

TOWARDS MABI'S RECOVERY

- LESSONS ONE YEAR ON -

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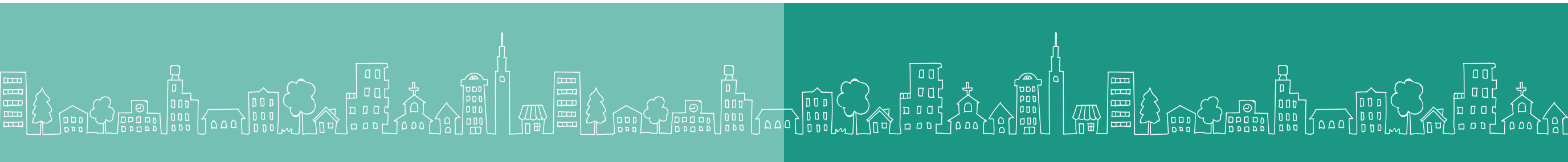
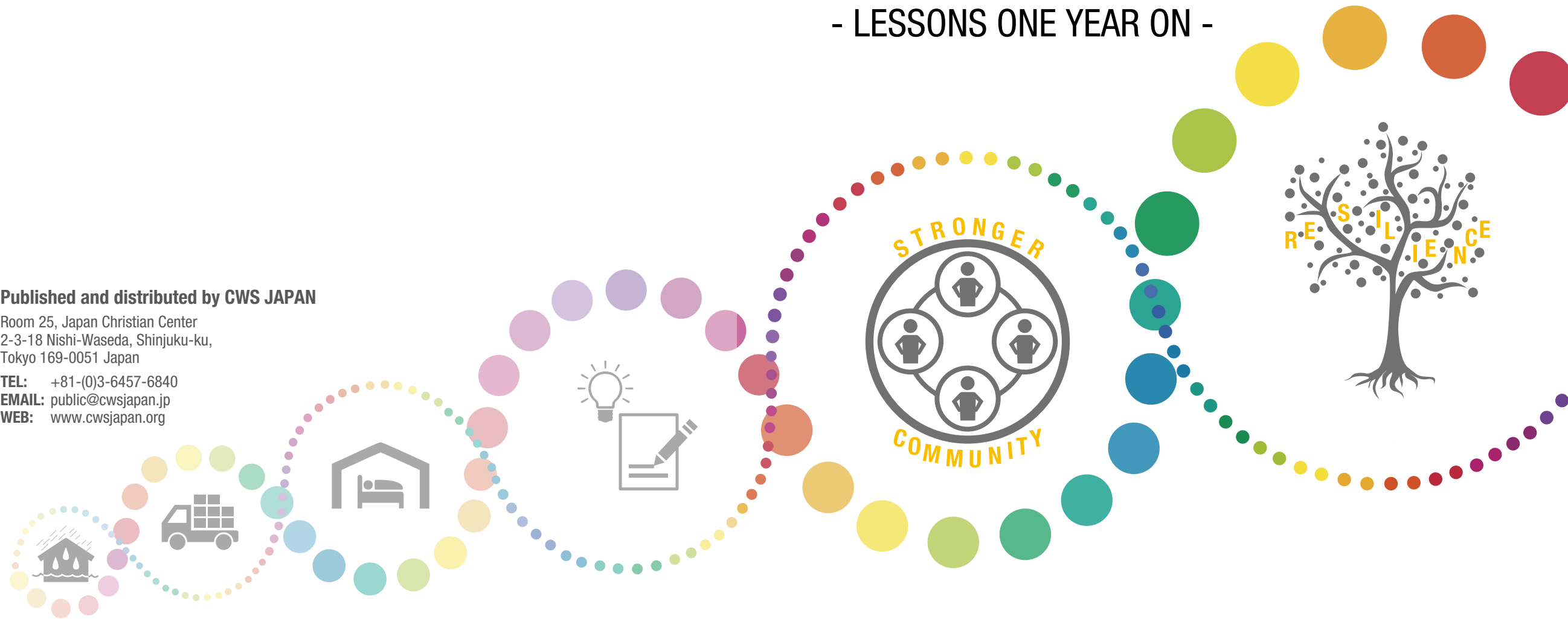


TABLE OF CONTENTS

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01	ABOUT THIS REPORT	02
02	INTRODUCTION	04
03	MAIN FINDINGS	
	3.1 People and Communities	06
	3.2 Natural Environment	16
	3.3 Organization	18
04	WAYS FORWARD	
	4.1 Sendai Framework for DRR Priority for Action 1: Understanding Disaster Risk	21
	4.2 Sendai Framework for DRR Priority for Action 2: Strengthening Disaster Risk Governance	22
	4.3 Sendai Framework for DRR Priority for Action 3: Investing in DRR for Resilience	23
	4.4 Sendai Framework for DRR Priority for Action 4: 'Building Back Better'	24
05	ANNEXES	
	5.1.1 Persons Consulted	25
	5.1.2 Documents Consulted	25

01 ABOUT THIS REPORT

“Towards Mabi’s Recovery – Lessons One Year On” builds on findings from Church World Service’s (CWS) earlier Six Months Since Western Japan Flood: Lessons From Mabi report which highlighted ten key findings about the relief phase: flood risk communication, infrastructure measures, early warning, evacuation and emergency behavior, shelter management, volunteer management, health issues, temporary shelter, recovery planning process and periodic changes in community perception and behavior.

Issues related to recovery were not covered in depth in that report, as Mabi’s Recovery Plan was only released in April of 2019 (see Figure 1 outlining the main components of the Recovery Plan). With the publication of the Recovery Plan and the passing of more time, there was an opportunity to return to Mabi and delve further into issues not covered in the six month report as well as document early recovery efforts.

The Main Findings (Chapter 3) are structured around core themes which emerged during the field visit and interviews: People and Communities, the Natural Environment and Organization. The analysis of these themes leads to Ways Forward (Chapter IV) which are aligned with the four Priorities for Action of the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030. By linking these local level lessons to an international framework, the authors hope that they can influence disaster recovery processes both within Japan and elsewhere.

Climate change projections indicate that crises like the 2018 floods can be expected with greater frequency, not only in Japan, but globally. This report identifies some of the most critical lessons from Mabi’s flood response and recovery efforts. These insights can contribute to Mabi’s continuing recovery efforts as well as their work towards preparing for future hazards. It is hoped that this learning contributes not only to their ongoing recovery, but is also used to inform other disaster and specifically flood prone areas globally.

STUDY APPROACH

The core of the report is based on direct field observations, interviews and document review. (See Appendices for people consulted and documents referenced). A core team made field visits and relied on purposive sampling as it was not possible to obtain representation from all stakeholders involved in the response and recovery efforts. Other authors with specific expertise and knowledge supplemented the field data. To triangulate field findings, a desk review and follow-up interviews by phone were conducted. This report provides only a snapshot of the main findings; it is not a comprehensive documentation of all of the issues, nor was it designed to be scientifically rigorous.



