

修 士 論 文

Gender Issues in Involuntary Resettlement due to Dam Construction: In case of Tokuyama Dam in Japan and Kotmale Dam in Sri Lanka

ダム建設に伴う住民移転におけるジェンダーイシュー：

日本の徳山ダムとスリランカのコトマレダムを事例に

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主査 _____

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1. Introduction

Dams constructed around the world obliged many people to resettle because of inundation of their homes, and various difficulties were reported in the reestablishment of their livelihoods after relocation. The number of involuntary resettlements by development projects has increased substantially in the last two decades. The number of projects triggering the involuntary resettlement policy by the World Bank's projects has increased from 146 active projects in 1993 to 747 active projects as of December 2009, representing 29% of the portfolio (World Bank, Environmentally Sustainable Department, 1996; World Bank, 2012). Therefore, movements against dam construction have occurred.

An example of a famous movement against dam construction is the movement that formed against the Narmada dam in India, a project financed by the World Bank and the Japanese government. This project was connected to the displacement of many people. Therefore, movements against the project formed and actions were conducted by civilian in India and by members of Japanese NGOs.¹

Another example of a famous movement against dam construction occurred regarding the Sakuma dam in Japan.² Takesada (2012) observed two types of research that investigated dam resettlement in the literature. In the first type, the conclusion of the research opposes dam construction and recommends stopping dam construction. These investigations focused on negative aspects of dam resettlement. In the second type, the research the conclusion of the research approves of dam construction and focuses on the efficient construction of dams. The position of this study is the second type because evaluations from the perspective of gender, the main theme of this thesis, are usually categorized into the first type. Therefore, the purpose of this research was to evaluate the resettlement of the Japanese case and the Sri Lankan case in short term and long term from the perspective of gender and assess the optimal compensation for future resettlements in developing countries.

1.1 Difficulties in involuntary displacement by dam construction

Hundreds of dams were constructed in Japan for agriculture, electricity generation, and disaster prevention during the rapid economic growth period after World War II, as shown in Figure 1. Consequently, huge numbers of people were obliged to leave their homelands because of dam construction. Some Japanese researchers worked on the issue of

¹ FoE Japan [Online] Available: <http://www.foejapan.org/aid/background.html>.

² Nihon jinbunkagakukai [Japan humanities council] (1958).

resettlement due to dam construction. Hanayama (1969) surveyed 40 dams throughout Japan to suggest appropriate compensation schemes for displaced persons. He stressed the difficulty of livelihood re-establishment after displacement. Hanayama concluded that the compensation, provided only for property at that time, was insufficient and that more comprehensive supports were needed. After Hanayama's research, compensation schemes for resettlers gradually improved and the length of time for negotiations over dam construction between villagers and the dam constructor increased. Maruyama (1986) examined 14 dams throughout Japan, which were not included in Hanayama's survey. He found that displaced people's attributes diversified along with the economic development and that they tended to relocate to urban rather than rural areas. Therefore, he categorized submerged villages into three types (urban, rural, mountainous areas) and clarified the correlation between the three types of village and the length of negotiation for dam construction.

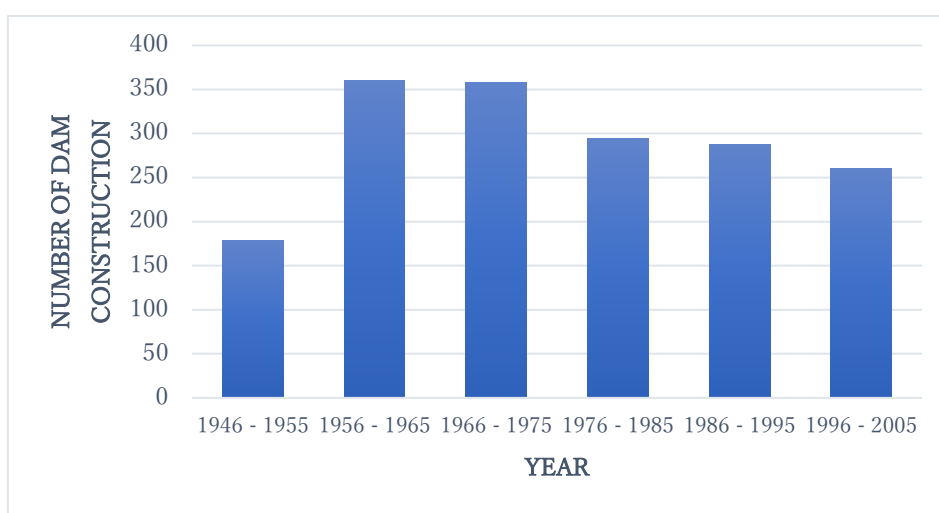


Figure 1. Number of dam construction projects by decade in Japan, 1946-2005. Developed by the authors based on Japan Dam Foundation (2016).

1.2 Gender issues in involuntary displacement

gender issues caused by displacement were also reported. Gender issues have been observed in several Asian dam construction projects. In the case of the Three Gorges Project in China, women were unable to get a new occupation after relocation due to discrimination against women and a lack of education (Tan, Hugo, & Potter, 2005). In the case of the Bakun Hydro-electric Project in Malaysia, wives had no choice but to stay home, although their husbands went to the cities to earn money. Therefore, wives faced challenges in caring for their families in addition to securing food by planting crops.

Moreover, women lost access to natural resources that provided food and craft materials in their original villages (Jehom, 2013). In the case of the Mahaweli Project in Sri Lanka, women were excluded from the right to own lands and their burden of women's role increased after resettlement because of the introduction of double cropping (Kumar, 1987). In the case of the Sardar Sarovar dam in India, a lack of water infrastructure in the resettlement area created particular problems for women. For example, women have to leave home to defecate outside before dawn or after dark because it is culturally unacceptable to be seen defecating (Sikka, 2016). These researchers suggest that gender differences were overlooked in the resettlement and livelihood re-establishment processes and that resettlement tends to exacerbate gender disparities that exist in project-affected areas.

2. Process of making Research Question

2.1 Outsider in case of dam construction

Table 1 shows the change in population of Tokuyama village from 1955 to 1980, which is the field survey area in this study.³ It should be noted that the rate of depopulation decreased in this period, even though many villages in Japan faced the problem of depopulation in the same period due to lack of opportunities for employment and education (Tokuyamamura, 1973). This indicates that people intended to stay in the village until they received compensation. As Tanaka (1994) pointed out, outsiders who wanted compensation and who worked in Tokuyama village as doctors, teachers, and policemen, stayed in the village. Besides, throughout the interviews in 2018 in Japan⁴, it became clear that these people were aware that they were not “original” Tokuyama villagers. Thus, they did not relocate to the resettlement areas developed by the dam constructor, where almost all the Tokuyama villagers moved. Instead, the outsiders tended to move to big cities or relocate to other areas close to the developed resettlement areas. We found that the resettlers included outsiders referred to as “dam brides.” These are women, not originally from Tokuyama, who married men from the village. “Dam brides” decided to get married and live in the deep mountain area for only a few years before they would relocate from the village. About 20–30% of women in the old Tokuyama village were “dam brides” and the majority of these were from big cities such as Gifu and Nagoya (Anonymous, 2017a) (Anonymous, 2017b). The “dam brides” met their husbands in big cities where the men had worked as seasonal workers in winter. These women told us that they were aware of hefty compensation to be given to their husbands, and this was the largest motivation for them to get married (Anonymous, 2017c). The “dam brides” tended to be regarded as money-chasers by the Tokuyama villagers. The nickname of “dam brides” was used in all the hamlets as a derogatory term. It is natural that there were not only women who married for money, but also those who just fell in love with men from Tokuyama. Moreover, women who came from outside before the plan for the Tokuyama dam construction was officially approved and women who were married and moved to Tokuyama with their husbands for the purpose of negotiation should not, perhaps, be viewed as “dam brides”—the boundary between “dam brides” and other outsider women seems to be very vague. However, it is true that there were many outsiders who arrived in Tokuyama just before the dam construction and the subsequent move to the resettlement areas. Our interviews also revealed that the “dam brides” had characteristics that were different from those of women who were originally from Tokuyama. “Dam

³ The basic information of Tokuyama dam is described in chapter 4.1.

⁴ Yamazawa, S., Moriya, K., & Nakayama, M. (2018).

brides” were not inclined to learn the history of Tokuyama and they did not try to understand the complicated kinship in the village (Anonymous, 2017d). Although it became clear that there are “dam brides” in Japan, it is not clear if there are any “dam bride” in Sri Lankan case. Therefore, one of the goals of this research is to clear if there are also “dam bride” in Kotmale dam in Sri Lanka and clear their characteristics.⁵

Table 1. Population transition in Tokuyama village.

	Men	Women	Total Population	Household	Change in Total Population
1955	1208	1309	2247	428	NA
1960	1243	1051	2294	482	47
1965	977	905	1882	465	- 412
1970	799	786	1582	455	- 297
1975	701	745	1446	494	- 139
1980	640	666	1306	511	- 140
1985	303	329	632	179	-332
1990	NA	NA	NA	NA	NA

Source: Ministry of Internal Affairs and Communications, National census (2005).

