

# 東日本大震災後の復興に関するジェンダー視点からの意識調査 調査報告書 「英語版」

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## **CASE STUDY: RESILIENCE AND WOMEN’S LEADERSHIP IN THE GREAT EAST JAPAN EARTHQUAKE**

### **INTRODUCTION**

The study analyzes women’s resilience and leadership from a local approach, in communities directly affected by the Great East Japan Earthquake of 2011. This case-specific analysis in Tohoku, a region historically affected by large tsunamis, provides a map of approaches to determine the direct relationship between resilience and women’s leadership. Through the analysis of four different communities, we answer fundamental questions that determine women’s leadership in disaster: What is the role that people, men and women, occupy in the disaster? Is it the same in each phase of the disaster? What are the characteristics of leading the disaster response and who are the people who lead? How do the assistance confluence and what is the impact on the affected community?

Of particular relevance in this discussion is the concept of community leaders. According to Ikeda and Asano (2019) these persons are local actors who, at the time of the disaster and in the different phases of the emergency, act in the management for the good of their community, using their knowledge, experience and previous roles. These leaders (women and men) are not always inserted in the formal management of the Japanese administration, but their contribution and activities are, as we will exemplify, decisive for the communities.

The following case study analyzes on the ground and from different perspectives the roles of people affected by the 2011 tsunami and nuclear accident. Beyond their status as direct victims of the disaster, these people are positioned as leaders of disaster management. We attend to the narratives surrounding the roles that women leaders assume, in contrast where possible with the role assumed by male leaders. The same disaster triggers a response and management that varies from one community to another, so here we offer a sample of cases that allow us to cover a plurality of responses and strategies.

## **METHODOLOGY**

This study is based on an interdisciplinary methodology that combines historical, sociological and ethnographic approaches. From the historical perspective, we observe the processes of Japanese society in the disaster; sociology is the tool to examine the human side of these events; and ethnographic fieldwork allows us to analyze the reconstruction phase by entering into direct contact with the communities affected by the great disaster of 2011. At the same time, the object of study is approached at four levels: national, regional, local and international. In addition, intersectionality is prioritized in our gender approach.

This multilevel, intersectional and interdisciplinary approach responds to the fact that there is no universal response to a particular disaster, as stated by Heijmans (2004), even in communities located in similar conditions. The multiple disasters in Japan throughout history are very disparate in typology and impact, making generalization difficult, so following the methodological approach of Japanese sociology, led by experts such as Urano and Oyane (2007), we study specific cases in communities impacted by the disaster.

This approach is not exclusive to Japanese sociology; authors such as Bankoff (2004) have also study disasters vulnerability through a map of local experiences with global considerations, without general theories or simple solutions and offering various possible paths. This analysis takes a similar path through case studies of local disaster experience in the Tohoku region. It maps historical and contemporary experiences in the Japanese Pacific, with women at the center of the disaster response.

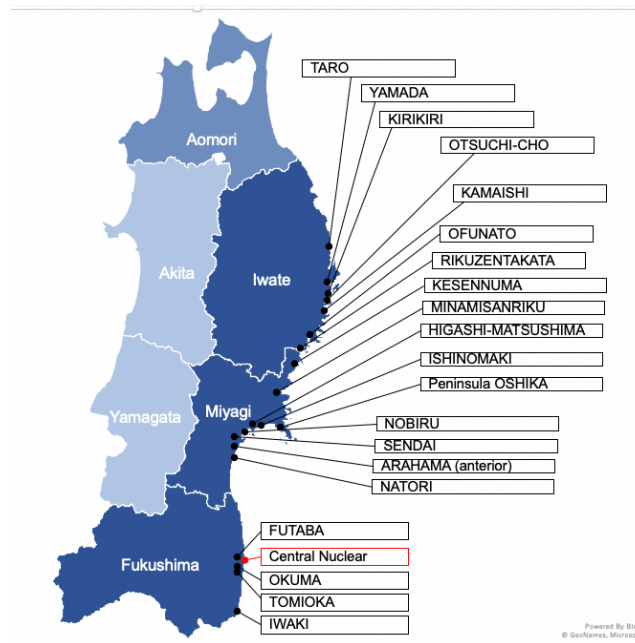
## **DATA COLLECTION**

Fieldwork conducted in Tohoku region focused on three prefectures affected by the 2011 earthquake, tsunami and nuclear accident (Iwate, Miyagi and Fukushima). The study has been carried out through observation technique, exploration of the reconstructed populations, interview (collection of oral testimonies) and collection of local documentation. In total, 20 communities were visited between 2020 and 2023.

Oral data collection was conducted through semi-structured interviews, a general interview and a more specific interview concerning women leaders. All interviews were conducted in person and in Japanese and were carried out in the field after receiving the consent of the participants. After the first contact and interview, communication was maintained via e-mail, letter or subsequent meetings.

Secondly, fieldwork has facilitated access to local and municipal sources: maps, brochures, museum exhibits, private reports and documentation, children's picture books, specialized magazines or photographs.

**Map I. Tohoku impacted populations under study**



Source: by the author

### **CASE STUDY**

Of the 20 communities visited and the information collected, 4 specific cases are presented. How do we select them and by what criteria?

- Each case is a sample of community action in one or more phases of the disaster: prevention, survival, evacuation, reconstruction and transmission.
- Each case highlights one or more women leaders in disaster management in their local communities.
- Each case is located in a different prefecture to show the map of experiences and responses to the earthquake, tsunami and nuclear accident in Tohoku.

Firstly, we analyze the small community of Kirikiri (Iwate), where a women's organization has played a key role for their community historically and also in crisis. This case allows us to delve into survival in extreme conditions, the role of shelter schools, the importance of food security, and how older women leaders acted and what moved them to play these roles.