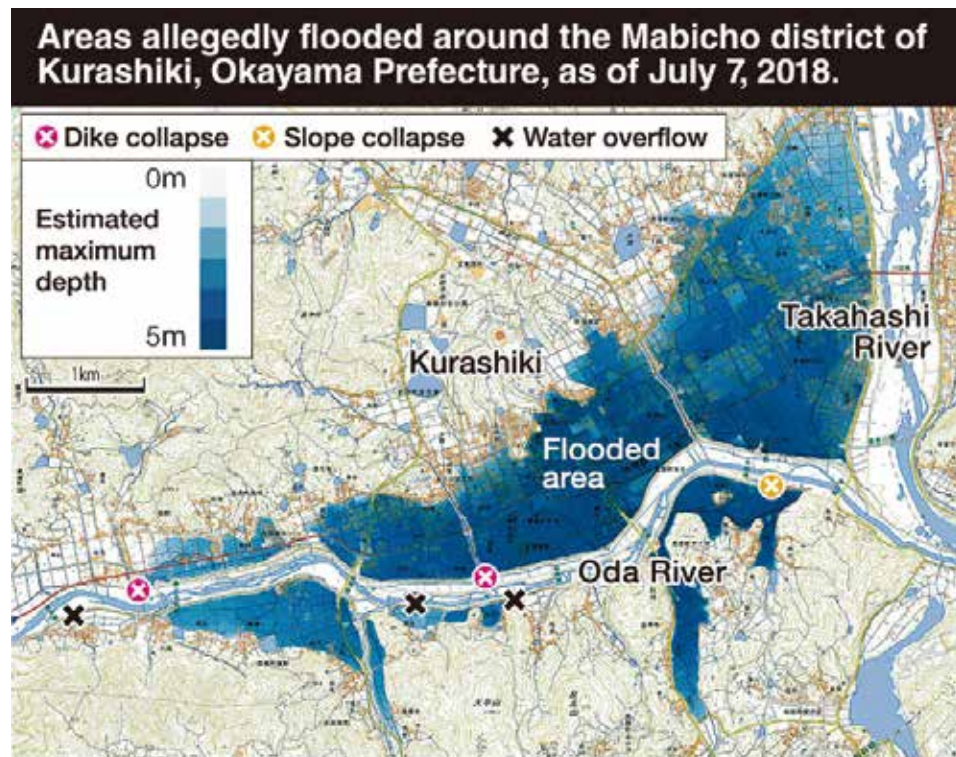
▲ Figure 1 – Summary of the Recovery Plan

02 INTRODUCTION

The Western region of Japan experienced heavy rainfalls in the early summer of 2018 resulting in devastating floods in areas of Hiroshima, Okayama and Ehime prefectures. The town of Mabi in Okayama prefecture was particularly affected as it stands on two rivers, the Takahashi and Oda, both of which overflowed and flooded one-third of the town. The embankments broke in 8 places and floodwater rose as high as 5 meters in many areas. About 4,600 houses were affected and 51 people were killed, most of whom were older than 70 years.

CWS Japan responded to the emergency in the first month of the floods by partnering with Humanitarian Medical Assistance (HuMA) to provide medical check-ups to affected people from a trailer outside evacuation centers. It also worked with partners to improve information management in the shelters so that people could find appropriate assistance¹.

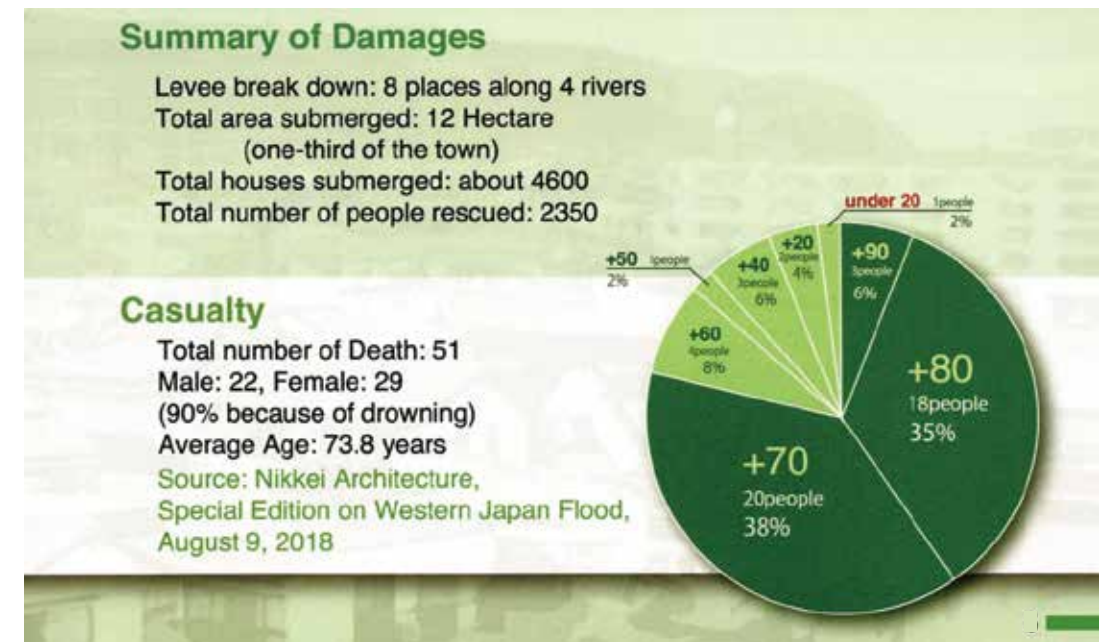
▼ Figure 2: Map showing the flooded areas (Source: The Daily Mainichi, July 11, 2018)



Compiled from a map provided by the Geospatial Information Authority of Japan.



▼ Figure 3: Summary of Damages



03 MAIN FINDINGS

3.1 PEOPLE AND COMMUNITIES

3.1.1 Awareness of "Bosai"

The magnitude and severity of the floods took everyone by surprise.

Residents in the affected areas recalled only experiencing minor, knee-high flooding in recent years with one saying "this is a sunshine area," referring to Okayama as the Land of Sunshine. As noted in the Six Month Report, many residents were unfamiliar with the hazard maps distributed by the authorities, despite them predicting where and to what level the floods would emerge. People were unaware of their own risk,

VOICES from the field

"We live in a sunshine area! We didn't have preparation because people believe Okayama is a site to support other areas, not to experience disasters. Nobody saw it coming. When people receive assistance, they have to be receptive to assistance; this is a new thing for them. We usually think this place sends things to places with disaster and now we are the ones to receive. It's difficult to be a receiver instead of a giver."

5-LEVEL WARNING SYSTEM

Warning Level	Action to take	Information provided by local government	Weather alerts issued by JMA
5	People must take measures to protect lives	Disaster information	Emergency warning
4	All residents must evacuate	Evacuation order/instruction	Landslide alert information etc.
3	Elderly people must evacuate	Evacuation preparation information	Rain/flood/storm surge warnings etc.
2	You should check evacuation procedure	Advisories	Rain/flood/storm surge advisories etc.
1	You should stay on alert for disasters	Early warning information	-

▲ Figure 4: 5-Level Warning System

The Japan Meteorological Agency earlier this year rolled out a new five-level disaster warning scale to be used for floods and landslides. It is designed both to simplify the existing system and to reduce casualties by speeding up evacuations. Source: NHK World, June 27, 2019 (<https://www3.nhk.or.jp/nhkworld/en/news/backstories/587/>)

