once went to Ebadon Island to get traditional food. Now, people from Ebadon Island come Mejatto to get the traditional food." Marae elaborated:

Do you know why I am here? I brought Dry Pandanus. Mejatto people work together to make Dry Pandanus every day. It is sold-out just at the same as I brought here in Majuro. Mejatto Island changed so much. The people in Mejatto planted trees of Pandanus. Mejatto is full of Pandanus. Mejatto Island has changed from the time when you were there. Only Ujae people and Jaluit people, other than Rongelap people, can make it². Actually, the Rongelap people taught how to make Dry Pandanus to the Jaluit people a long time ago.

The second meaning is that Dry Pandanus has become a tool for recovering family relationships important for living as a people from the Marshall Islands.

The Marshallese built relationships by moving around instead of owning land and settling in one place. The land that is matrilineally inherited is important as "headquarters (kapijukunen)." However, people move around as needed and decide on where they have "forever land" (juknen). They have survived the vulnerable environment of the atoll. People moved across the ocean, visiting relatives for a change of air, making a lot of preserved food, participating in a marriage ceremony or a one-year-birthday ceremony, and supporting relative who stricken by typhoons and so forth.

In addition, Dry Pandanus can become a tool for binding people who are opposing each other about compensation from the U.S. Before making dry Pandanus, they depended on compensation money from U.S. and were less dependent on local natural resources. There is difference between money and natural resources. Money can be changed into anything and keeps value. Natural resources decay with the passage of time. That is why people have to use or exchange natural resource before decay and save money for a rainy day. After the independence of the Republic of the Marshall Islands, the U.S. paid compensation money to the H-bomb victims of about 100 dollars every quarter. After compensation money was delivered, victims came into conflict with each other over the right of compensation. A long time ago, there was conflict among island residents such as boundary conflict or title conflict²¹, but such conflict kept things things as they are, or were not mentioned with respect to settlement²². Since the land has been divided by family numbers, rights toward land were flexible. The production of Dry Pandanus leads to a situation in which it is disadvantageous to hold onto many handmade Dry Pandanus, encouraging Mejjatto residents to give their handmade Dry Pandanus to relatives in town building ties and fomenting reciprocity.

As seen in the example above, the reason for conflict about compensation among victims is shifting reliance to money from natural resources in order to live. Therefore, one way to address the problems created by this situatin is to increase natural resources. This can alleviate the conflict and bind people.

Dry Pandanus plays an important role to continue traditional ways of life. Making Dry Pandanus identifies Rongelap person, who, by exchanging Dry Pandanus, contributes to the maintenance of a network of Rongelap relationships. Revival of Dry Pandanus signals the endogenous recovery of their homeland which was devastated by atomic bomb tests.

²¹ Robert C. Kiste, *The Bikinians: A Study in Forced Migration*, Menol Park, Calif.; Cummings Publishing, 1974, p52.

²² Michael Rynkiewich, "Adoption and land tenure among Arno Marshallese," In *Transactions in Kinship*. Ivan Brandy, Honolulu: University Press of Hawaii, 1972, p99.

Dry Pandanus is not only a traditional products but is also a symbol of the Rongelap community. It allowed them to transform their temporary island into a second-home island, tying together the Ronogelap people. Without Dry Pandanus Mejatto people cannot think of their temporary island as their island.

6. Conclusion

This paper explored the reconstruction of a community devastated by radioactive contamination by depicting the Rongelap community of the Marshall Islands and their struggles.

Land is the most valuable asset in the Marshall Islands. Marshallese have strictly land rights regulations, also they have wide networks beyond their atoll or island governed by family and hierarchical relationships, with which they share resources that they directly gather and hunt. Before the atomic and nuclear tests, this simultaneously closed and open network makes it possible to live in a severe environment of a commons made up of a coral atoll. Then, the H-bomb test devastated this commons. Radioactive contamination there is comprehensive and created a persisting tragedy against their community. Radioactive contamination, however, cannot be perceived: it has no smell, nor has it color. Rongelap people need to show the level of radioactive contamination to get compensation. One of the ways to show radioactive contamination is by showing that they cannot live evacuated from their home atoll. The world heritage and the peace museum approaches may also become resources to attract those who not only are interested in marine activity but also in history. Reproducing of Dry Pandanus plays an important role to help them recover their commons by increasing their traditional resources.

In concluding, I should note that development of the victim's own resources is important for recovering commons as well as demanding a compensation claims for radioactive contamination. Reproducing Dry Pandanus is a down-to-earth approach to reconstruct their commons.

¹ Michiel and Michael Thompson, *Divided We Stand : Redefining politics, technology and social choice*, 1990, p.13.

² The Dry Pandanus is made on the Mejis Island, the Ailok Atoll and the Lae Atoll, other than the Jaluit Atoll.