Secondly, the relationship between resilience, children's education and sustainable reconstruction is explored through a kid's space in Rikuzentakata (Iwate), led by a woman. This case details the role of Japanese women in children's education through the prevention phase and into reconstruction, as well as the actors who made it possible.

Third, the study focuses on Sendai (Miyagi), the global capital of resilience, where a key organization led by women and influenced by the experience of the 1995 earthquake, shows the phenomenon of disaster feminism from a local level, its progress, difficulties and projections.

Finally, the fourth case analyzes the experience of a single mother from Minamisoma (Fukushima), who has built her own risk management based on the experience of Chernobyl in 1986 and the mothers affected by the nuclear accident in Belarus, despite the difficulties.

### **CASE 1.**

#### **Kirikiri: Women's association and resilience in community-based tsunami management<sup>1</sup>**

Kirikiri (吉里吉里), a small fishing community of 1,861 people in Iwate prefecture, was isolated for four days. It belongs administratively to the city of Otsuchi-cho (大槌町), but is separated by a mountain and a tunnel. The tsunami affected Otsuchi-cho City Hall and this fact aggravated the management and rescue since local town councils are the center of operations in emergencies. The community responded to the disaster by its own means.

According to the narrative of the interviews conducted, the community leaders of Kirikiri took an active role in the disaster response, evacuating to the elementary school after the earthquake. The Shinto priest, the director of the Kirikiri community center or the two chairwomen of the Women's Association, among others, were the ones who led the actions. After the tsunami, they managed the school shelter with about 400 evacuees (residents of all ages, including 60 elementary school children and 30 junior high school children, as well as elderly and sick people who lost their homes).

Conditions were very complex: the tsunami left the community without electricity and water, and low temperatures. The community was completely cut off by road. For a total of three months the school was the community's evacuation center, focusing on survival and later on reconstruction. Knowing their territory and the magnitude of the disaster, they were aware that help would arrive, but it would take time. The community managed the disaster for days, weeks and even months.

During the shelter management, community leaders assumed a safeguarding role. As this analysis demonstrates, their actions and leadership were not spontaneous; they respond to a process of community organization that dates back to the last century and whose characteristics of neighborhood cooperation for the common welfare have cemented the basis of coexistence relations and are activated in times of crisis. In this

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<sup>1</sup> For more information and an extended analysis of this case study see: Women and resilience in Japan: The role of Kirikiri's Fujinkai leaders in disaster management. In Cavaliere Paola, Otani Junko (eds.) (forthcoming). *The Handbook of Disasters Studies in Japan*. Amsterdam University Press.

process, the role of women leaders who are part of the historical Women's Association (Fujinkai 婦人会) was key. Their role also demonstrates the importance and relevance of Women's Association in small rural communities in the Japanese archipelago.

We observe community resilience around the shelter and the role of women community leaders, over sixty years of age. The analysis of local archive documentation reveals the close and historical community bond woven around the Kirikiri Women's Association and its role in the face of the disaster. This case also offers lessons learned. The lessons provided by community leaders during the tsunami may be applicable to other areas of the world when a disaster leaves an entire population isolated and the survival of the inhabitants is a priority.

**Table I. Kirikiri damages in numbers**

Population before the tsunami (2011)	Population after the tsunami (2020)	Persons dead and/or missing in the tsunami	Structural damages
2.475	1.861	97	Daño total: 355 (37%) 430 hogares afectados de un total de 780

Source: Kirikiri Community Center

**Disaster management in the narrative of leaders.**

People who assumed leadership in the evacuation center were between 59 and 65 years old. Both women and men were leaders previously recognized by the rest of the neighbors, mostly because of their job or activity in the community, as well as their family lineage. However, the leaders interviewed recognized that they were not prepared for a disaster of such magnitude and affirmed that they had acted for the good of the entire community, that is, they led the management because of their experiences prior to the disaster and their sense of responsibility towards the community.

Leaders acknowledged having heard their grandparents talk about the "tsunami of year 8 of the Showa era" (1933) when they were young and remembered the "Chilean tsunami" (caused by the Valdivia Earthquake of 1960) when they were young. According to these testimonies, during the 2011 tsunami, some older neighbors did not evacuate beyond the memorial because they trusted that, as in the previous occasions (1933 and 1960), the tsunami would not pass the memorial and they would be safe, but this was not the case. This experience has resulted in further reinforcement of disaster prevention and remembrance in the community, which has placed a new memorial in a prominent location.

Kirikiri leaders assumed roles according to their gender and pre-disaster activity. Also, during the reconstruction. The following table summarizes, through analysis of their oral testimony narratives, the roles they assumed as leaders and their descriptions of good leadership in times of crisis.