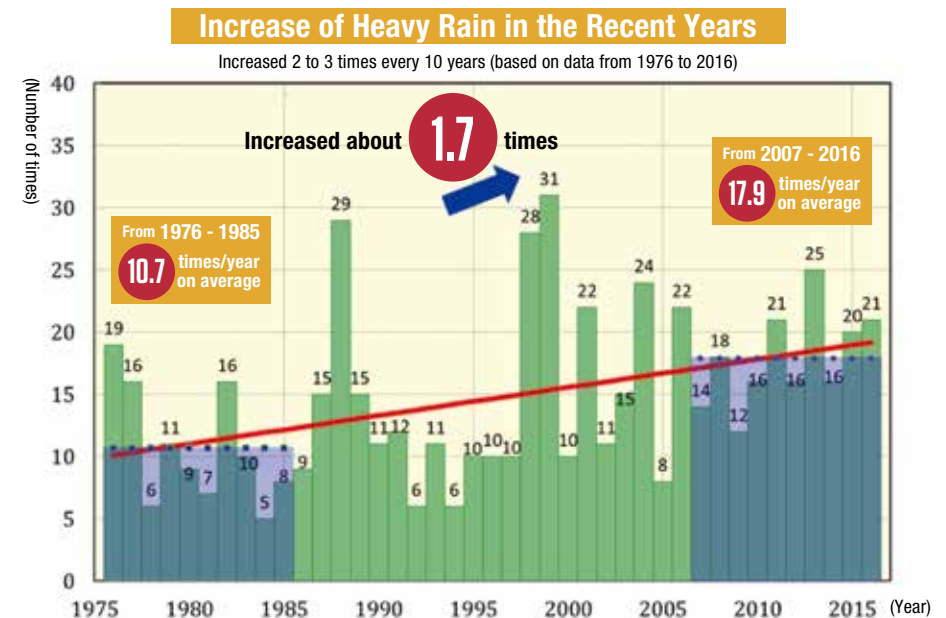
and did not understand the 'Backwater Phenomenon' where smaller rivers overflowed. Also, SNS was used to convey general risk information, but many people, the elderly in particular, were not connected this way. False information was spread on these platforms creating further confusion.

Unsurprisingly, where flood drills took place and were highly attended, towns had higher evacuation rates. In Shimohara, a community in neighboring Soja, for example, previous high attendance at flood evacuation drills were noted as contributing to the near 100% evacuation rate during the flood. The town is situated closer to the bigger Takahashi river, thus people have more awareness and fear of potential flooding.

A "Bosai Mindset" is evolving in Mabi, but has not fully translated into action.

Due to the floods, awareness has been elevated in and around Mabi and there is a change of mindset when it comes to the need to prepare for disasters. There has been increased technology penetration among the elderly, for example, as many realize how disconnected they are without access to mobile communication. Many are buying smartphones, attending classes to learn how to use them, and using social media apps such as Line. However, it's unclear the extent to which this has shifted action. Alarmingly, only two months after the summer floods, when the same region was struck by typhoon Jongdari (Typhoon No.12), less than four per cent of people heeded the government's pre-emptive evacuation orders².

Dr. Kenmotsu Katashi, a Visiting Lecturer at Okayama University of Science, suggests that 2018 heavy rains are directly related to climate change. Other environmental changes he has noted within recent years include: infrequent drizzling, irregular but more frequent typhoons, simultaneous booming of sakuras (cherry blossom) and Ume (plum) flowers, extreme summer heat, heavy snowfall in winter and heavy rainfall (over 80 mm per hour) which has increased 1.7 times in the last 30 years.



▲ Figure 5: Frequency of extremely heavy rainfall (80mm/hour) has increased 1.7 times in the last 30 years Source: Ministry of Internal Affairs and Communications (http://www.soumu.go.jp/main_content/000514806.pdf)

² The Japan Times Online, "Only 3.6 percent of Hiroshima residents had evacuated when July rain disaster struck", August 3, 2018.

3.1.2 Health

Affected people faced numerous health issues as a result of the floods and ensuing evacuation.

In the immediate aftermath of the floods, elderly and disabled were at highest risk and faced severe potential health threats: many had evacuated without their medicines, others had dietary restrictions such as high insulin and could not eat what was provided in the evacuation centers, and for some it was difficult to cope with the summer heat. Psychosocial stress was also high among survivors and their family members.

Formal evacuation centers were not equipped to handle the special needs of the most vulnerable.

A total of 39 formal evacuation centers, mainly public schools, were set up the morning of July 6th in Kurashiki. By the next day, 4,800 people had arrived in them. For families with disabled people – such as the blind or those in wheelchairs – many did not even consider going to an evacuation center

because they knew the conditions would be so unfavorable to their circumstances. They turned to relative's homes or other places not designated as shelters for assistance.

For families with disabled children, circumstances were even more difficult. Many were late to evacuate, and by the time they did, there was no room for them or the space that was left was inadequate, with many saying "it was impossible to stay there." Similar experiences were found in Tohoku after the Great East Japan Earthquake (GEJE) of 2011 where evacuation centers seemed to disregard the needs of women, children, the elderly, the disabled and other vulnerable groups³.



▲ Truck bringing water to an Evacuation Center
(Photo Source: Sakiko Kanbara, July 7th, 2018)



▲ A board at an evacuation center. Kurashiki Disaster Recovery Organization (KuraDRO) was set up at the wake of the disaster on July 8th, 2018, to combine various organizations and stakeholders, and this is how people were trying to understand how they were all linked.
(Photo Source: Sakiko Kanbara, July 7th, 2018)

Many people with special needs are now living with overstretched family members or staying in hospitals or nursing care.

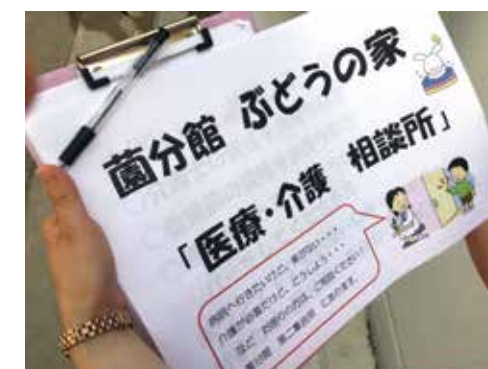
About a month after the flood, "Parents' Support STEP," an Okayama-based NPO for parents of disabled children, conducted a survey of 17 caregivers of disabled children. Only one of the participating interviewees went to an evacuation center after receiving the evacuation warning. The rest didn't consider it an option as they did not think their children could adjust to the environment there. These parents instead chose to either go to a relative's house, or stay at home. Yet many children became restless, depressed or fell sick within the first few days after the floods. Parents who had moved attended to their children almost round the clock, in an unfamiliar environment, leading to burn out.

Support for family members caring for elderly or disabled people was described as inadequate. Many of these caretakers also lost assets during the floods and were struggling to care for their relatives without medical specialization nor additional financial provisions. Parents of disabled children noted that if they were not connected on social media, they could not access information about where to receive additional support.

Some elderly ended up in a communal hall of a primary school which was converted to a make-shift healthcare space for elderly by a group called Budo-no-ie (meaning House of Grapes). They provided round the clock services for elderly and those suffering from dementia. The services were kept intentionally minimal and bare bones, to avoid creating dependency. Others left the city altogether, resulting in a disruption of care, or are scattered in different hospitals, some staying there for up to three months.

VOICES from the field

“ I was in a temporary shelter, and saw many blind people or those in wheelchairs come the first day. On the second day, they disappeared. It was clear that the evacuation center was not equipped to meet their needs and they had no information. ”



▲ Signboard of Budo no ie - a make-shift healthcare space for elderly
(Photo Source: Dr. Sakiko Kanbara)

▼ An elderly receiving care at Budo no ie
(Photo Source: CWS Japan)



VOICES from the field

“ When people evacuated, they didn't bring everything with them. They didn't have their regular medicines, those with high insulin have dietary restrictions and couldn't eat the same bread every day. Some forgot their teeth. People with special needs went to hospitals or stayed with relatives outside of the city and we didn't have information about those people for over six months. We found out about where people were in the newspaper. We need to develop an evacuation center for those with special needs because everything was in chaos. ”

Health care providers struggled to get information about those with special needs who were staying in formally run evacuation centers.