2.2 Short term impacts for women

Gender issues are also present in the subject of resettlement by natural disaster. Chowdhury (2001) has pointed out that women have a high risk of being injured by natural disasters because they are usually in their homes, and men have a lower risk because they usually work outside a shoal zone. However, Bari (1992) has pointed out the important role of women who tackle the challenges of natural disasters with agency. Kabeer (1996) defined “agency” as the ability to define one’s goals and act upon them. Such cases where women engage in reconstruction activities with agency after earthquake disasters have been documented in cases of earthquake disasters in Japan as well. Aoki (2018) examined records of the four major earthquakes from the Taisho period to the present (the Great Kanto Earthquake, Great Hanshin-Awaji Earthquake, Chuetsu Earthquake, and Great East Japan Earthquake). He noted that women provided supports in such major earthquakes. However, there are a few studies which indicate that women

⁵ The basic information of Kotmale dam in Sri Lanka is described in chapter 5.1.

overcome gender issues within the context of resettlement due to dam construction, while women's important role engaging in reconstruction activities with agency are pointed out in disaster cases. Therefore, another purpose of this research is to elucidate how women overcome such gender issues in conjunction with gender issues which have been insufficiently studied and arise by involuntary resettlement in dam construction in Japan.

2.3 Long-term impacts for women

Scudder (2005) researched more than 50 cases of resettlement by dam construction and created the Four Stage Framework model. This model categorizes resettlement into four processes: 1. Recruitment Stage, 2. Transition Stage, 3. Stage of Potential Development, and 4. Handing Over/Incorporation Stage. As shown by Scudder's model, resettlement by dam construction has to be evaluated in both the short and long term. In the Tokuyama dam case in Japan, Kimura (1997) conducted follow-up surveys for more than 30 years of the resettlement process, from the period of negotiation until after resettlement, and identified the changes observed in Tokuyama. Hamamoto (2001) found that people from Tokuyama suffered from emotional distress in three periods: a negotiation period, a livelihood reestablishment period, and a period of movement against dam construction in another city, which made displaced people think that the dam construction is useless. However, only monetary issues were discussed in the process of negotiating the resettlement. On the other hand, some researchers evaluated the long-term consequences of resettlement. Nakayama and Matsumoto (2016) analyzed the cases of the Tokuyama dam and the Miboro dam. They pointed out that these dams were developed in an era of very rapid economic growth in Japan and that, prior to the resettlement, the displaced persons had mostly been engaged in farming and forestry, without specific skills to secure new occupations after resettlement in urban areas. The authors also suggested that land-for-land compensation may not be the best option for resettlers because many of them wanted to relocate to urban areas and abandon farming as their major source of income. Sugiura and Matsumoto (2016) compared the Tokuyama case with the Kusaki and Sameura dams. They showed the pattern of resettlement after displacement, which correlates with the degree of dependency on the productivity of the farm land. However, such studies are basically interview researches subject to the male head of a household; as such, long-term resettlement has not yet been evaluated in terms of gender. Thus, in this research we evaluate resettlement because of dam construction in Japan in terms of gender issues in the long term. Table 2 is a summary of previous studies. Also, we focus on women's productive activities from which we can observe the long-term transition

when we evaluate long-term resettlement in terms of gender.⁶ In this research, we focus on productive activities, as the long-term transition is easy to observe among these activities.

In summary, the research questions in this study are the following:

1. Was there any “dam bride”. If so, Why?
2. What kind of gender issues did women face after resettlement? And how did women overcome gender issues with agency?
3. What kind of productive activities have women been engaged in through the long term?

Table 2. The Summary of Previous Studies.

cause	dam resettlement					natural disaster	
	general		gender			gender	
category	short term	long term	short term	long term	women's agency	short term	women's agency
	impact	impact	impact	impact		impact	
Japan	✓	✓	✗	✗	✗	✓	✓
other countries	✓	✓	✓	✗	✗	✓	✓

⁶ Tanaka (2002) categorized three types of activities: 1. productive, 2. reproductive, and 3. community activity. Productive activities include farming, livestock, and wage labor. Reproductive activities include cooking, washing, and fetching water. And community activities include group work in village and ceremonial occasions.

3. Methodology

We carried out field surveys in Japan and Sri Lanka. We interviewed women and men who resettled due to the Tokuyama dam construction and Kotmale dam construction. Our interviewees included women originally from submerged village and “dam brides” who were originally from outside of the village. The survey was undertaken in the resettlement areas of “Omoteyama,” “Monjyu,” and “Shibahara” in Japan and System B, C and H in Sri Lanka under the condition that interviewees would be kept anonymous. Detailed information about field survey are described below.

Tokuyama dam in Japan

Field survey①

Place : resettlement area (Omoteyama, Shibahara, Monjyu)

Interviewee : Men and women from Tokuyama (total: 10)

Date: August, 20th – 22th, 2017

Questionnaire was distributed.

Field survey②

Place : resettlement area (Omoteyama, Shibahara, Monjyu)

Interviewee : Women from Tokuyama (total: 10)

Date: November, 24th – 26th, 2017

Questionnaire was distributed.

Field survey③

Place : resettlement area (Shibahara, Monjyu, Omoteyama)

Interviewee : Women from Tokuyama (total:6 women)

Date: September, 17th – 19th, 2018

Kotmale dam in Sri Lanka

Field survey ①

Place : System H (Nava Hanguranketha, NavaTheldeniya, Kothmalpura)

Interviewee : Women from Kothmale village (total: 10 women)

Date: September, 2nd – September,9th, 2017

Field survey ②

Place : System H (Kothmalpura, Maliyadevapura, Ranwantalawa, Gurugama)

System C (Othelawa, Gankewela, Hetapaheyaya)

System B (Bandanagala, Nawangama, Maswela, Weerana)

Interviewee : Women from Kotmale village (total: 90 women)

Date: October, 28th – November, 5th, 2018

Questionnaire was distributed.

In order to clarify the gender issues in the dam resettlement context and identify how women overcome difficulties, the IRR and PAR models will be used. The IRR model by Cernea (2000) categorizes the factors connected to the impoverishment of resettlers into eight risks: 1. landlessness, 2. joblessness, 3. homelessness, 4. marginalization, 5. morbidity, 6. food insecurity, 7. loss of access to common property assets, and 8. social disarticulation. This model is the basic theory for development agencies currently. A questionnaire was made based on the eight risks in the IRR model. Therefore, this research will clarify which risks women faced during the negotiation period. The PAR model analyzes the factors connected to a disaster (Figure 2). This model explains that a disaster is caused by not only hazards such as earthquakes and flooding, but also the victims' vulnerability. Vulnerability is categorized into three types: root causes, dynamic pressures, and unsafe conditions. Root causes refers to a lack of "access" to power, structure, and resources, and "ideologies" of political and economical systems. Dynamic pressures can be categorized into micro and macro-levels. Factors connected to vulnerability at the micro-level include local institutions, local investment, local markets, and so on. Factors at the macro-level include rapid population change, rapid urbanization, deforestation, and so on. Unsafe conditions mean factors categorized within the physical environment (such as a dangerous location), local economy (such as low-income levels), social relations (such as special groups at risk), public actions and institutions (such as lack of preparedness). Usually, this model is applied to a natural disaster case; therefore, it has seldom been used for analyzing resettlement by development. However, a situation where society is damaged by disaster and a society is affected by development seem to be similar because both societies become unstable; it was thus obvious that people became impoverished due to not only hazards by disaster or evacuation by development, but also because of their vulnerability. Therefore, the PAR model seems useful in analyzing vulnerability and it is possible to apply it to dam resettlement in this study.