**Table II. Lessons learned as told by 4 community leaders in Kirikiri**

<b>Women leaders</b>
<ul style="list-style-type: none"> <li>- Evacuating with nothing and managing for months: "There was no time to think about our homes, only to act". "Good leadership, knowing who does what, communicating and trusting people were key" to management. "During management we did not think about gender, we worked for everyone, there was no time to think about anything else." "We have to take care of our local shelters."</li> <li>- "Some sick people were put next to everyone, we did not have space, although the older ones were placed near the bathroom on the second floor."</li> <li>- Managing people from outside the community, "There were a few people from out of town who were stuck here". "I've never been more grateful for my profession than I was then."</li> <li>- "Information is a very precious and sensitive commodity in times of uncertainty."</li> <li>- "Nobody complained, everyone cooperated."</li> <li>- The key to management: "You have to have leaders you can trust".</li> <li>- The role of the Women's Association: "We have a good mutual support system; a good information network and we know everyone. In normal situations we are an organization of housewives and maybe from outside it looks like we are not active, but when something happens, we pull together and work in unison."</li> <li>- We didn't step forward, rather it was people in their 30s and 40s who told us that they would act under our guidance, and the result was positive. We are often asked about the reason for Kirikiri successful management. It is not an easy answer, we have to go back to our organization 70-years of history"</li> <li>- About the reconstruction: "The Women's Association interrupted its activity for 7 years, due to the disappearance of homes and the evacuation in temporal housing outside. We searched for all the women on our membership list, but it was very difficult to find them because households are registered with the father's name as the head of the family. In 2017 many returned. It has taken almost 2 years to reorganize and now we are at a standstill again because of the pandemic."</li> </ul>
<b>Men leaders</b>
<ul style="list-style-type: none"> <li>- "Survival was the priority". The importance of leading in extreme circumstances: "Information was scarce, we asked for patience. Without light, that night the radio was telling us: in this sad and uncertain night let's take care of ourselves and be kind" (the radio will be the only means of communication that will reach the shelter), "There was fear because of what happened, and the continuous aftershocks of the earthquake".</li> <li>- It surpassed all expectations. In times of crisis, we must listen to the authorities and act".</li> <li>- "We had a manual, but we were not prepared. We decided who was good for what according to the tasks, which young people to help and what resources we had. On the 12th [less than 24 hours after the tsunami] we were organized. We knew help would come, but it would take time"</li> <li>- The importance of identifying oneself at the evacuation center: "Those in charge of management tasks wore a yellow vest or a mark in front so that others could easily identify them".</li> <li>- We used the water from the rooftop pool. We divided the spaces according to need: the elderly near the toilet, the sick separated [were placed in the tatami room] and the library for the children to play. The kitchen classroom was the temporary kitchen and we rationed 30 kg of rice that we stored in the sanctuary".</li> <li>- No one was left behind: "Even if it was a small ball of rice, everyone had to eat".</li> <li>- Every day we worked hard, but on Sundays we rested.</li> <li>- On his leadership: "They trusted me. But a leader has to work twice as hard to be respected".</li> <li>- On the reconstruction, which they have documented for ten years: "It had to be done quickly, otherwise people get discouraged, leave and don't come back. First the houses and then the common area and the public building".</li> <li>- Faced with psychological difficulties after the impact, they thought that "we had to fight for the living", "there was no other way" and it was "very painful". For this reason, they decided to celebrate the "undokai" (sports festival) in October of that year as tradition dictates, although for the 2011 "matsuri" (traditional festival) only a discreet ceremony was held at the shrine, without a celebration.</li> </ul>

Source: By the author using oral interviews in Kirikiri

Todos los entrevistados reconocieron el papel de la escuela refugio, así como el impulso por trabajar de forma conjunta por el bien común que sintieron y la preocupación por el impacto psicológico en la comunidad. Todos los entrevistados consideran que Kirikiri es “una comunidad fuerte” y valoran positivamente el resultado en la reconstrucción, a pesar de las dificultades. Muestran apego y amor a su región, de la cual se sienten muy agradecidos (“*arigatai chiiki*”). Los líderes coincidieron en haberse “volcado en devolver la vida a la comunidad” y creen que “su comunidad se ha reconstruido con éxito”.

Si atendemos a la distribución de roles, se puede afirmar que en el momento de mayor incertidumbre resultó fundamental la organización, la acción de los líderes y el buen conocimiento del territorio y la comunidad. En este caso, tanto hombres como mujeres reunieron esas características. Los hombres lideraron jerárquicamente la organización, distribución y supervisión de tareas. Principalmente realizaron trabajos externos y logísticos como la búsqueda y organización de recursos, víveres y ayudas, tareas que requieren uso de fuerza (limpieza y retirada de escombros) y trataron de establecer contacto con las autoridades y el uso de la radio.

In case of women leaders, they managed the spaces, preparation and distribution of food (*takidashi*) together with 10 women neighbors. They also managed information, care for the sick and disposal of the deceased. The women leaders took on supervisory roles in community welfare, such as caring for people, feeding evacuees, and organizing and tidying up the school. The detailed and accurate information they have about the community members proved invaluable in management; a fact also acknowledged by male leaders. The elderly women were recognized by the younger generations as natural leaders.

The role of Kirikiri's women leaders and their response to crisis management in 2011 is rooted in the history of the local Women's Association, an organisation that came into existence in the first half of the 20th century. As Asano (2008) states, local women's organisations have been closely linked to local community development in all around Japan, both socio-economically and educationally. Also, in times of crisis such as war or disasters, as evidenced by the analysis of a local source, kept in Kirikiri community shrine, the *Commemorative Magazine: 40 Years of the Formation of the Kirikiri Community Women's Association* (published on 9 November 1986). Women's Association activities over the decades, which began in 1933, demonstrate the ability of local women to organise and take action for community development and to improve economic and educational situation of women and their families. Women contribution to the community cannot therefore be separated from social development.

On the other hand, testimonies in Kirikiri affirmed that the system of registering households under the name and surname of the men as head of household (*Koseki*) made it difficult to regroup and search for evacuated women during reconstruction. This system, which prioritizes the head of the household, is a recurrent problem in disasters (Masai et al., 2009). It affects women not only because it makes it difficult to register

the family home in temporary housing when evacuated, but also to gain direct access to disaster relief, where payment is made to the head of the household (during the Covid-19 pandemic, Japanese government assistance was given to heads of households, mostly men).

### **Conclusions**

Community resilience of a small fishing village in Iwate in a school evacuation center demonstrates the ability to survive in extreme conditions and the role of leadership assumed by the elderly villagers, both men and women. Leaders of Kirikiri were able to manage and bring the whole community together during the crisis, regardless of gender and age. Resilience fosters leadership in the face of a crisis, empowering everyone, involving the community in management and later in reconstruction.

Elderly women, representatives of the Kirikiri Women's Association, took on management and leadership roles during the emergency, making use of their knowledge and skills. In this case, they took on roles of care and welfare for the community, in line with the historical activities that the Association has been carrying out since the last century. The task of providing relief food (takidashi) is still present as a characteristic of the role expected by women and is still prevalent, although it is not the only role they undertake.