Care services, paid for by the government under non-emergency times, effectively failed in the immediate aftermath of the floods, as there were no communication channels to determine the whereabouts of the elderly or disabled. Groups like Mabi-care reported learning the locations of some of their patients through the newspaper. Certain legal obstacles such as the Personal Information Protection Law, prohibit sharing critical information with NPOs, therefore limiting their awareness of where affected people are located.

Furthermore, while numerous Information and Communication Technology (ICT) platforms exist which can expedite and facilitate information sharing, they were not effectively leveraged during the response. This is in part because many government sectors and organizations are unfamiliar with them. In addition, staff turnover within Social Welfare Councils (responsible for coordinating volunteer efforts and sharing information) is high, resulting in important information on the needs of the affected people being lost from one staff member to the next.

Although health care professionals such as the “Min-sei-iin (民生委員)” have a wealth of information about the health needs of the most vulnerable, it was not utilized because they did not know where people evacuated to. These providers spent days in the early stages going to formal and informal evacuation centers as well as relatives’ homes to check on their patients. At the same time, many survivors did not understand where to access both physical and psychological first aid that was being provided due to lack of information on health care provided in the shelters.

Where prioritization treatment methods were applied, care for the most vulnerable improved.

In the neighboring town of Soja, a prioritization system was established to ensure appropriate care was provided to the various needs of the disabled and elderly. AMDA, the organization in charge of health care provision in the Evacuation Centers there, categorized people based on the severity of their needs using a color coded system (ranging from red – yellow- green, indicating the severity of their issues). Care was thus efficiently and appropriately targeted and disease spread controlled. The system was developed in response to the Kumamoto earthquake, which helped AMDA’s leader identify and apply these kinds of best practices.

3.1.3 Psychosocial health and community cohesion

Opportunities for communities to assemble played an important part in psychosocial recovery and maintaining and building social cohesion.

Affected people were dispersed to non-designated temporary shelters, rental homes, or to relatives’ houses outside of town. As a result, they did not have a space to meet, share experiences, or exchange support. In addition, all summer festivals were cancelled due to the floods.

Various NPOs organized events and meeting circles, known as ‘salons’ which were effective spaces for people to share updates and information, listen to and support one another over a drink or a meal. These salons don’t follow a specific formula – they can be as big as an emergency evacuation center, and as small as the corner of someone’s living room, and anyone can register with a space and a focus activity. Similar meeting places were formed after the GEJE and Kumamoto earthquake of 2016 and have been useful fora to help people get through the most difficult phases of relief and recovery.



▲「豪雨ニモマケズ」“Not Losing To Heavy Rain”

The Council of Social Welfare has published a Booklet called “豪雨ニモマケズ” (meaning “not losing to heavy rain”), where they wrote about these community circles or Salons around Kurashiki and introduced their activities.

Those who cannot go to the community circles or salons either because of physical difficulty, lack of transport, or simply lack of willingness, are visited periodically by the officers of Mabi Support Center. People can call the Center if they have a specific need, but some do not have access to a phone. For them, these officer’s visits become a critical connector for information and support.

Programs targeting children were particularly helpful in reducing their anxiety.

During the evacuation period and while living in temporary shelters, children were separated from their friends and many were left unattended as their parents were busy with recovery efforts. Local NPOs, Save the Children, Okayama Prefecture and Okayama



▲ Community gathering in Makibi (Source: 豪雨ニモマケズ)



▲ Community gathering in Yata (Source: 豪雨ニモマケズ)

Prefectural University jointly established a child-friendly space (CFS) at Okayama Prefectural University during summer holidays. In total 787 children (including 489 elementary school pupils and 296 infants) used the space, which was supported by 397 volunteers and qualified nursery teachers. Although the center was located outside of Mabi, twice daily bus transportation was arranged between 3 evacuation shelters in Mabi. In previous disasters, Save the Children set up child-friendly-spaces at evacuation shelters by itself; this was the first time the prefecture itself created an integrated CFS.

Other efforts, such as “Refresh Camps” were organized to reduce stress and promote positive psychosocial recovery among children. The one set up by Setouchi YMCA, for example, gave children a chance to play games, learn camp songs and archery, go kayaking and fish. Children were encouraged to speak about their experience and feelings around the floods, a successful initiative brought from the Kumamoto earthquake response. Parents reported that as a result of the outings children were more cheerful, talkative and independent.

To support children's psychosocial health in schools, the Kurashiki-City Board of Education dispatched additional teachers and school counselors. EARTH of Hyogo Prefecture also helped schools and teachers with shelter management and mental care support in Kurashiki-City.

3.1.4 Inclusion

(see also Health Section 3.1.2)

Evacuation centers made attempts to ensure gender-based security.

Between July 9th and August 17th, city officers visited each formal evacuation center to monitor the environment and certify it was favorable to women and children. The Shelter Management Manual of Kurashiki City advises complete segregation of men and women wherever possible, to prevent cases of abuse. The city officers advised evacuation center managers to use cardboard partitions to create semi-private areas for women and confirmed that the toilets had electric lights and security alarms.

While there were toilets and bathing areas designated specifically for men and women, some were kept for common use in order to accommodate the needs of transgender and other sexual minorities. In addition, phone companies donated tablets to circulate information about gender safety. This is an improvement from previous disaster responses, especially the GEJE, where many reports found gender sensitivity was not taken into account in the design and implementation of many evacuation centers.

In mid-July, gender abuse hotline numbers were distributed. The hotline number was also written on cards kept in bathrooms and circulated on the city's website from August 9th on. A hotline specifically for

▼ The flier distributed at the evacuation centers

避難所・避難先では
女性や子どもを狙った性被害・性暴力、DVなどが
発生するリスクが高まります

自分を大切にしてください
周囲の目と支えがたよりです

単独行動はしない
ようにしましょう！
性的な嫌がらせやいたづらなど
尊厳を傷つける行為も犯罪です
被害をうけたら相談を！

夏ないふり・知らないふりをせず
助け合いましょう
ストレスをためず
不安な気持ちも声
に出しましょう

西日本豪雨によって生じた、様々な悩みや、女性に対する暴力に関する
相談を下記の窓口でお受けしています。
だれにも相談できず、ひとりで悩んでいませんか？
ひとりで悩まず、お気軽にご相談ください。

相談機関 ※相談は無料です。情報は守られます。 緊急時は110番へ

倉敷市男女共同参画推進センター	086-435-5670	火～土 (9:00～17:00) ※7月17日(火)は臨時休業
岡山県女性相談所 ★DV 夜間電話相談	086-235-8060 086-235-6101	月～金 (9:00～16:30) 月～金 (16:30～20:00)
岡山県男女共同参画推進センター	086-235-3310	火～土 (9:30～16:30)
男性相談員による男性のための電話相談	086-221-1270	毎月末金曜日(17:00～20:00)
LGBTの方のための相談電話	086-435-5670	火～土 (9:00～17:00)

このチラシに関するお問い合わせ先 倉敷市男女共同参画推進センター 電話 086-435-3116

matters related to LGBT abuse/discrimination was also established.