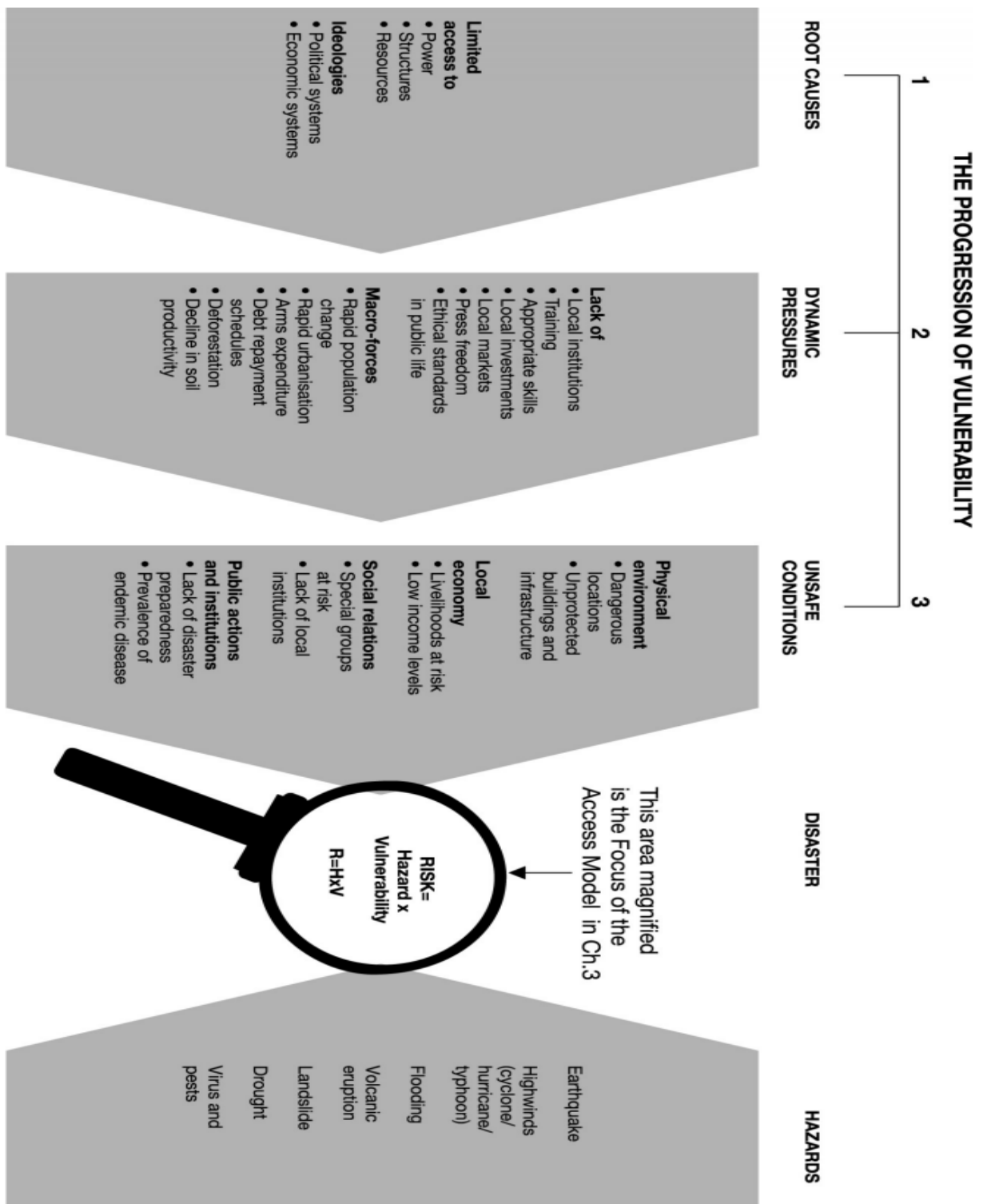


Figure 2. PAR model
Source: Blaikie, P., Cannon, T., Davis, I., & Wisner, B (2004).

4. Case study: Tokuyama dam in Japan

4.1 Basic information about Tokuyama dam

The Tokuyama dam in Gifu prefecture is the largest multipurpose dam in Japan. It has a water storage capacity of 660 million tons. The dam was built by the Japan Water Agency on the Ibi River for the purposes of power generation, flood management, and industrial water supply. Figure 3 shows the location of the Tokuyama dam. A unique feature of the dam is that almost all lands in Tokuyama village were submerged and all 466 households (about 1500 people) had to move. Table 3 shows a timeline of Tokuyama dam construction. The Japan Water Agency (JWA), owner of the dam, asked the resettlers either (a) to move to one of the five resettlement areas built by the JWA or (b) to move to a place of their own choice. Tokuyama village had been composed of eight hamlets. The villagers from these hamlets were “mixed” in the five resettlement areas of Omoteyama, Monjyu, Shibahara, Itonuki, and Amishiro, which were existing communities that already had residents. The lifestyle of the resettlers was completely changed after relocation. Before resettlement, villagers were mostly engaged in farming or forestry because the village was located deep in the mountain. After resettlement, about 40% of the family heads changed their occupation and about 60% of their spouses changed their occupation. The ratio of people engaging in farming or forestry dropped significantly, from 25.8% to 3.6% (Gihuken chihou jichi kenkyuu senta, 1988).

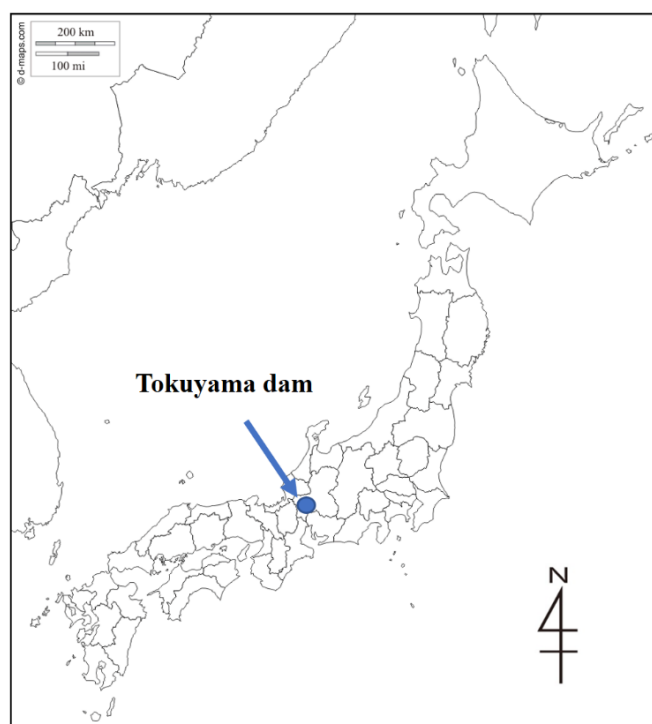


Figure 3. Location of the Tokuyama dam.

Table 3. Timeline of Tokuyama dam construction.

Year	Event
1957	Proposal of Tokuyama dam construction was announced at the firsttime.
1976	The plan of Tokuyama dam construction was approved by Ministry of Construction.
1984	Resettlement started.
1989	All 466 households made a contract with Japan Water Agency.
2000	The construction of Tokuyamadam started.
2008	Tokuyama dam construction is completed.

Source: Developed by the authors based on Fujihashi-mura (1990).

4.2 Previous research about Tokuyama dam

As shown in chapter 2, Kimura (1997) conducted follow-up surveys for more than 30 years of the resettlement process, from the period of negotiation until after resettlement, and identified the changes observed in Tokuyama. Hamamoto (2001) found that people from Tokuyama suffered from emotional distress in three periods: a negotiation period, a livelihood reestablishment period, and a period of movement against dam construction in another city, which made displaced people think that the dam construction is useless. However, only monetary issues were discussed in the process of negotiating the resettlement. Some researchers evaluated the long-term consequences of resettlement as well. Nakayama and Matsumoto (2016) analyzed the cases of the Tokuyama dam and the Miboro dam⁷. However, there are no evaluation of Tokuyama dam from the perspective of gender.

4.3 Result of field survey about Tokuyama dam

4.3.1 Dam bride

“Dam brides” are regarded as different from people originally from Tokuyama village, not only in terms of their birthplace, but also their characteristics. Those originally from Tokuyama tend to express their nostalgia for the now-submerged village. They also tend to express their dissatisfaction with other lifestyle and related changes, such as higher energy prices. On the other hand, “dam brides” wished to leave Tokuyama as soon as possible. “Dam brides” tend to positively evaluate the resettlement in that they started participating in the activities of the host community, including shopping in the city which was never possible in Tokuyama. Some of the “dam brides” even mentioned that they felt

⁷ Miboro dam is another dam in Gifu prefecture in Japan.

relief from the mental stress caused by complicated and problematic human relations and customs in Tokuyama, such as participating in wedding ceremonies and funerals (Anonymous, 2017c). “Dam brides” felt unhappy about the lengthy negotiation process with the JWA regarding their resettlement because they wanted to leave Tokuyama as soon as possible. One “dam bride” informed us that she had assumed she would have to live in Tokuyama and endure the conventional lifestyle of the village for no more than a few years, although she eventually needed to stay there for more than 15 years (Anonymous, 2017d).

Dissatisfaction with infrastructure in the resettlement area

As for opinions about the infrastructure in the resettlement area, differences were observed between the wives originally from Tokuyama and the “dam brides.” Almost all the former were satisfied with the existing infrastructure such as transportation facilities, hospitals, and schools. These infrastructures were much more convenient and better than the ones in Tokuyama. In particular, schools provided resettlers with great benefits which could be enjoyed even by future generations of the displaced community. In contrast, “dam brides” tended to be unsatisfied with the infrastructure in the host communities (Anonymous, 2017c). This may be because some of them had lived in big cities before marriage and they found the infrastructure in the host community inferior to that of big cities.

Experienced to work in big cities

Many employment opportunities in construction works, including the Tokuyama dam construction, were available for resettlers due mainly to rapid economic growth in Japan at that time. Therefore, men from Tokuyama were able to find new occupations without major difficulties. Similarly, women from Tokuyama could find new occupations, especially part-time jobs in the city. However, some of them stressed that working in a city proved very hard for resettlers who were from deep in the mountain. Some of “dam brides” seemed to be free from hardships in working after relocation. One “dam bride” we interviewed said that most women coming from outside had experiences in working part-time in big cities, whereas women from Tokuyama had never worked in cities. Another “dam bride” mentioned that one of the benefits of resettlement was that employment opportunities existed for women in the host (new) communities (Anonymous, 2017c).

Relationship among family members

Tokuyama villagers felt that their relationship with their children changed. As the resettlement area was located much closer to the big cities than the Old Tokuyama village, children working in cities were able to visit their parents' houses in the host community more easily than old Tokuyama village. Tanaka (1994) pointed out that the proportion of households with less than two family members declined from 50% before resettlement to 27% after relocation. This implies that displaced persons started living with their children who had jobs (and homes) in cities. Displaced persons thus felt happy with the new relationship with their children although they seldom met their children working in big cities before relocation. Similarly, "dam brides" found the resettlement area better than Tokuyama because of access to their parents' homes in the big cities. However, the relationship between "dam brides" and their mothers-in-law was problematic due to the differences in their cultural backgrounds. "Dam brides" from big cities did not understand Tokuyama culture which mother-in-law had. Therefore, tensions and conflicts led to some "dam brides" living separately from their mothers-in-law after resettlement (Anonymous, 2017e).