Kiriki women's resilience dates back to the last century and is closely linked to the history of community development. Through the use of local resources and associativism, women actively contributed themselves to local and national developments. In addition, the Women's Association internally promoted the improvement of women's status and rights throughout its history and under different circumstances and crises.

Lastly, family ties and generational hierarchy are still very much alive and present in small rural communities of Japan such as Kirikiri. Women and men still occupy activities and responsibilities that their predecessors did last century, including community leadership. In this case, relationships based on trust and community respect contributed to good disaster response and management and subsequent reconstruction.

## **CASE 2.**

### **Rikuzentakata: Kids education and sustainable reconstruction**

We analyze the process of rebuilding a children's space located in Rikuzentakata town (陸前高田, Iwate Prefecture) after 2011 earthquake and tsunami, the internal and external actors that influenced the process, as well as the role of the woman leader involved and the impact on the community. We assess the resilience, the link to sustainability and the growth opportunities that resulted for the women.

## Rebuilding Kirarin Kids

Kirarin Kids is the name of the children's space (Oyako no Hiroba 親子の広場). There are approximately 7,000 such spaces in Japan. They are designed to support families with young children, serve as a meeting or playing space, and provide educational activities around care and parenting. Kirarin Kids was founded by its director and leader in July 2010, but was severely affected by the tsunami.

After the tsunami, the city quickly set up 80 shelters for 10,000 affected people. Among the missing buildings were the city hall, library, museum, gymnasium, civic centre, hospital, several kindergartens, several senior citizen centres, three of its nine elementary schools and three of its six high schools, parks and the fire station, according to the Report on Earthquake and Tsunami Emergency Relief (2012) by the non-profit Niiza Childcare Support Network.

Kirarin Kids not only lost its space, but the staff and director were seriously affected. Most of them lost family members and/or their homes. However, a month later, on 14 April 2011, the director decided to reopen Kirarin Kids inside a high school library, which became the largest evacuation centre in the city. She and her staff were busy collecting milk powder, nappies and providing "a space of comfort and shelter for families and children", as she explained in an interview.

Disaster reconstruction is an evolving process, taking years and even decades. Today, after going through multiple personal, work and administrative difficulties, as demonstrated by the review of related documentation and the testimony of the director, Kirarin Kids space and its employees have positioned themselves as a reference point for the community, which has been rebuilding in parallel. For almost a decade, Kirarin Kids has gone through several phases of the reconstruction process and various temporary locations, including a container, to finally open its doors in January 2020, in a landmark location in Rikuzentakata community. The children's space is now located inside a striking wooden building designed by Kengo Kuma, along with an interior by designer Akira Minogawa.

The support achieved to raise again this children's space is an example of success that has its origin in the community activity and the efforts of the women in charge, along with the involvement of external actors who promoted a reconstruction project. The space continues to act as a meeting place for children and families and also includes training activities in risk and disaster prevention, as well as the promotion of the United Nations Sustainable Development Goals.

Below are the key players in the reconstruction of Kirarin Kids as a resilient space in Rikuzentakata.

**Table III. Key actors in the reconstruction of Kirarin Kids**

<b>Employees and director/leader of Kirarin Kids</b>
<p>The perseverance of the employees had three objectives: rebuild their lives (1), provide support to families and children (2) and prevent the depopulation of their community (3). Communities cannot be sustainable without children and Kirarin Kids managed to place this problem at the center of the town administrative reconstruction, acting at the same time as a solution.</p> <p>“We believe that children feel happy if our lives are full of joy and smiles, in a welcoming community that supports the growth of both children and parents, through mutual help and the warmth and richness of interactions. Due to the disaster, we experienced misery and sadness, but the enormous energy of children, their courage and liveliness gave the parents strength to continue. Lovingly watching over the children, who are treasures of the community, and providing support to the families who care for them, Kirarin Kids wants to continue with its activities” (Kirarin Kids in 2012)</p>
<b>Local NGO Niiza Childcare Support Network (Saitama Prefecture)</b>
<p>In June 2011, the NGO organized a work team to evaluate the disaster in Tohoku and the effects on children's centers. They were shocked by the level of devastation in Rikuzentakata and the disappearance of the central location where Kirarin Kids had operated. The team visited the institute that acted as a shelter and admired “the efforts of those in charge of Kirarin Kids who, despite having lost loved ones and their homes, had restarted activities again using toys and books to continue supporting affected parents and children. Despite being surrounded by devastation and very cold days, the atmosphere there was like a sunny and hot day in the middle of winter,” the NGO states in its report. The NGO promoted, together with the rest of the actors, a project to rebuild Kirarin Kids, based on frequent visits to the place to evaluate needs and real situation and at the same time consulting with actors and experts who mobilize resources.</p>
<b>International Organization UNICEF</b>
UNICEF experts offer childcare assistance.
<b>NEC private company</b>
Training workshops and technological capabilities
<b>Institution academic Sofia University</b>
<p>Mobilizes resources and offers assistance from specialists in psychotherapy and grief. In spring 2012, funding was secured and “Kirarin Kids redevelopment Support Project” began.</p>
<b>Foreign aid from Japan disaster Relief Fund Boston</b>
<p>Japan Disaster Relief Fund Boston (JDRFB), located in Boston (United States).</p>

Source: By the author based on *Report on Earthquake and Tsunami Emergency Relief* (2012), private documents provided by Kirarin Kids and interview with the women leader and director of Kirarin Kids at Rikuzentakata (November 25, 2021).

In areas affected by a major disaster, many changes occur as reconstruction takes place. These changes especially affected Kirarin Kid's employees, who had to take care of reestablishing their lives both personally and professionally to have means and survive.

In this case, the different actors who intervened in the reconstruction took into account these facts: "The alterations in the hearts of the operating members cannot be ignored. This fact suggests that the project must advance taking into consideration the status of the operators, their children and their families" (2012, p.17).