The recovery plan itself uses language to be more inclusive. For example, “men, women” was changed to “men, women, other” to account for sexual minorities. The Gender Equality Promotion Center tried to raise awareness and understanding about sexual minorities while visiting various shelters. In the Recovery Plan, this issue, unfortunately, was not mentioned. To quote from the Shelter Management section, Article 4-3: “Review of the Operation Manual of Evacuation Centers will be done to make them more accessible, where enough consideration will be given to the needs of disabled and elderly people and their caregivers, where privacy of women will be secured, and separate spaces will be kept for pets.”

3.1.5 Education

The floods resulted in significant disruption to education and an unstable learning environment.

All eight public elementary and junior high schools in Mabi were forced to close between July 8 until September 3, 2018 because they were either damaged by the flood, used as an evacuation shelter (3 elementary schools were used as evacuation shelters for 1,680 evacuees), or because they lacked life-line infrastructure (electricity, water, sewage). This long disruption of school education only occurred in Mabi, whereas other schools in Kurashiki city resumed on July 11, 2018.

Out of the four damaged schools, children at two elementary schools and one junior high school had to change schools up to three times. In September, these children commuted to shared classrooms outside of Mabi until temporary classrooms were ready. They now commute to the temporary classrooms built at the playground of non-damaged schools in Mabi, still exposed to an unstable learning environment, with potential long term negative mental health or academic impacts.

Half of the children previously attending a badly damaged special needs school have now been transferred.

Kurashiki Makibi Special Needs School, established in 2013 in Mabi, targets elementary to high school students with intellectual and physical disabilities, with a total of 327 attendees. The school was inundated with 4.8 meter high water, which reached 5cm above the second floor level, damaging all of the rooms and six school buses. About half of students now study at classrooms held at other special needs schools, resulting in longer commuting time and stress, while the others are studying in temporary classrooms on the original school ground.

The government and NGOs provided financial support for education.

At 16 evacuation shelters in Kurashiki-City, learning rooms for junior high and high school students were opened to support their studying. Based on the Disaster Relief Act of Japan, educational materials, including school bags and textbooks were provided for free to the affected school children during summer holidays.

In October, Okayama Prefecture announced financial support of 20,000 yen per affected household (whose homes were inundated above floor level) with a child/children under age 18. More than 6,000 households were targeted. While other educational expense subsidies for poor household children exist, this disaster relief program specifically for affected households with children, was the first of its kind in Japan. In addition, Save the Children also supported children's graduation expenses (30,000 yen for 6th grader, 40,000 yen for 9th grader and 50,000 for 12th grader), reaching a total of 428 children. Further investigation is needed to determine the outcome of this support and how it is viewed by the authorities.



▲ Temporary building of Kawabe Elementary School in the ground of Sono Elementary School (Source: CWS Japan, November 9th, 2018)

3.1.6 Housing

Shelter and lack of information regarding housing options, remain the most critical issues for those displaced.

Respondents noted that the most difficult recovery issue today is housing. Currently, people displaced by the floods are scattered with very different situations. Some homes were completely submerged and although residents want to return to Mabi, they have no financial support to rebuild. Many of them may have had earthquake insurance, but did not have flood insurance because of the prohibitive cost. Others would like to return to Mabi, but face high rents and a limited supply of empty houses.

Furthermore, there are only a handful of construction companies and materials to rebuild with, causing significant delays. The government has provided support to cover half of the rent for 2 years with the amount depending on family composition, but this will end in a year. With poor information flow between the government and those affected, anxiety and confusion about next steps is high.



▲ Prefabricated temporary shelters in Yanaihara area
(Source: 豪雨ニモマケズ)

3.2 NATURAL ENVIRONMENT

3.2.1 Improvement works of river channels

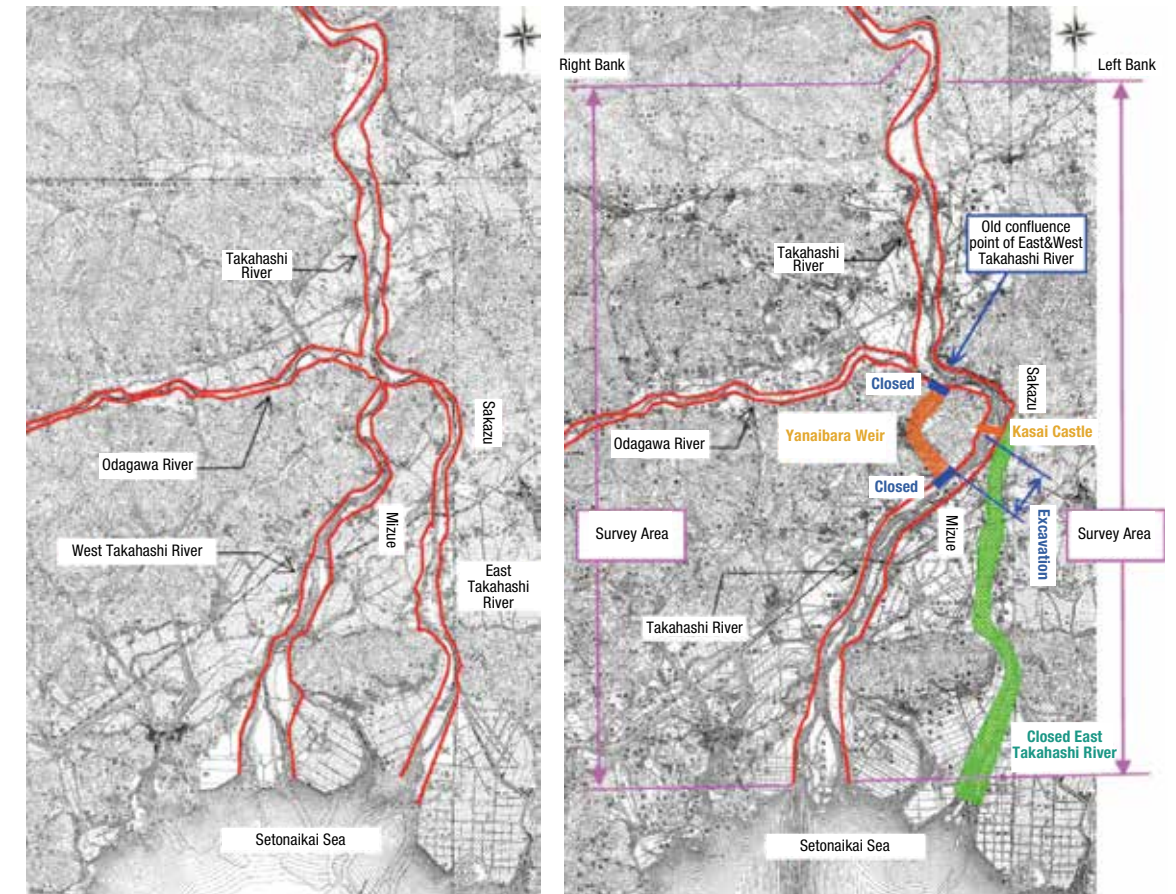
Delay in decision for river channel works hindered hard mitigation measures.

The Takahashigawa River originally flowed as an X-form in the Kurashiki and Tashima plains (See Figure 6). After joining with the tributary Odagawa River, the main river divided into two rivers flowing separately into the Setonaikai Sea. Following severe flooding in 1893, the government improved the rivers by combining two channels to make one with larger flooding capacity (See Figure 6). While this mitigated flood damage in Kurashiki City in the downstream areas, flood issues remained along the Odagawa River.