Relations with others before and after resettlement

Differences were observed between "dam brides" and others in establishing personal relationships, both before and after resettlement. In Tokuyama, people had close relationships, especially with those in the same hamlet. They helped each other in rice farming and reconstruction of their houses, which is called "yui." People usually entered a neighbor's house without asking permission. The relationships among the villagers were much closer than those among people in the big cities. However, the "dam brides" did not have close relationships with their neighbors when they lived in Tokuyama. They preferred to be or talk with other "dam brides." Difficulty in mastering the dialect in the village and a lack of farming skills prevented "dam brides" from establishing good relationships with those who originated from Tokuyama (Anonymous, 2017a). Tokuyama villagers lived in eight hamlets before resettlement. They moved to five resettlement areas established by the JWA where they had to interact and build relationships with resettlers who came from different hamlets than their own. They had to address two issues after relocation: (a) relationships with displaced persons from other hamlets, and (b) relationships with those in the host communities. As for the former, people originally from Tokuyama tended to have close relationships only with those from the same hamlet. However, all the Tokuyama villagers interviewed mentioned that they had known each other before relocation and they experienced no difficulties in their interactions with those

from other hamlets. “Dam brides” also tended to maintain relationships with the people from the same hamlet. In addition, “dam brides” had close relationships with other “dam brides” from the same hamlet. As for relationships with people in host communities, people originally from Tokuyama seldom interacted with those in the host communities, whereas “dam brides” were keener to establish relationships with people in the host community. Participating in activities of the host community, such as cultural classes and volunteer works, enabled “dam brides” to interact with the host community. “Dam brides” interviewed informed us that the Tokuyama villagers were shy and they lacked experience in interacting with people in cities (Anonymous, 2017f). Tokuyama villagers tended to stay away from the host community due to their backgrounds being rooted deep in the mountains.

4.3.2 Short-term impacts

Based on the IRR model, the risks that women faced during the negotiation period and after resettlement are categorized into three issues: landlessness, joblessness, and loss of access to common property assets. These three issues will be analyzed based on the PAR model. Also, this analysis will clarify what kinds of factors are connected to success or failure of resolution by the women (see Table 4).

Landlessness

(1) Women’s participation

During the negotiation period about resettlement, meetings took place periodically and discussed who was eligible for getting compensation and how much compensation was necessary. These meetings (including bus trips to resettlement areas beforehand) involved women, although women seldom attend meetings in their own hamlets in daily life. The reason why women attended these meetings is that they received a daily allowance after each one and that there was a system which enabled them to attend. Therefore, when the husband was busy and the content of discussion seemed to be not complex, he forced the bride to attend the meeting. Although women had the opportunity to attend meetings, they did not voice their own opinions. The reason why women completely gave up expressing their opinions was due to cultural constraints; this can be explained as a root cause in the PAR model. However, it is important to point out that there was a system that allowed women to participate in meetings, and which can be understood as dynamic pressure (at the micro-level) within the PAR model.

(2) Decrease of farm lands

Women always had to be engaged in all processes of farming in Tokuyama as this was their role. However, after resettlement, most Tokuyama villagers could not get farm land and, thus, women did not have to cultivate it anymore. Therefore, the women's burden dramatically decreased and they became part-time workers. There are two factors as to why they did not receive farm lands. First, there was a system that gave resettlers an option as to whether they could continue farming or not and which can be explained as dynamic pressure (micro-level). Second, an acreage-reduction policy was implemented by the government at that time; this can be explained as dynamic pressure (macro-level).

Joblessness

(1) Job opportunity

An acreage-reduction policy, which enabled only people who manage more than 50 acres of farm lands to be engaged in farming, was implemented due to a large amount of rice in Japan at that time. Therefore, it was necessary for resettlers to find new jobs other than farming (this can be explained by dynamic pressure at the macro-level). However, at that time, due mainly to rapid economic growth in Japan, there were enough job opportunities and even women coming from rural areas found work such as sewing (this can be categorized as dynamic pressure at the macro-level). Therefore, women were engaged in not only part-time work, but also sewing jobs in their houses while doing other house work such as child-raising. Another reason why women found new work easily is that a system of job placement in the resettlement scheme enabled them to, for example, obtain cooking licenses (an instance of dynamic pressure at the micro-level). Moreover, "dam brides" already had experience in working part-time in big cities. Therefore, these experiences became one of the factors that helped them to easily start part-time work and earn their own money (an example explained by root causes).

(2) Funding

After displacement by development or natural disasters, microfinancing for women was sometimes introduced. In cases of displacement by dam construction in Japan, some prefectures that benefited from the construction created a fund to facilitate reestablishing the livelihood of the resettlers. As for the Tokuyama dam construction, a fund called "zaidan hojin kiso sansen suigen chiiki taisaku kikin" was made for the resettlers. One of the benefits that resettlers received from this fund is money distribution. Five million yen for each household was distributed for livelihood reestablishment. Although it was not prepared specifically for women's empowerment, it was possible for women to use this

money to find new roles. However, it became clear that all the women who were interviewed in this research did not know about the money distribution and only their husbands used the money for such things as their hobbies. The reason why women did not know about the money distribution stemmed from the relationship between wife and husband. In Tokuyama, the husband always manages the money and the wife does not have the right to do so (an example that can be explained by root causes in the PAR model).

Loss of access to common property assets

Sometimes women participated in the inspection process by the JWA to define which area of the common forest is owned by each household. Women had an opportunity to attend negotiations regarding the common forest due to a system of daily allowance for the participants (an example of dynamic pressure at the micro-level in the PAR model). However, there was a slight difference between “dam brides” and Tokuyama women: one “dam bride” said that Tokuyama villagers were more familiar with the common forest than outsiders and that is why Tokuyama women strongly insist on their right to own the common forest (an instance of root causes in the PAR model) (Anonymous, 2018a).

Table 4. Results of Analysis by PAR model in Tokuyama dam.

Category	Gender Issue	Type of Factor	Root Cause	Dynamic Pressure (macro)	Dynamic Pressure (micro)	Unsafe Condition
Landscape	Women's opinion	Success factor			There was a system of daily allowance for participants. Therefore, women had opportunities to attend the meeting.	
		Failure factor	Women completely gave up insisting on			

			their opinions due to cultural constraint.			
	Decrease of farm land	Success factor		An acreage-reduction policy was implemented by the government.	There was a system where resettlers had an option whether they could continue farming or not.	
Joblessness	Women's new role	Success factor	Dam brides had experiences in working part-time in big cities.	There were many job opportunities due to rapid economic growth.	There was a system of job placement due to obligation for the constructor to facilitate livelihood reestablishment.	
				Necessity to find a new job instead of farming due to an acreage-reduction policy.		
	Funding	Failure factor	Women were not aware of the distribution fund due to men's management of money.			

Common property assets	Women's participation	Success factor			Women had an opportunity to attend negotiations regarding the common forest due to a system of daily allowance for participants.
		Failure factor	Dam brides faced a problem of lack of knowledge due to dam bride's completely different background from Tokuyama women.		

4.3.3 Long-term impacts

It became clear that women changed their productive activities in the long run after resettlement. Mainly, women's roles changed in three areas. Figure 4 shows the changes of women's productive activities before and after resettlement.

(1) Part-time jobs

As mentioned before, women easily obtained part-time work after resettlement due to economic growth. However, most of them did not continue in these jobs until retirement age. Before women reached retirement, the husbands retired from their jobs and started new activities, such as election campaigning, small businesses, caring for their parents,

and so on. Therefore, most of the women quit their jobs and started supporting their families.

(2) Side jobs

As also mentioned earlier, some of the women were engaged in side work (such as sewing) after resettlement. However, such job opportunities decreased because of economic stagnation. Therefore, women had no choice but to leave such work in the long run.

(3) Farming

After resettlement, a very small number of women continued farming. As time passed, these women who continued farming asked their husbands to buy farming machinery; they also borrowed machines from the Japan Agricultural Co-operatives (JA). Therefore, women in this case did not face gender issues of women’s burden as in other cases. However, as these resettlers aged, they lent farm land free of charge because the second generation did not want to inherit this land or to be engaged in farming. In addition, land prices became cheaper and it was difficult to sell their land. Thus, some women said that they had to think seriously about whether to buy farm land at that time.

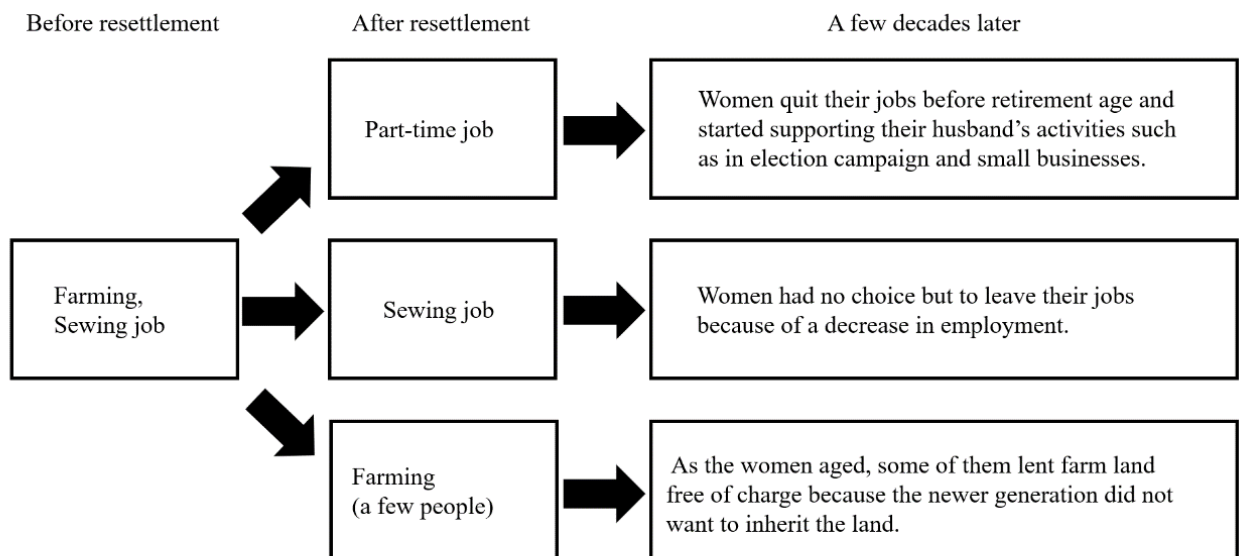


Figure 4. Changes of women’s productive activities through the long run in Tokuyama dam.