Currently, Kirarin Kids works on risk and disaster prevention as part of its activities, but according to the director, it is not a priority. They introduce it voluntarily and openly to all the community. However, when analyzing the frequency and type of activities they carry out, it can be stated that the space is very committed to risk prevention in Rikuzentakata. It has been implemented the "Kirarin Bosai Fesu", a monthly workshop with an expert in prevention. From April 2019 to March 2020, there were 13 sessions of "Kirarin Bosai" with a great level of participation.

## **Conclusions**

The case shows how the reconstruction of 2011 tsunami in Rikuzentakata and the mobilization of resources to offer assistance to a children's space required great cooperation between various actors, from the business world, academia, international organizations and non-governmental organizations, as well as local institutions. The bidirectionality of interests and needs was essential for the project success. The importance of addressing reconstruction with a gender perspective is also demonstrated, prioritizing children's community spaces managed by women, which results in long-term sustainability and prevents depopulation as a consequence of the disaster.

The leadership of working women, active and employed before 2011 disaster, facilitated the achievement of a project that (1) recovers jobs in the educative and care sector and (2) restores necessary services in an affected community, ultimately contributing with new values and functions.

Finally, the analysis highlights the resilience of a children's space during reconstruction, focusing on children and families as the central axis of a sustainable city. Currently, in addition to working on prevention with the community, Kirarin Kids has positioned itself as a reference place in the community.

### **CASE 3.**

#### **Sendai and female empowerment in disasters**

Before the triple disaster of 2011, there were already organizations in Tohoku and specifically in the city of Sendai, that worked on disaster prevention from a gender perspective. These organizations mobilized after the great disaster, coming together in a large network of support and assistance. One of the most important women's organizations is Equal Net Sendai.

After the disaster, this organization was not only the basis of movements that have led to the influence of female leaders in the Sendai Framework for Disaster Risk Reduction 2015-2030, but has also supported training of women leaders in prevention with the aim of reinforcing community resilience, empowering women in disaster management and increase greater presence of women in Japanese institutions.

This case analyzes the origins of this local feminist-based organization, the work carried out on gender and disasters, its assistance during the 2011 emergency, the role of advocacy for women's rights during reconstruction through empowerment and prevention training and, finally, the barriers they still face.

#### **A leader in local feminism**

Emiko Munakata, born in Sendai in 1949 and former president of Equal Net Sendai is well-known leader locally and nationally for her work in gender equality, specifically for promoting women's empowerment through leadership in disaster management.

In Fumie Asano (2016), Emiko Munakata tells her personal story, from her frustrations with gender inequality within Japanese society in domestic and family issues, until becoming a leader and advocating for female empowerment through prevention. Munakata did not fit into the tradition and conservative thinking, so she began to look for more active roles within her community (Munakata, 2016, p. 102).

She was born, grew up, married and became a mother in Sendai, until she decided to be part of her community more actively, to the point that during the 2011 tsunami and the reconstruction, her leadership has been essential to address disaster management with a gender perspective in all phases. However, the roots of her activities did not emerge in 2011 disaster (although they were strengthened), but rather go back to before and offer a historical perspective of community-based women's organizations. As Munakata herself states: *"in community development, the individual, his origin, his strength and function, are vital"* (Ibid., p. 102).

Equal Net Sendai 's work is rooted in a locally based Japanese feminism together with an enabling international context. *"I realized that the problems that I faced individually in my role as a woman were not my own, but rather were social problems and that it was necessary to solve them"* (Ibid., p. 106). Studies in social sciences led Munakata to

come into contact, in the 1980s, with the international women's movement and the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). She became interested in international women's movement.

Despite difficulties and some opposition, in 2003 she managed to found Equal Net Sendai. In 2005, the same year that the national government introduced for the first time the concept of gender perspective in disaster prevention plans, Munakata participated with other women in the National Conference on Women, Reconstruction and Disasters, held in Japan, where she met with leader Reiko Masai (president of Women's Kobe Network and promoter of gender approach in disasters in the country since the 1995 earthquake based on her work against gender violence).

According to her testimony, Munakata was impressed by Masai 's work and wanted to learn from women's experiences in Kobe. An important line of collaboration between both leaders of two different regions (Kansai and Tohoku) started. This collaboration will be key in 2011 disaster.

The initial goal of Equal Net Sendai was to empower women from the community base in order to achieve gender equality. Taking into account that disaster prevention was and is historically a national issue for Japan, Munakata considered it strategic to advocate for equality through a gender approach in disasters. As she states, she thought that they would encounter less male resistance, they would listen to women more and thus would strengthen the resilience of their community.

Sendai City Council contacted Munakata to integrate her knowledge and experience in gender and disasters with national authorities. Equal Net Sendai therefore worked to improve disaster management with a gender focus at the local and regional level, but also at the national level. Munakata was appointed as a member of the Committee of Experts on Earthquake Disaster Prevention in the Region, representing Tohoku. And this committee was part of the Central Prevention Council of the Cabinet Office. In 2011, ten days before the triple disaster, on March 1<sup>st</sup>, the group of experts (with Munakata) presented improvement proposals to the government, based on the gender recommendations worked on from Sendai.

Researchers Hagiwara and Osawa (2013), who on the occasion of the triple disaster subsequently reviewed the minutes of this government meeting, state: "we cannot help but wonder how much the situation of the victims would have improved if the points discussed in that proposal, which was made together before the earthquake, had been put into practice" (2013, p. 136).

### **Assistance to women, seniors and children in 2011**

After the 2011 tsunami, Equal Net Sendai visited the evacuee shelters in Sendai and noticed the needs of the victims, especially women. On April 19<sup>th</sup>, when water was

already restored throughout the city, the organization launched a support service called “Sentaku Net”, a laundry network for evacuees.