The government formulated the Yanaibara Weir project in 1968 to resolve the flooding issue in the Odagawa River and to supply water to Kurashiki City. Yet it faced difficulties building consensus among local communities and governments and responding to the changing water demands. While the project would have mitigated flood damage upstream in places like Mabi town and supplied water downstream to Kurashiki city, the town of Funaho would not benefit from the project and thus did not approve it until 1995 in exchange for other development projects, such as highway, sewage, and irrigation projects. In 1997, the government started the comprehensive project of moving the confluence point with the Odagawa River downstream and constructing a weir. However, as population growth was declining, so too were the water demands, and as such, the government suspended the project in 2002.

In 2007, the government formulated the revised flood protection plan and excluded water resource development of constructing a weir. The revised plan was aimed at decreasing the flood water level of the Odagawa River by some 5 meters by using the old

channel to move the confluence point with the main Takahashigawa River some 5 km downstream. The government planned to start construction work in the



▲ Figure 6: River improvement works before the project (left) and after the project (right) after the severe flood of 1893
(Source: MLIT)

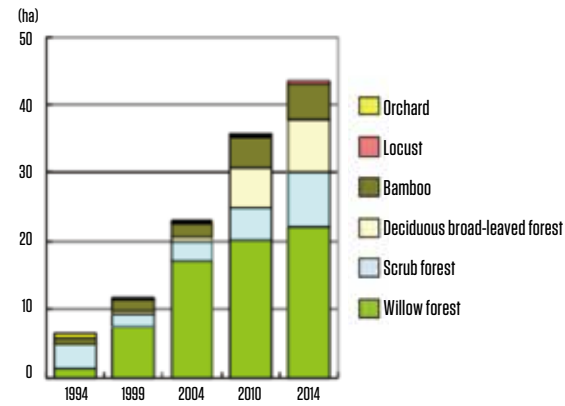
3.2.2 Green issue and infrastructure

Green infrastructure is an essential part of mitigation measures.

Greenery volume had increased inside the Odagawa River over the past decades. Since greenery in rivers provide various benefits such as habitats for ecosystem and scenery, cutting trees is a controversial issue. The River Law was revised in 1997 to include environment preservation as one of the objectives in river projects. The Ministry of Land Infrastructure

and Transport (MLIT) requires balancing environment and flood management issues, but the greenery in the Odagawa River has certainly disturbed river flows and may have contributed to increased flood damage in 2018.

The MLIT is considering constructing the new channel of Odagawa River as green infrastructure. Experts and academic researchers are examining the width and forms of the river channel by conducting simulation of water flow and sedimentation movement with considerations of impacts on ecosystem, scenery,

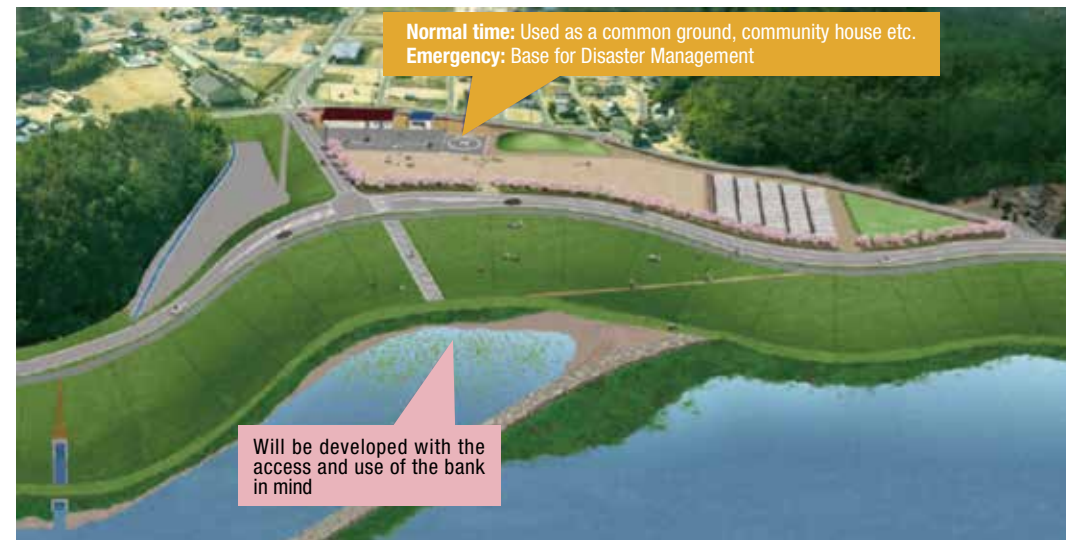


▲ Figure 7: Trends of green area in Odagawa River (Source: MLIT)



▲ Green in Odagawa River before flood (Source: MLIT)

▼ A pond for ecosystem in new channel (Source: MLIT)



access to water, etc. Based on the examination, the MLIT is planning to create habitat for diverse ecosystem by constructing wetlands, a pond, and a small channel. These facilities are crucial to preserving the current rich ecosystem in the Takahashigawa River including “asaza”, floating plant, an endangered species (See picture above). The pond and surrounding areas are expected to become recreation areas for local communities and disaster management base as well.

3.3 ORGANIZATION

3.3.1 Community Organizations

Community members played a critical role in Mabi’s response and recovery.

Numerous global frameworks recognize affected communities as being best positioned to flexibly and quickly meet needs, with strong local networks and knowledge. The strength of the Mabi community was evident in response to the floods as several ad hoc relief centers arose to fill critical gaps and tend to

needs not being covered by other actors. For example, numerous relief items were collected and distributed out of a community store called Kanbara Gofukuten. The store also served as a hub to coordinate volunteers and for affected people to exchange views, get information and relieve some of their distress. There were so many activities being run out of Kanbara Gofukuten that they created an information management system to track distributions and volunteer dispatches to evacuation centers. Within one month, 147 people were provided support with donated items housed at their store. However, the amount of un-needed and ultimately unused donations became a problem, and many clothes that were inappropriate for the season were discarded or transferred elsewhere.



◀ Kanbara Gofukuten, a community store which served as an ad hoc relief hub, coordinating volunteers, providing space for community exchange, temporary childcare and storage of donations.



VOICES from the field

“ The first days were the worst; volunteers were pouring in from everywhere and we could not manage. We developed a system to coordinate them all using an information board which detailed who was going to what evacuation center.

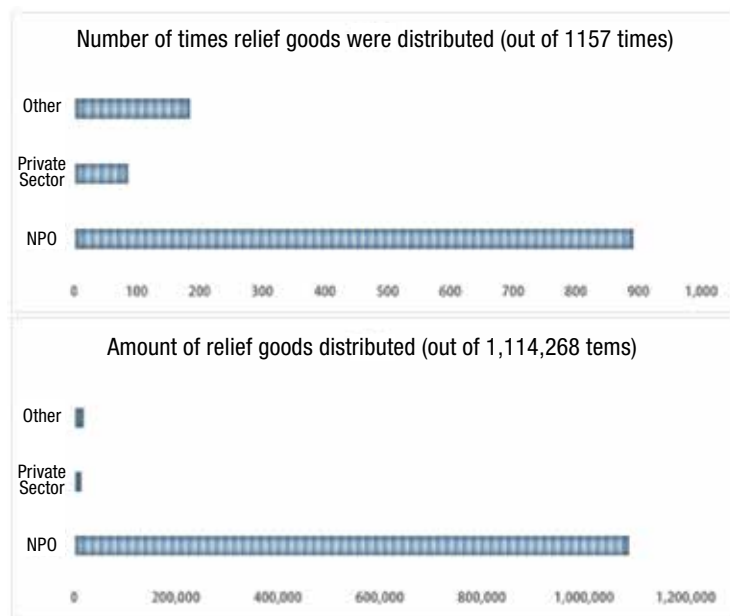
The local government was the focal point for larger support, but they don’t receive the small-scale relief items like bottles of water, so there was limited coordination with them for these things. We set up a private place for people from the outside to come and provide chiropractic activities.