5. Case study: Kotmale dam in Sri Lanka

5.1 Basic information about Kotmale dam

Kotmale dam is five major head works projects in Mahaweli Project in Sri Lanka and it has a water storage capacity of 722 million tons. Figure 5 shows the location of the Kotmale dam. The dam was built by the Mahaweli Authority of Sri Lanka (MASL) on the Kotmale Oya (a tributary of the Mahaweli Ganga) for the purposes of employment creation, power generation, water supply and production of rice in resettlement area. About 3200 households were displaced from late 1970 to early 1980 by the Kotmale dam construction (Werellagama, 2005). Table 5 shows a timeline of Kotmale dam construction. Financial assistance for the projects has been provided by the government of Sweden. Preliminary studies of Kotmale project were carried out by the Government of Sri Lanka with the assistance of US Agency for International Development (USAID) in 1961 and subsequently by UNDP and FAO from 1964 to 1968. A feasibility study of the project was carried out by the Water and Power Development Consultancy Services from 1973 to 1976. (Mahaweli Authority of Sri Lanka (MASL) 2006)

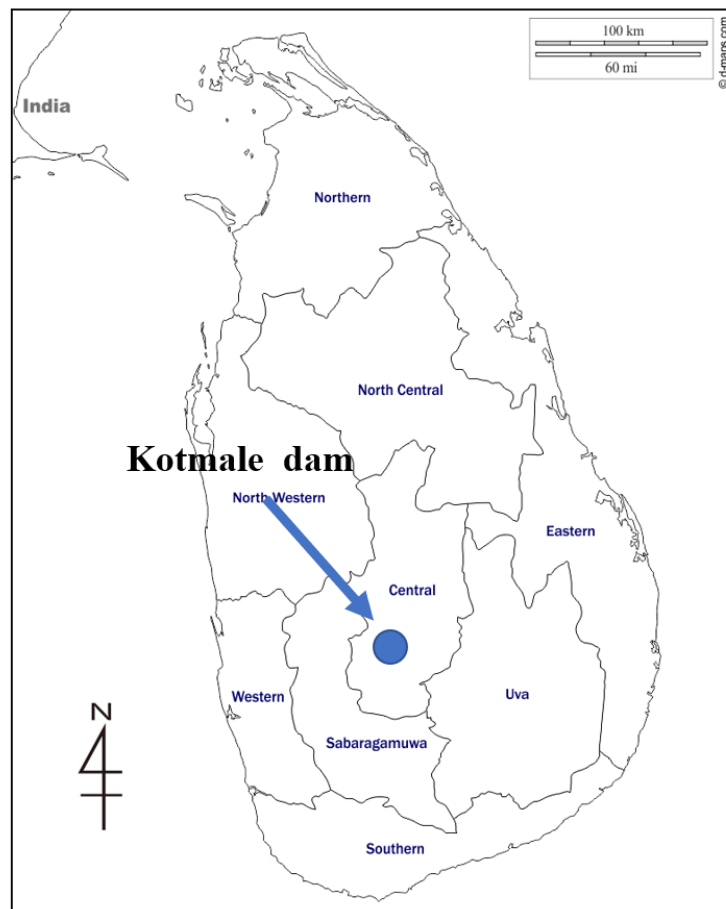


Figure 5. Location of the Kotmale dam.

Table 5. Timeline of Kotmale dam construction.

Year	Event
1961	Preliminary studies of the Kotmale project were carried out by the Government of Sri Lanka with the assistance of USAID.
1964 to 1968	Preliminary studies of the Kotmale project were carried out by UNDP and FAO.
1973 to 1976	A feasibility study of the project was carried out by the water and Power Development Consultancy Services.
Late 1987	Resettlement started.
February 1979	Construction work commenced.
November 1984	The reservoir was impounded.
June 1985	Commercial power generation commenced.

Source: Developed by the authors based on Mahaweli Authority of Sri Lanka (MASL) (2006).

The MASL asked the resettlers to move to (a) one of the three resettlement areas (i.e., Systems B, C, and H) for paddy cultivation or (b) a location for tea plantations near the old Kotmale village. The Kotmale villagers who chose resettlement areas in Systems B, C, and H for paddy cultivation lived there with other people: (a) people involuntarily displaced by the construction of another dam in the Mahaweli development program and (b) people who voluntarily moved to the resettlement area from various parts of Sri Lanka to obtain land and cultivate paddy. Figure 6 presents the all resettlement areas prepared in the Mahaweli project. The resettlement areas are called Systems B, C, and H. These areas were accepted by the Kotmale villagers (Figure 6).



Figure 6. Location of the resettlement area in Mahaweli development project. (Mahaweli Authority of Sri Lanka (MASL), 2006).

We conducted field surveys in Systems B, C, and H. These resettlement areas consisted of villages. Table 6 presents the number of participants, the names of the villages that accepted the Kotmale villagers, and the locations where we conducted the field surveys. The population we targeted to conduct the interviews was first-generation women displaced by the Kotmale dam construction. Figure 7 shows the distribution of the age of the participants. Most of the participants were aged approximately 60 to 70 years, and this age range was related to the dam construction beginning approximately 40 years before the field surveys were conducted.

Table. 6 The village name and the number of interviewees.

SystemB	Badanagala	15
	Ihalaellewewa	6
	Weerana	3
SystemC	Gankewela	11
	65 Yaya	12
	Othalayaya	8
SystemH	Kothmalpura	18
	Gurugama	15
total		88

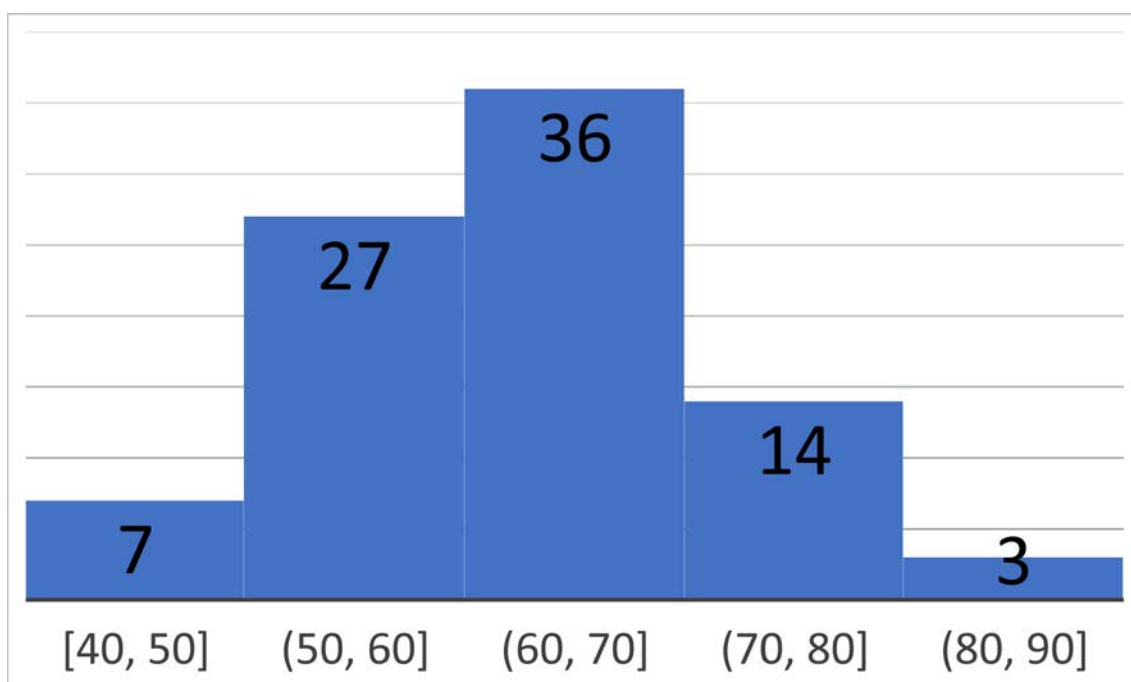


Figure 7. The distribution of age of interviewees.

5.2 Previous research about Kotmale dam

As for short-term evaluation, Mendis (1973) analyzed the Mahaweli development program and pointed out that the development program highly focuses on the economical benefit and did not involve resettlers. On the other hand, Takesada (2008) evaluated the resettlement in case of Kotmale Dam from the long-term perspective stated that resettlement people have their own strategies even though resettlers did not participate in the decision making in the development program. Some of them chose the resettlement area for getting education opportunities for a future generation nevertheless they experienced poverty in a short-term. In case of Victoria Dam, which is one of the developments in Mahaweli Project, Manatunge (2016) evaluated the resettlement in the long run and discovered differences of satisfaction level between the people living in different places categorized into 4 groups. The differences of satisfaction level were caused by some elements such as stability of income, land ownership, education opportunity, and infrastructure. These research from the long-term perspective shows the effectiveness of long-term evaluation. Moreover, construction of Kotmale dam also triggered some issues for women as shown in chapter 1.2. Kumar (1987) clear gender issues about land and women's burden. As for land, male or husband were recognized as head of the household and women who originally owned their own lands before displacement were excluded from the rights to lands. In addition, Only the son has right to inherit the land for preventing fragmentation while customary law allows women to have their own lands. As for women's burden, introduction of double cropping meant that women's burden was increased and husband started to manage cash income, which makes women suffered from mental distress. Rohana (1991) also clear many issues for women.