Through a network of volunteer homes, women in the shelters handed over their laundry. In addition, the organization Equal Net Sendai worried about the lack of support for girls and adolescents over ten years old, and they established the “Girls to girls Project”. Girls from outside the disaster area sent gifts or items to the affected girls in Tohoku.

They also created the “Delivery-Care” project to visit small evacuation centers, not officially designated before the disaster, with a lack of relief supplies and with high levels of stress and difficulties, to listen to their needs and send them direct support. Pregnant women, lactating women, people with disabilities and the elderly were especially assessed.

Equal Net Sendai experience during this emergency shows the state of the city, the need to act actively that arises from the members of the organization, the care deployed to access information and women in evacuation centers and the role that ties with other experts plays in helping each other: *“We went to nearby schools and institutes that were acting as shelters and gathered information based on what we saw (...) Obviously we could not go in and access it in any way. We entered the municipal shelters thanks to negotiations with the city and some connections and community ties. In nearby shelters outside the municipality, such as in Kensenuma or Higashi-Matsushima, we were able to access thanks to the support of the expert and professor Fumie Asano, who accompanied us. This is how we decided to launch our assistance services”* (interview with E. Munakata, July 4, 2021).

Equal Net Sendai also had difficulties implementing assistance, because it was informal and outside the authority’s management, with strong male presence: *“At first, they pushed us back and some evacuation center managers even told us that there was no need. We focused on one area and offered the service to 10 shelters, but only 5 accepted it. The Sendai Gender Equality Center didn't help much either. “Most of the public employees in Sendai at that time were men.”* (Ibid.)

### **Training women leaders in prevention**

After the 2011 experience, Equal Net Sendai conducted studies and research: *“In June 2011 we conducted a study with 3,000 female participants from Miyagi prefecture who suffered the disaster, of which 1,500 responded. (...) the survey clearly determined that women wanted to actively participate in leadership so that the same problems would not be repeated. We decided to train women towards leadership in prevention. We launched the program in 2013”* (Ibid.)

Training program launched by Equal Net Sendai was intended to empower women in leadership in disaster prevention: *“In parallel with municipal training, we designed our*

*program aimed at 100 women every three years, open to the Miyagi prefecture. 30 are formed annually. The objective was also to create a network of women bosai leaders. Currently we already have a network made up of 80 women leaders, the majority from Sendai. Approximately 50 are part of the evacuation center committees.” (Ibid.)*

Trained prevention leaders’ range in age from 20 to 70 years old. The majority are married women who occupy different roles within the community. Training *Bosai* leaders is carried out through a theoretical and practical program. During the classes, women “review the *region* 's prevention plans, analyze whether they have an adequate gender focus, propose improvements, learn with experts and people who offer social assistance in various areas, especially related to different types of disabilities and how to integrate these people in prevention, they do evacuation workshops, participate in events with other citizens, housewives, students or they are panelists at press conferences.” Finally women are also more visible in the media, “what is learned has to be linked in the community,” says Munakata.

### **Barriers to women empowerment in *Bosai***

Once trained, women leaders are not officially recognized by the Sendai administration as volunteer personnel to act in disasters. These women are accepted volunteer leaders in their own community and when a disaster strikes, they will know how to manage the emergency and evacuation centers from the places they live. They know their area and the community very well.

So far, the impact of this training has been, according to Munakata, a greater involvement of neighborhood associations in prevention with a gender focus, especially in the northern area of Sendai. Likewise, this type of training “*is now being implemented throughout the country, but the use of these human resources after being trained continues to be one of the problems,*” states Fumie Asano (2021, p. 57). Administrations still need to address this issue and gap, in order to integrate women leaders into official disaster management channels.

There are other barriers in the process of empowering new leaders, related to gender and the role of women in Japanese society: (1) difficulty in coordinating networks of leaders at the regional level and involving men, (2) the lack of women's confidence in their own merits and abilities, and (3) problems participating or “being accepted” in evacuation center committees. Equal Net Sendai advocates for a gender approach that facilitates the participation of both men and women together.

### **Conclusions**

The analysis of the origins and activities of Equal Net Sendai, a local feminist grassroots organization in Sendai city, shows that the triple disaster of 2011 accelerated a previous process. Following the 2011 disaster, local Japanese women's gender equality demands were integrated and reinforced at regional and national levels, serving as the basis for

global policies adopted in the Sendai Framework in 2015, especially the role of women as leadership agents in risk and disaster management.

Sendai local leaders opted for gender equality in disasters before 2011 as a strategy to achieve structural equality in society and empower Japanese women in greater participation, this objective being reinforced after the experience of 2011, but currently still not achieved. The lack of confidence in women, the non- acceptance by men and the gender roles established in the division of labor and hierarchies in Japanese administrative management remain strongly rooted despite the training programs launched.

On the other hand, the previous existence of female-based organizations in Sendai city that respond informally to the emergency and care for women, children and the elderly through various assistance projects for the affected population, shows women's role at the time of the disaster. With their activities, women contribute to community resilience, despite not being integrated into the formal prevention channels of Japanese institutions.

#### **CASE 4.**

##### **Minamisoma: Chernobyl, motherhood and radiation risk management**

Minamisoma is a city in the province of Fukushima next to the Futaba district, between the 20 and 30 km border of the nuclear power plant that the government established after the nuclear accident in 2011. Depending on the area, the city was affected by radiation and because evacuation was not mandatory, it was left in limbo, which had an impact on the decision-making of its inhabitants about whether to leave or stay.

According to official data, in 2010 the city had 70,878 inhabitants. In 2020 had 59,005 (16.8% less). After the impact of radiation, various locations had to be abandoned by government mandate. In the city of Minamisoma, residents had to weigh the risk according to their criteria and a situation in continuous evolution.