3.3.2 Non-profit organizations (NPOs)

“Without NPOs, we could not have handled this disaster.”

The NPO response in Mabi was incredibly strong; groups were agile and creative during the initial phases, coming up with solutions on the spot, and finding ways to reach affected people before other forms of support even arrived. A white paper published by Okayama NPO

Center based on surveys conducted 3 months after the disaster, reported that 90% of relief goods were distributed through NPOs and that 66% of emergency spaces (such as for storage of goods, meeting venue, parking cars etc.) were provided by NPOs for the longest duration. For other support such as cleaning and sanitizing submerged houses, moving furniture, distributing freshly cooked warm food, providing massage and salon services, NPOs were credited with covering 75% of the total.

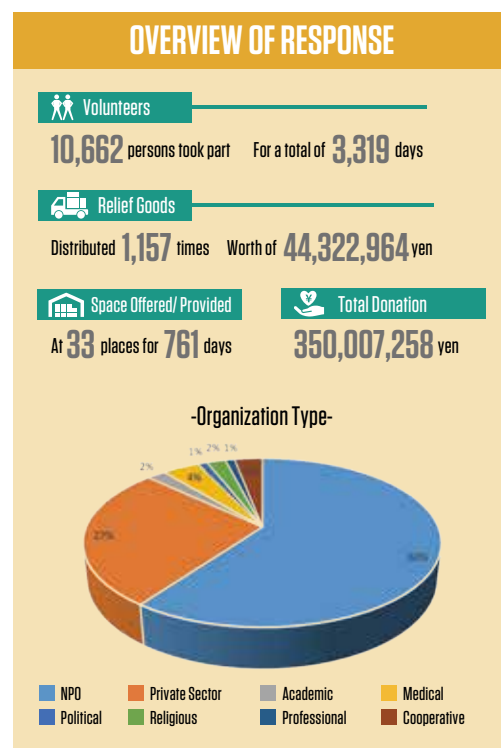


▲ Figure 8: Graphs showing number of times and total volume of relief goods distributed by NPOs during the first three months after the flood.
(Source: Source: 「岡山県における平成30年7月豪雨への民間支援白書」, Okayama NPO Center, Japan Platform (JPF), JVOAD, 2018)

Ten out of 17 of Japan Platform’s partner NGO projects were based in Okayama. Activities included renovation of facilities for the disabled, Volunteer Center (VC) management support, dispatching medical doctors, and providing household appliances to families living in the prefabricated Temporary Shelters.

Coordination among NPOs was impressive, due to pro-active efforts of the Okayama NPO Center.

The Okayama NPO center ran regular coordination meetings which were an opportunity to aggregate and share information on the status of shelters and home evacuations, and to identify the location of activities and distributions in the affected areas. Part of the coordination success was a result of the Center’s foresight and preparedness, as two months prior to the floods, the Okayama NPO Center developed a robust coordination mechanism in which they developed consensus and understanding among NPO actors. Successful sectoral coordination also took place, such as health cluster meetings, which happened daily through Kurashiki Disaster Recovery Organization (KuraDRO).



▲ Figure 9: An overview of response after the Western Japan Floods
(Source: 「西日本豪雨災害被災者支援 初動対応期レビュー報告書」, Japan Platform Emergency Response Division, 2018)

3.3.3 Government

Previous disaster management training and exposure among some government leaders helped steer critical decisions.

For example, as a result of her previous training with UNHCR, the Mayor of Mabi immediately prioritized supplying water to evacuation centers and communities for cleaning and sanitation. Drinking water would come, she was certain, but providing people water to clean themselves, their houses, the washroom facilities was critical to maintaining hygiene and limiting disease outbreak.

However, not all responders had this kind of exposure, leaving other government officials poorly prepared to manage a disaster of this scale, including those at the emergency shelters. Smaller cities and town offices such as Mabi have a severe shortage of human resources in general, and these deficiencies become even more pronounced during disasters as they struggle to manage the massive influx of assistance including volunteers, care givers and relief items. This “Jyuen-ryoku”, or capacity of receiving assistance at the local government level, has also been observed as a critical factor in previous disasters.

Coordination between NPOs and the local authorities was uneven.

The central government has acknowledged that it cannot support all relief and recovery efforts and must work more closely with NPOs to meet needs. For the first time, multi-stakeholder central coordination meetings were held with the Cabinet office to address system-wide issues such as disaster debris, equipment for clean-up. Gaps in local level coordination efforts were also discussed.

While this was an important first step, the meetings were not as useful as anticipated. NPOs, intimately familiar with issues facing the affected communities,

VOICES from the field

“ We were waiting for the administration, but the administration had no experience and no knowledge of disaster management. They had so little experience with managing volunteers and this became a huge problem. ”

brought problems they could not resolve at the field level to the central coordination body with hopes of getting answers. However, due to the fragmentation of government ministries, as well as confusion as to which issues needed to be addressed by whom and at what level, decisions could not be made. The process of consultation with and clearance from other offices took considerable time and was not conducive to the fast action required during an emergency response.

At the local level, coordination efforts between the government and NPOs were similarly strained. NPOs unsuccessfully tried to include local government in their weekly coordination meetings at the prefectural and municipal levels. However, since government had never worked with local NPOs before there was mistrust about which ones were legitimate or professional and what their intents were. As a result, NPO and volunteer activities in Mabi were largely separate from government. This not only created disparity in the affected areas, but also generated confusion and frustration among aid agencies and volunteers. Recognizing this problem, Japan Platform with other partner organizations urged the Cabinet office to create a registry of credible and trustworthy NPOs to send to the Municipal office. However, to date, this has not been done.

Where NPOs and local authorities did collaborate, successful outcomes were achieved.

For example, the government relied on NPOs who had direct access to and strong relationships with communities to determine what materials to reorder for the reopening of schools. Also, AMDA, a health organization in neighboring Soja, had a pre-existing relationship with the local authorities and as a result was immediately designated as coordinating the health response in that town. This resulted in the quick establishment of the effective prioritization system (as described above).

Although the city government made efforts to ensure the recovery planning process was inclusive, gaps still remain.

Respondents felt that the community consultation process was more perfunctory than participatory and have difficulty understanding how the Recovery Plan directly impacts their lives. The biggest question that government heard from people during consultations was when the river bypass would be created and the levees repaired, which they are currently addressing.

Participatory recovery planning is a time-consuming process, and recovery needs a balanced approach of speed and quality. From the limited interviews, it appeared that some issues of gender, aged population, physically/ mentally challenged were unnoticed in the recovery process as a "silent majority".

VOICES from the field

“ People recognize the link between government and NPOs is missing but they can't put it forth. Recognizing these problems is not taking us anywhere. NPOs played a big role in the communities but there is no manual to bridge the formal structure and these networks. NPOs understand the needs of the communities and their capacities should be linked to government efforts. ”

Technological hazards are important part of risk assessment.