1. women lost "gam medda" (clusters of houses consisting of several nuclear families) which supports women and shares the burden of women's task such as house work.
2. people lost the traditional system of reciprocal exchange labor (attama and kaiya) and they couldn't help each other due to caste differences and different places of origin.
3. Marriage style (binna marriages, dida marriages), which husband live in wife's house was lost and women lost support from their family.
4. Lack of common lands was another factor that women lost their access to income generating opportunities. Women were not able to use common lands for keeping livestock and slash-and-burn cultivation which are traditional ways to earn money for women.
5. Women couldn't attend training programs and social activities because of domestic works.
6. Women have only little influence on decision making regarding farm production, marketing and family budget due to lack of land.

Schrijvers (1993) also pointed out some gender issues from the perspective of cultural anthropology.

1. Especially women and children were visibly undernourished.
- 2.

Women missed supports of their mother in case of child care, martial conflicts, and in general to help them. In addition, girl-child couldn't go to school because of the distance and had to engaged in a childcare and housework. (isolation). 3. Many men tried to suppress their own frustration and fear of failure by taking to heavy drinking and beating their wives. (the changes in male behavior). 4. Women became to economically depend on men because of loss of land for slash and burn cultivation and job opportunities (their economic dependency on men). Based on these previous research, it is clear that especially women suffered in Mahaweli development as in other cases.

5.3 Result of field survey about Kotmale dam

5.3.1 Dam bride in Kotmale case

(1) Urgent marriage

We observed “urgent marriage” households, that is, couples who got married quickly to obtain compensation during the negotiation period, in the Kotmale dam case. Notably, urgent marriages were not observed in the Tokuyama dam case. Urgent marriages are typically conducted between relatives in the same village. Therefore, these couples may have got married even without the dam construction. However, the resettlers attempted to get married and create an independent household to obtain compensation, and even girls aged younger than 18 years rarely got married.

The number of women who reported urgent marriage households in the resettlement area was six women out of the 89 women (Figure 8). In the Maswela village in System B, approximately 8% of the women were categorized as being in an “urgent marriage” and 7% of the women were categorized as a “dam bride,” which we describe in the next chapter based on the interviews (anonymous 2018b).

Regarding the negotiation period before resettlement, the duration depended on each hamlet in the old Kotmale village. In the case of Sri Lanka, the government indicated that the villagers had no choice but to leave their village and transfer to the resettlement area; thus, their displacement was involuntary. Therefore, the negotiation period in this case is as follows: the time from when villagers were informed about resettlement to the time when they started to leave. For example, the duration of the negotiation in the Maswella village was 1.5 years. The shortest duration of negotiation was 3 months, and the longest duration of negotiation was 5 years. Table 7 presents the urgent marriages in the women's original village in the old Kotmale village and the women's attribute information related to marriage. These women were relatively younger than the other participants because they did not get married until the dam construction was announced. Each woman in an urgent marriage in this case was from a different hamlet in the old Kotmale village.

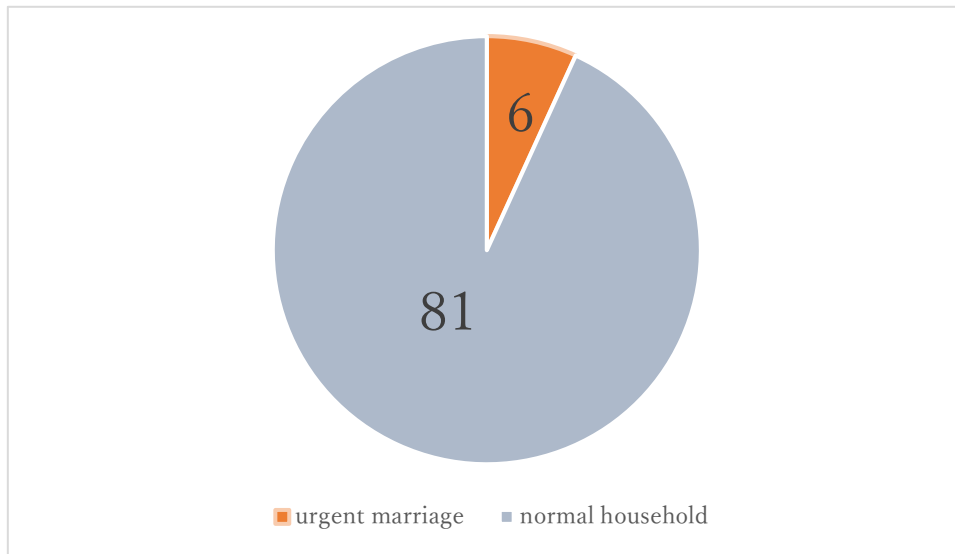


Figure 8. number of “urgent marriage” and normal household.

Table 7 “urgent marriage” women’s attribute information related marriage.

Name code	age	Original village in Kotmale	Year of marriage	Age at the time of marriage
A	50	Maswela	1980	12
B	66	Morape	1976	24
C	53	Hedunawa	1982	17

Di	58	Gankewela	1984	24
E	56	Othalawa	1983	21
F	52	Mawala	1985	19

(2) Dam bride

Some “dam brides” married men originally from Kotmale in the period immediately prior to the dam’s construction and the subsequent resettlement, which are same women as Tokuyama dam case. The characteristics regarding this matter are as follows. A few women from outside villages came to the Kotmale village to obtain compensation. These women were from cities far away from Kotmale, for example, Kegalla and Kandy. Most of these women were farmers, and a few of these women worked in the government sector, for example, in schools. In the Maswela village in System B, 7% of the women were categorized as dam brides. In case of the Kotmale dam resettlement, each village in Kotmale had different duration for the negotiation period. The Maswela village, Nawangama village, and Thispane village were granted more than 1.5 years to move to resettlement areas. The other villages were granted 5 months to resettle from the time of the announcement of the dam construction. We observed that in some of the villages that had a relatively long negotiation period, this long duration triggered urgent marriages and dam brides. We also observed this trigger in the Tokuyama dam case: The duration of the negotiation was more than 30 years, and during this time, many “outsiders” arrived and incidences of dam brides were observed.

5.3.2 Short term impacts in Kotmale case

Based on an IRR model, the risks women faced during the negotiation period and after resettlement were categorized into five problems: Landlessness, Joblessness, Homelessness, Marginalization, and Morbidity. The analysis we conducted on these five

problems was based on the PAR model. This analysis assessed what types of factors were connected to the success or failure of the resolutions made by the women (Table 8).

Landlessness

A problem people faced was a decrease in the quantity and quality of land. Therefore, women, especially women engaged in paddy cultivation in addition to house work such as child care, suffered from the difficulties of farming. The reason why resettlers faced problems regarding the quantity and quality of land was that the government had selected an arid area as the resettlement area. The government's goal was to develop land that had never been used for farming or rice cultivation, and this situation is explained by the unsafe condition in PAR model.

We observed a unique case: a dam bride had negotiated with the Mahaweli Authority and moved to the tea areas proximal to the Kotmale village where the income was immediate and guaranteed. This case was the only case of this type that we observed in the Gurugama village in System H, that is, a resettler negotiated with the Mahaweli Authority and received alternative land free of charge; notably, resettlers usually sell their land in the resettlement area to move to a new area (Anonymous. 2018c). This unique dam bride characteristics can be explained by the root cause in the PAR model.

Regarding the right to own land, the literature has stated that males or husbands were recognized as heads of the household and women were excluded from the right to land. In this study, based on our survey, we observed that husbands in all the households owned land in the resettlement areas. However, as reported, there were unique cases of women in urgent marriages who married men from outside the village were able to obtain new land for women after resettlement, and this phenomenon can be explained by root cause in PAR model.

Regarding the selection of resettlement area, women were excluded from the decision to select a resettlement area. This situation was especially relevant to the people in System H, who faced water scarcity that resulted in insufficient amounts of water for housework and farm use. Therefore, these women had to walk long distances to collect water. Some men in the System H explained that the villagers consisted of men cheated by the government because the government had provided false information to convince the people that the resettlement area had an adequate water supply. This group consisted of men who had misunderstood that the well in the resettlement area works correctly although fetching water from a well is women's job. (Anonymous. 2018d) The reason why this community had problems regarding an insufficient water supply was that the women had been excluded from the group that assessed the resettlement area before

moving, and this phenomenon can be explained by a root cause in the PAR model.

Joblessness

After the resettlement, the Sri Lankan women did not obtain a new role; by contrast, the women in Tokuyama dam case obtained new roles, for example, part-time jobs proximal to the resettlement area. The reason why the Sri Lankan women did not have an alternative was that these women were not highly educated, especially the women in Systems C and H. Therefore, finding a job outside of farming was difficult. Notably, the women in System B found new jobs in cities. Another reason why women did not obtain a new job was that the area around the resettlement area was not developed; thus, there were no job opportunities. This phenomenon can be explained by dynamic pressure (macro level) in the PAR model. By contrast, in the Tokuyama dam case, many job opportunities, such as sewing, were available because of rapid economic growth. Moreover, in the Sri Lankan case, there were no Systems such as job placement to help the women obtain an alternative job. This phenomenon can be explained by dynamic pressure (macro level) in the PAR model. In the Tokuyama dam case, the women received training before the resettlement, and the dam construction introduced new jobs for women.