Authors such as David Slater et al. (2014) or Aya H. Kimura (2016) have investigated the role and movements of Tohoku mothers that emerged after the nuclear accident, from the political focus in the first case and on food security in the second. Both researches focus on the difficulties and vulnerability of women affected by the nuclear accident, especially mothers of children who raised their voices in the midst of the mistrust fostered by local and national authorities that tried to silence their fears (Slater et. al, 2014).

According to Kimura, authorities recognized the threat to food safety on March 19, a week after the nuclear accident, when they discovered contaminated vegetables and milk, but the extent of the impact was uncertain and citizens distrusted the government's complete transparency (2016, p. 2), which ended up causing them to

assume the management of food security on their own, a phenomenon that the author calls “citizen science.” In this process, the figure of the mother, traditionally assigned to the domestic space and food provider of the family is especially relevant.

The case study aims to contribute to this approach, which places women and motherhood at the center of radiation management, what Slater calls “radiation mums”. But we do it a decade later, which offers us a broader temporal perspective and we focus on resilience, in this case seen as the resistance to leaving the place of origin and the strategies adopted to manage the risk. To do this, we analyze the experience of a woman resident in Minamisoma, her actions and difficulties from the first day of the nuclear accident to the present and how this process impacts on a personal, local, national, but also international level.

### **A single mother in the nuclear accident**

In 2011, T. was a single mother of three children residing in Minamisoma. Since 2021, T. has narrated her experience professionally in The Great East Japan Earthquake and Nuclear Disaster Memorial Museum, a new museum to show the history of the nuclear accident.

T. experience and testimony are key to understand the human part of the nuclear management accident, especially to answer questions about the affected and evacuated population: How are them? How was the process to decide staying and how they live? How did the children experience it?

In a visit to the museum in 2021, on 19 December, T. transmitted her narrative. This narrative highlight: the psychological impact of the disaster on children, on women's employment, the fear of disease, confusion, the difficult decision about evacuating or not evacuating, lack of information, distrust in science and the authorities, feeling of abandonment, anger, loss of home, return, risk, hope and also, the initiative of many citizens to rebuild the community again. Her experience encapsulates more than a decade of personal, community and national challenges. The testimony, with multiple approaches to the impact of the disaster, also demonstrates the importance of oral transmission.

### **Run away, evacuation and return**

The story of the first year of the lives of T. and her three children (at the time of the disaster the oldest was 21 years old and the youngest was 4) after the nuclear accident is a compendium of desperate escapes, lack of information, stress and difficult decisions around radiation, evacuation and finally return. As she explained in *We* (2021), despite living near a nuclear power plant, she never thought that one day they could be in danger and, if that happened, she assumed that they would be offered help. But her experience was the opposite.

On March 13, two days after the disaster, T. decided to take her two young children to Saitama Prefecture. Usual transportation was interrupted so it was not easy to get them out of the area. To achieve this, a family friend traveled in his vehicle from Saitama prefecture to meet her at an intermediate point near the affected area of Fukushima prefecture and, before leaving back, he gave her 5 liters of gasoline in case she and the eldest son, who had decided to wait in Minamisoma, needed to flee later.

On the 14th, T. went to work at a nursing home. But while there, another explosion occurs at the nuclear plant, so that same day she decides to leave her job and flee the city with her eldest son. However, exits were limited. They couldn't go east because the tsunami had damaged the entire coast. They also could not take the central highway because passage near the central highway was prohibited. They have no choice but to travel west in Fukushima Prefecture. Along the way, she finds several buses that evacuate employees of large companies or organizations. She asked for help, "but everyone passed by." During her narration, she emphasized that she realized that "no one would come for us."

Between 20 and 30 km from the plant, a border and no man's land is established: The government does not send official transportation to evacuate, since it is not mandatory, but at the same time service companies, volunteers and help for the victims stop entering due to fear of radiation and the confusion of the events, so its inhabitants are left in a limbo. On March 15, the government announced for the area measures such as "shelter indoors" or "do not go outside unless it is strictly necessary", something that for T. was not clear enough.

T. explains that she began to mention the word "evacuation" on March 18, a week after the disaster. In the "run away" she reached several cities in the west, within the Fukushima prefecture, but all of them were overflowing with evacuees, and some had been left without running water due to the earthquake damage. T. managed to be welcomed in a friend house and ended up as a volunteer helping other evacuees preparing meals (*takidashi*) with her son.

But the level of stress, the situation as a refugee in her friend's house, and her regrets for having abandoned her job make her change the decision to evacuate: she decides to return home in Minamisoma on March 28. There she involved in reconstruction and assistance tasks as a volunteer, which is why she comes into contact with groups of volunteers and professionals dedicated to assistance and the nuclear problem.

Further beyond the established 30 km radius of the nuclear central, the daycare services reopen again, so she decides to bring her little son back with her. When she goes to pick him up, she finds a child who does not smile and who took a while to recover and return to normal.

Then, T. feels divided between staying in Minamisoma or protecting the children, who cannot go outside to play to avoid radiation. She feels very confused and afraid,

according to her worlds. They live with a radiation meter continuously, without knowing what the outcome of the plant will be. Finally, in December 2011, she made an intermediate decision: she rented an apartment with her children in an inland city in the same prefecture.

### **The Chernobyl connection: Maternity and risk management**

T. did not trust the official or scientific information available, so she decided to go one step further. In February 2012, she traveled to Belarus to learn about the experience of mothers affected by the nuclear accident at the Chernobyl plant in 1986:

*“I wanted to hear for myself the experience of other mothers, I did not want to read information written in books or disseminated in online articles written by other people, nor the advice of Shinichi Yamashita, at that time the official advisor of Fukushima prefecture on management of radiation and health risks” (We, 2021, p. 34).*

During her reconstruction and assistance tasks in Minamisoma, she came into contact with Dr. Minoru Kamata and the organization Japan Chernobyl Foundation, who helped her travel to Belarus with a councilor from Itate-mura (Fukushima).

T. arrived in the province of Gomel (Belarus), 250 km away. of the Chernobyl nuclear power plant: *“We talk about Ukraine, but in Belarus there was serious damage due to high radiation. It is the distance between Tokyo and Fukushima”* In 2012, 26 years had passed since the accident and T. believed she could find answers for Fukushima and *“clues to our future”* (Ibid.). She wanted to know, and see for herself, how the place was affected, what was happening with the food, how they lived, what the medical check-ups were like, if the children died or what had happened to the thyroid cancer.

*“I wanted to know many things, but the most important: Can the children of Fukushima become adults? Other people around me wanted me to ask if Fukushima girls could become mothers. I asked these questions through tears, but the mothers I met answered me: Do you see us sick?”* (Ibid.)

One of the observations that T. noted was the difference in healthcare systems: Japan has a very high standard and Belarus's is lower. This reassured her, but on the other hand, she called to warn about the Chernobyl data and the danger involved in taking them as an absolute reference when analyzing the Japanese case. T. returned from the trip to Europe with lessons about radiation risk management based on the Belarusian case to take into account in Minamisoma and empower herself locally.

That same year she made the decision to return permanently in Minamisoma and implement a strategy based on conversations with Belarusian mothers. According to these, if she was to remain in the affected area with children, she should: (1) perform annual medical checkups on the children; (2) measure radiation in milk and products consumed in schools and home; (3) prevent children from going to forests or

contaminated places and (4) take children out of the region for one month a year, a healthy retirement (2021, p. 35).

“It's okay to come back,” the Belarusian mothers told her and that's what T. needed to hear. However, in order to return and live with the nuclear risk, there are *“a mountain of things that must be done to manage the risk of radiation in children”*, she emphasizes. *“We mothers have no choice but to think about the children, if they could do it, so can I”* (Ibid.).

### **Activism and transmission of lessons**

Since then, T. has dedicated herself to transmitting and sharing this experience and lessons: “We are resisting while doing risk management and I think it is important to show it” (2021, p. 36).

The reaction of Japanese society, however, is complex. Sometimes she is being accused of “killing her children” or “using them for her own benefit.” But at the same time, she has also managed to raise her voice in local and national risk communication councils as a victim of the nuclear accident.

Since 2012, she has participated and traveled to Minamata city to support the families of the victims of Minamata disease (due to mercury contamination in the 1950s), in a legal battle for government aid that continues to the present day. Her activism has expanded to other cases of industrial disasters in the country.

She stated that is “a normal mum”, but Ministry of the Environment in Japan called her in 2012 to learn about her experience. T. participated in six official meetings but, at the end of 2012, the government changed and T. was no longer required.

In 2016, Peace Boat organization asked her to represent Japan along with three other citizens affected by the nuclear accident in Fukushima at the COP in Rio de Janeiro (Brazil). During her participation in the Annual Summit on Climate Change for the program “My Voice” T. explained her experience as a mother and the situation of children in Fukushima. She was surprised by the lack of precise information available abroad on the nuclear accident and the current situation. For these reasons, T. believes that victims and affected people should continue to directly transmit their experience.

### **Conclusions**

Firstly, we observe how distrust in authorities and science, as well as general knowledge in managing an unprecedented crisis, lead a mother to empower herself and act on her own to obtain solutions. In this process, by seeking answers in the Chernobyl precedent, we are looking at the past and the history of a previous nuclear disasters. But above all the importance of the human transmission of experiences is highlighted, mainly women's experiences because of their status as mothers. A Japanese mother affected

by the nuclear accident in Fukushima seeks answers from other Belarusian mothers with children, which ends up serving as a reference for applying a risk management strategy and not abandoning Minamisoma.

Secondly, this action has consequences and national and international impact, since the national government will try to officially integrate mother's personal experience, something that will be interrupted by the change of government in 2012. From then, the government of Shinzo Abe applied a policy of everything under control and the voices of mothers lost strength. Although there are still groups that oppose to nuclear plants and continue to protest daily, they have not been able to influence national decisions.

Thirdly, the inhabitants who decided not to evacuate and learned how to live based on a management strategy, are seen as resilient and resistant, but on the other hand, they contribute to central government interests to avoid further depopulation in rural areas.

Finally, it is worth mentioning that it is still early to determine the sustainability of Minamisoma and other cities impacted by radiation, since many families with children left. Although families like T. remained assuming risk management, this does not mean that their children will remain. Therefore, this case study serves as a starting point for future research in the area, to delve into the long-term consequences of the nuclear accident in the community.

## **CASE STUDY OVERALL CONCLUSIONS**

Each case study has some specific conclusions, according to the approach, leaders and the Tohoku community examined. As a global conclusion, these four cases show women's leadership in the region during all phases of the disaster.

In the four cases exposed, the women of Tohoku acted with leadership through their organizations or individually. They contributed to survival in the most acute phase of the response to the 2011 tsunami in Kirikiri (1), engaged in sustainable reconstruction in Rikuzentakata (2), took the lead in assisting evacuees in Sendai (3) and finally, applied their own strategies to inform themselves and manage nuclear risk and the future of their children in Minamisoma (4).

In turn, the case of a feminist organization in Sendai (3) allows us to conclude that this empowerment and response of women has its roots in the 90s, so it predates the 2011 tsunami, although the magnitude of the disaster enhances it and has influenced it throughout the reconstruction process until today. In Kirikiri's case (1) we can go further back and locate the link between women resilience and women response to crises in the 1930s. The cases of Rikuzentakata (2) and Minamisoma (4) are the exclusive result of the 2011 tsunami impact disaster.

In sum, these four cases show the variety of responses and strategies of Tohoku women at different times in the last century and in different generations at the time of the disaster, and how these responses are configured in Japanese society and contribute to community and national resilience. At the same time, some of these strategies are inserted in a feminist movement to improve women's situation and achieve gender equality.

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