Homelessness

In the Mahaweli projects, the Mahaweli Authority did not prepare houses in the resettlement area for the resettlers. Therefore, the resettlers had to build houses. Although the government distributed materials for building houses, these materials were insufficient, and the resettlers had to find or buy additional materials. Usually, women are regarded as passive victims in the context of forced displacement. However, we observed that women collected materials in addition to their job (e.g., child care), which can be explained by a root cause in the PAR model. In a unique case, a woman returned to the forest around her old Kotmale village to collect materials, despite the many hours required to make the trip, which required walking and taking a bus. (Anonymous. 2018e)

Marginalization

As indicated in the literature, the resettlers lost the mutual support that they had exchanged with neighbors, and most notably, the women with duties such as housework experienced an increased burden. Men also incurred problems, for example, the insufficient number of workers in the funeral sector in the resettlement area, and the absence of a water infrastructure for farming. However, as over time, women's associations to share the burden, farmer organizations for water management, and local

community groups for funerals were established, which can be explained by dynamic pressure (micro) in the PAR model. These changes in the community group for mutual support means that the resettlers were not always passive, and they attempted to solve problems in the long run. These community groups were gradually established and observed in almost all the resettlement areas in Systems B, C, and H. Therefore, concerns related to marginalization were gradually solved, and women’s burden decreased.

Morbidity

In the resettlement area, cases of malaria were observed a few years after the resettlement because the government had selected land in the jungle for the resettlement areas; this can be explained by unsafe condition. To manage the problem, the government distributed medicine and controlled the spread of malaria with the use of insecticides. Therefore, the duration of the problem was short, and this can be explained by dynamic pressure at the micro level. However, women’s burden increased because of the spread of malaria for the first a few years because taking care of a family is the women’s role.

Table 8. Results of Analysis by PAR model in Kotmale dam.

gender issue	type of factor	Root cause	Dynamic Pressure(macro)	Dynamic Pressure(micro)	Unsafe condition
Landlessness					
Decrease of quantity and quality of land	Success factor	A dam bride negotiated and moved to tea areas where income was immediate and guaranteed			
	Failure factor				Government tried to develop land in the dry zone.

Right to own land	Success factor	A few urgent marriage women got married with men from outside and owned their own land			
Women had to walk long distance to collect water.	Success factor			A water infrastructure and water community were gradually established.	
	Failure factor	Women were excluded from the decision making about selecting resettlement area.		A lack of water infrastructure in the short term.	
Joblessness					
Lack of job opportunities for women	Failure factor	Women are not highly educated (in System C, H)	The area is not developed and there were no job opportunities.	A lack of system for job placement	
	Success factor	Women are highly educated (a certain area in System B)			

Homelessness					
Loss of house	Success factor	Women also had an important role to gather materials to build temporary house.		Government distribute some materials.	
Marginalization					
Lack of mutual self-help and community support and lack of water	Success factor			Women's Associations and Farmer Organizations (for water management) and community development societies were gradually established.	
Morbidity					
Malaria	Success factor			Government distributed medicine and controlled spreading of malaria with the use of insecticides.	

	Failure factor	Taking care of family is completely women's role			Government made resettlement areas in jungles.
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5.3.3 Long term impacts in Kotmale case

Before the resettlement, women were engaged in various occupations: jobs in farming, on tea plantations, and in the government sector. However, immediately after the resettlement, the women had to engage in farming and housework. Therefore, the women's burden has been recognized as a topic related to gender in the literature. This research evaluated the changes in women's productive activities in the long term (Figure 9).

In Systems B and C, the women's burden dramatically decreased because the women saved money and borrowed farming machines from a farmer's association that gradually established a few years after the resettlement. In System H, people did not earn so much money because of a water shortage and did not borrow machines. Therefore, we observed that infrastructure in the resettlement area was one of the most important factors that affected livelihood reestablishment and women's burden.

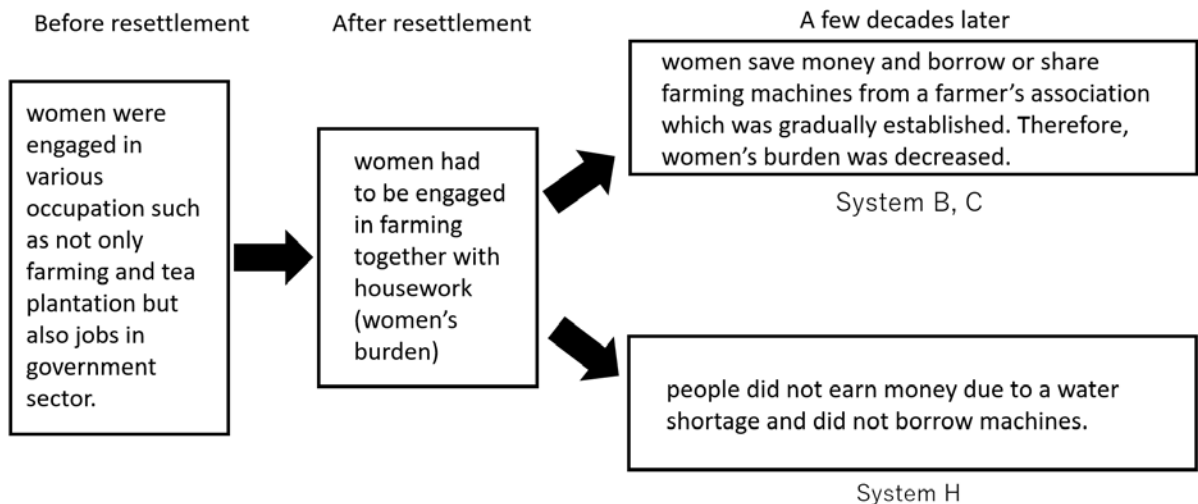


Figure 9. Changes of women's productive activities through the long run in Kotmale dam.

6. Conclusion

Finding 1: There were dam bride households and urgent marriage households before resettlement.

There are dam brides from outside in the cases of Japan and Sri Lanka. Both cases offer compensation for resettlers, and the compensation motivates women living outside to settle down in the village to be submerged by dam construction.

Although the dam brides in the Kotmale case were observed to not differ from the villagers originally from Kotmale village, the dam brides in Tokuyama case have characteristics that differ from villagers originally from Tokuyama village. These characteristics are categorized into positive characteristics and negative characteristics in the context of dam resettlement. Regarding the positive characteristics, the dam brides in the Tokuyama case were basically from cities bigger than Tokuyama village. Therefore, these dam brides were good at working in part-time jobs and easily reestablished their livelihoods. In addition, people originally from Tokuyama seldom interacted with the people in the host communities, whereas dam brides were keener to establish relationships with people in the host community. For the negative characteristic, dam brides were sometimes excluded from the negotiation process, such as negotiations about the common forest in Tokuyama, because of their background.

Urgent marriages were observed in case of Sri Lanka. Some women attempted to get married immediately before the resettlement. These women basically got married to a relative in the village. Therefore, their characteristics did not differ from the other villagers. Only one unique characteristic was observed: women in urgent marriages were relatively younger than the other villagers, and a few women aged 18 years were not married.

Finding 2: Women attempted to solve issues caused by dam construction with the agency before and after resettlement.

Although women have been regarded as passive victims in the context of dam resettlement in the literature, we observed women's important role with the agency.

Regarding the land, in case of Japan, women were involved in the resettlement process because of the allowance system. Therefore, women had an opportunity to reflect on their opinions of the resettlement scheme. Regarding jobs, in the case of Japan, women easily obtained a new job after resettlement because of job placement Systems. These examples demonstrated that Japanese women were not always passive victims and contributed to

solving problems with agency. The Sri Lankan women also played a crucial role in reestablishing their livelihood. Regarding the homelessness problem, women also gathered materials and built their houses in the resettlement area. As presented in the previous chapter, in some unique cases, women returned to their home land, despite the long distance, and obtained materials.

Findings3: In the long term, women's roles (job and farming) are expected to change. This research also clears the change of women's productive activities in the long run. Regarding the change in job, in case of Tokuyama, women obtained a part-time job, for example, a sewing job, immediately after resettlement without difficulties. However, job opportunities that did not require women to have a specific skill, such as sewing, decreased in the long term. Regarding farming, in the cases of Tokuyama and Kotmale, farming machines and farmer's associations enabled women to cultivate farm land more efficiently; however, the literature had evaluated resettlement only in the short term and had indicated that women's burden dramatically increased immediately after resettlement in Sri Lanka the case. However, in System H, people did not earn money because of a water shortage and did not borrow machines. Therefore, women's burden did not change in the long term.

Findings4: IRR and PAR models have effectiveness and ineffectiveness to explain the phenomena in dam resettlement from the perspective of gender.

(1) Evaluation of IRR model

Through analysis of the dam resettlement from the perspective of gender, both the difficulties and effectiveness of the IRR model became clear. As for the difficulties, it was hard to explain the trivial risks, which mainly occurred in a developed country such as limited rights to state their opinions in meetings for resettlement and the right to insist on their common forest area however women are usually excluded from meetings in case of developing countries. The reason why the IRR model has difficulty in explaining these trivial risks is that this model was made based on some involuntary resettlement cases in developing countries. Therefore, this model is not useful to describe the same phenomena in a developed country. On the other hand, the IRR model is effective in describing gender issues in the context of dam resettlement. Fujikura and Nakayama (2015) evaluate some dam resettlement cases in Asian countries by the IRR model and the Tokuyama and Kotmale cases were also analyzed. However, it became clear that some risks and good practices can be found in the Tokuyama case from the gender perspective, which were not pointed out in the previous research. Good practices include, for example, a system

of job placement, and allowing both women and men to participate in meetings to facilitate livelihood reestablishment.

(2) Evaluation of PAR model

Basically, the PAR model is used for disaster cases and is seldom used for dam resettlement. However, the result of this research proves that the PAR model is useful to explain factors connecting issues in involuntary displacement due to dam construction. The PAR model works well especially with gender issues because this model also explains the factors that arise from root causes, such as money management by men. In contrast to the effectiveness of the PAR model, no factors were explained by the category of unsafe conditions in case of Tokuyama. However, some factors categorized into unsafe condition in Sri Lankan case connected to gender issues because the physical environment (such as a dangerous location) and the local economy (such as low-income levels) are completely different from the Japanese case.

6.6 Policy recommendation

(1) Dam bride

Dam brides with an insufficient amount of knowledge regarding submerged areas must be considered in the process of resettlement.

(2) Urgent marriage

Compensation payments to individuals aged younger than 18 years should be prohibited.

(3) Women's participation

A system that promotes the participation of women in the negotiation process is required, for example, allowances and the opportunity to participate in the pre-resettlement bus trip should be provided.

(4) Job

Job training for professional jobs before resettlement, and the creation of job opportunities projected to persist in the economy.

(5) Farming

Introducing farming machines through farmer's associations and adequate water infrastructure development immediately after, or perhaps before, resettlement.

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Appendix

水没移転者の男性と女性に対する質問票 (調査一度目)

ご回答にあたって

①本調査は、世帯ごとの調査ではなく、個人ごとに回答していただくものです。
できる限りご家族の方との相談はせずに、ご自身の率直なご意見を述べてください。

②今回ご回答いただいた内容については学術研究でのみ利用し、それ以外の目的で利用することは一切ございません。また、研究発表の際には匿名を用い、個人情報は一切公表しないのでご安心ください。

調査日時: 平成 29 年 月 日 () 時 分 ~ 時 分

調査者氏名 :

回答者氏名 :

①ご自身に関する質問

問1 年齢はおいくつですか？

問2 最後に通われた学校はどちらですか。(1. 旧制尋常・高等小学校 2.旧制中等学校 3.旧制高等学校 4.旧制大学 5.中学校 6.高校 7.短大・高専 8.大学・大学院 9.その他)

問2.1 移転する前の同居していた家族構成を教えてください。

問2.1.1 移転した当時の同居していた家族を教えてください。変化した場合、それについてどうお思いますか。

問2.2.2 現在の同居している家族を教えてください。

②移転全般に関する質問

ダム建設・生活再建について

問3 当時ダム建設に賛成でしたか。理由も教えてください。

問4 現在の移転先を選択した理由があれば教えてください。

問5 他に希望していた移転先はありましたか。(表山・文殊・網代・糸貫・芝原) 理由も教えてください。

問6 移転時の補償金について、どのようにお考えですか。

問7 移転時の補償として得た住宅や集団移転地についてはどのようにお考えですか。

問8 移転時の生活再建措置として行われた職業斡旋についてはどのようにお考えですか

問9 現在得た補償の他に、何か必要であったと感じる補償はありますか。

問10 今思い返し、移転先の地域に必要であったと感じるものが何かあれば教えてください。また、逆に移転先にこれがあったので良かったと感じているものがあれば教えてください。

③移転後の変化に関する質問

移転後の生活の変化について

現在住む場所に移転してから変わったことについてお尋ねします。

問11 移転をしてから、普段の生活は良くなったと思いますか。

問12 娯楽は何か変わりましたか。

問13 その他変わった点はありますか？

地域（コミュニティ）内におけるご自身の役割の変化について

問14 移転する前の地域内において何か団体や活動に参加されていませんか。また、そこで何か役職をされていませんか。

問 14.1 現在お住まいの地域において何か団体や活動に参加されていますか。また、そこで何か役職をされていますか。

問 15 移転する前の地域の人たちとの関係とはどのようなものでしたか。

問 15.1 現在お住まいの地域の人たちとの関係はどのようなものですか。

問 16 移転する前の地域からご自身が得られるもの（例：近隣同士の助け合い、自然の恵みなど）は何がありましたか。

問 17 現在お住まいの地域から得られるものは何かありますか。（例：交通の便、新たな近所付き合い）

家庭内におけるご自身の役割の変化について

問 18 移転後、ご自身のお仕事は変わりましたか。移転前の仕事も含め、年代順にこれまでのお仕事や、兼業のお仕事について教えてください。（いつ頃・業種・雇用形態・仕事場所）

問 18.1 移転してからこれまでのご自身のお仕事（もしくは家事）についてどのようにお考えですか。

問 18.2 移転する前と比べて、ご自身のお仕事による収入は変わりましたか。

問 19 移転する前と比べて、移転後は家庭内におけるご自身がこれまで担当していた仕事や役割は変わりましたか。

問 20 移転する前と比べて、移転後は同居しているご主人（もしくは奥様）との関係は変わったと思いますか。（例：仲が深まった、意見を言えるようになった）

問 21 移転した後に、同居している（もしくはしていた）ご家族とご自身の関係は変わりましたか。

インタビューは以上となります。ありがとうございました。

徳山ダム建設と水没移転に関する調査研究 (調査二度目)

水没移転者の女性に対する質問票

ご回答にあたって

①本調査は、世帯ごとの調査ではなく、個人ごとに回答していただくものです。できる限りご家族の方との相談はせずに、ご自身の率直なご意見を述べてください。

②今回ご回答いただいた内容については学術研究でのみ利用し、それ以外の目的で利用することは一切ございません。また、研究発表の際には回答者については匿名とし、個人情報は一切公表しません。

①ご自身に関する質問

問1 年齢はおいくつですか？

問2 旧徳山村に住んでいた期間はいつからいつまでですか。

問3 最後に通われた学校はどちらですか。(1. 旧制尋常・高等小学校 2.旧制中等学校 3.旧制高等学校 4.旧制大学 5.中学校 6.高校 7.短大・高専 8.大学・大学院 9.その他)

問4 ①移転する前②移転した直後③現在の家族構成を教えてください。

②移転全般に関する質問

問5 当時はダム建設に賛成でしたか。また、補償をめぐって何かの活動に参加されていましたか。

問6 現在の移転先を選択した理由を教えてください。

問7 他に希望していた移転先はありましたか。(表山・文殊・網代・糸貫・芝原・その他)

問8 移転して良かった点は何かありますか。また、特に移転した女性にとって良かった点は何かあると思いますか。

問9 移転して悪かった点は何かありますか。また、特に移転した女性にとって悪かった点は何かあると思いますか。

③仕事に関する質問

問10 移転する前と移転した後にご経験されたお仕事の時期・業種・雇用形態・仕事場所についてそれぞれ教えてください。

問11 移転する前とした後で比べ、ご自身が稼げる収入・仕事量は増えましたか。また、ご経験された仕事についてどのようにお考えですか。

④家族との関係に関する質問

問12 移転した直後、ご実家のご家族との関係は変わりましたか。

問13 移転後、家庭内においてご自身の役割は変わりましたか。

⑤地域との関係に関する質問

問14 移転前に外部から旧徳山村に嫁いできた人たちがいると思いますが、どのような関係でしたか。

問15.1 移転前は旧徳山村で大事な頼み事をする人・悩みを相談する人が近所でしたか。

問15.2 移転前は旧徳山村でどのような活動に参加されていましたか。

問16.1 移転直後、大事な頼み事をする人・悩みを相談する人が近所でしたか。また、現在はどうか。

問16.2 移転してから、地域の活動に何か参加されましたか。

⑦その他の質問

問 17 ダム移転に関して何かご意見はありますか。

インタビューは以上となります。ありがとうございました。

Questionnaire in Sri Lanka

Survey place: _____

Name _____

Gender _____

RQ1: Dam bride

Q1 How old are you?

Q2 Where are you originally from?

Q3 How long did you stay in the submerged village?

Q4 When did you get married

(In case of A. Norma household)

Q5. Do you recognize about urgent marriage and Dam bride, which seek compensation?

Were there any good or bad points for you?

(In case of B. Urgent marriage)

Q6. Why did you get married just before resettlement? Were there any good or bad points?

(In case of C. Dam bride)

Q7. Why did you move to the submerged village and get married just before resettlement?

Were there any good or bad points?

RQ2: Short term impact

<IRR model>

Q8. What kind of difficulties did you face?

Q9. Did you face difficulties of ① Landlessness ② Joblessness ③ Homelessness ④ Marginalization ⑤ Morbidity ⑥ Food Insecurity ⑦ Loss of access to common property assets ⑧ Social Disarticulation?

<Agency theory>

Q10. How did you overcome the difficulties? (this question will be asked for each gender

issues answered in Q9)

<PAR model>

Q11. How did you get the resources and agency (motivation)? (this question will be asked for each answer in Q10) Or Why did not you get the resources and agency (motivation)?

RQ3: Long term impact

<Before resettlement>

Q12. What kind of productive activities (such as farming • wage labor) were you engaged in before resettlement?

Q13. What kind of reproductive activities (such as cooking • washing • fetching water) were you engaged in before resettlement?

Q14. Why were you engaged in the productive and reproductive activities?

<After resettlement>

Q15. What kind of productive activities (such as farming • wage labor) were you engaged in after resettlement

Q16. What kind of reproductive activities (such as cooking • washing • fetching water) were you engaged in after resettlement?

Q17. Why were you engaged in the productive and reproductive activities?

<Now>

Q18. What kind of productive activities (such as farming • wage labor) were you engaged in now?

Q19. What kind of reproductive activities (such as cooking • washing • fetching water) were you engaged in now?

Q20. Why were you engaged in the productive and reproductive activities?