"Natural" disaster induced technological hazards (NaTech) risk has been identified in the Sendai Framework,⁴ and its incorporation in local risk assessment has been discussed in OECD countries for the past several years. During the floods, the importance of this kind of assessment was clearly demonstrated as an aluminum factory in neighboring Soja city exploded, affecting over 40 houses. Although the explosion did not result in any casualties (due to an early evacuation of factory workers), the risk was not communicated properly to the local residents.

WAYS FORWARD

04

The research uncovered numerous issues, some of which contributed to success in Mabi's response and recovery, but others which need strengthening. These lessons and recommended actions are organized around the four priorities for action of the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR).

4.1 SENDAI FRAMEWORK FOR DRR PRIORITY FOR ACTION 1: UNDERSTANDING DISASTER RISK

The SFDRR underscores the importance of understanding disaster risk "in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment."⁵ Such awareness is essential for prevention and mitigation and ensures proper preparedness and response measures are taken.

Raising and maintaining citizen awareness: Residents, NPOs even government actors in Mabi recognize the limited awareness of and preparations made for the floods. There was insufficient attention paid to hazard maps,⁶ poor attendance at evacuation drills, and weak communication networks among stakeholders. Since the floods, awareness of the importance of Bosai has been raised, but needs to be maintained. Promoting community wide evacuation drills, and disaster awareness raising events which include all members of community (including, importantly, elderly, disabled and youth), will be critical for maintaining this heightened awareness and ensuring better preparedness for future disas-

ters. Also, given the hesitation of many parents with disabled children to go to evacuation centers, drills can give families a better understanding of what to expect, and can also help evacuation center management understand the special needs exist and how best to address them.

Incorporating technological hazards in risk assessment: The SFDRR identifies multiple hazards and the need to prepare for them.⁷ As the Soja aluminum factory explosion showed, a comprehensive NaTech risk assessment and a proper risk communication mechanism among local residents is a necessary part of any community based risk reduction measures.

⁴ Sendai Framework Scope and Purpose: The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks.

⁵ SFDRR relevant articles: 24 (c): To develop, periodically update and disseminate, as appropriate, location-based disaster risk information, including risk maps, to decision makers, the general public and communities at risk of exposure to disaster in an appropriate format by using, as applicable, geospatial information technology; 24 (g): To build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning

⁶ See "Issue 1: Flood Risk Communication" in CWS Six Months Since Western Japan Flood: Lesson From Mabi Report

⁷ SFDRR Scope and Purpose: The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks.

4.2 SENDAI FRAMEWORK FOR DRR PRIORITY FOR ACTION 2: STRENGTHENING DISASTER RISK GOVERNANCE

Managing disaster risk and response requires strong governance, including “guidance and coordination within and across sectors, as well as participation of relevant stakeholders.”⁸ The SFDRR recognizes the need for “the public and private sectors and civil society organizations... to work more closely together and to create opportunities for collaboration.”⁹

Coordinating among multiple stakeholders:

The legal provisions around the Basic Countermeasures Act could be reviewed to address several issues within resource constrained local governments, including cooperation with and among non-government organizations, informal networks and the private sector. Each brings various strengths and capacities for all stages of response to recovery, which when recognized and leveraged appropriately can ensure a more comprehensive and holistic contribution to disaster response and recovery.

Improving communication channels, especially with the most vulnerable:

Although more elderly residents are signing up for social media apps like LINE, information sharing gaps still exist. In non-crisis times, communication flows and information channels should be established, including an open digital information system between care providers and those in need of care, as well as among service providers. During non-emergency times it will be important for NPO and government staff to familiarize themselves with these systems so that they can be quickly activated during times of crisis. The same is true during recovery phases, as the displaced community still needs accurate and timely information about housing and other reconstruction plans.

Building ex-ante trust, relationships and partnership agreements between government and NPOs:

Examples of successful collaboration between the government and NPOs reinforce the need to systematize these relationships prior to disaster not only to fill gaps, but to ensure a more community-driven disaster response and recovery process. While this missing linkage is recognized among stakeholders, further efforts to mainstream NPO activities and voices, especially those of women, in official coordination mechanisms. Efforts can include mapping local capacities and developing a registry of pre-existing service delivery systems to minimize fragmentation, confusion, delay and/or duplication.

Building consensus among national government, local governments, local communities, civil society organizations and other key stakeholders:

While the government formulated a flood protection program half century ago, it could not start it due to lack of consensus among concerned organizations and key stakeholders. Coordinating interests and concerns is crucial in promoting infrastructure projects. Risk governance mechanisms need to be strengthened by engaging a wide range of key stakeholders.

4.3 SENDAI FRAMEWORK FOR DRR PRIORITY FOR ACTION 3: INVESTING IN DRR FOR RESILIENCE

Inclusive recovery has been a consistent and core theme of international frameworks set up by the Agenda 2030 for Sustainable Development Goals, in which 193 countries have pledged to “leave no one behind” and “endeavor to reach the furthest behind.” The topic was most recently prioritized at the Fourth World Reconstruction Conference (WRC4) 2019, whose theme was “Inclusion for Resilient Recovery,” which stressed the need to “put people at the center of recovery processes, making certain that they have a role in assessments, planning, policy development, implementation, and monitoring of recovery.” It also emphasized the need for “local and national governments to include vulnerable groups in the planning, implementation and monitoring of resilient recovery as well as ensure that the benefits of building back better are equitably shared.”¹⁰

These global commitments reflect an attempt to remedy the current situation where a large part of the population (e.g. women and girls, people with disabilities, people in rural areas, indigenous peoples, ethnic and linguistic minorities, migrants, displaced people, gender and sexual minorities, youth, and the elderly) are disproportionately excluded from several dimensions of development, including post-disaster recovery.¹¹

Ensuring evacuation centers meet needs of most vulnerable (including disabled, elderly):

Prioritization of care approaches applied by AMDA helped provide people with varying health conditions appropriate care and special attention. Plans for evacuation centers should include similar systems which categorize people according to the severity of their health needs, as well as specific gender and age requirements, and ensure they are equipped to handle them.

Recognizing informal evacuation centers: Informal evacuation centers sprung up as a result of the formal centers being unable to attend to the most vulnerable. However, in order for an evacuation center to be designated as ‘formal,’ a city official must be present to manage the assistance. Without this formal recognition, informal centers received limited assistance. A mechanism to recognize informal evacuation centers, perhaps as “annex” to the formal centers, should be established so that these critical centers are not excluded from assistance.

Establishing co-design and co-delivery mechanisms of the recovery plan:

As described above, in Mabi, inclusive recovery planning was limited. Aside from the direct community meetings conducted by the city office, there needs to be a strong link between Shakyo (Social welfare Association) and the city recovery planning department, so that local social welfare, health, housing and livelihood related issues can be conveyed through a proper channel.

Promoting structural measures which incorporate green concepts:

This disaster demonstrates that structural measures can be crucial to protecting human lives and assets from flooding. If flood protection structures had been completed as planned, the damage would likely have been far less severe.

Rivers provide important environmental functions such as offering habitats for various ecosystems, giving an opportunity for water leisure and enhancing the scenery. In urban areas, they are particularly valuable to maintaining an eco-friendly environment. When promoting structural risk reduction measures, balancing the management of flood risks with environmental protection is a challenge. River environment and water flow simulations can help decision making. Green structures, as opposed to grey structures, should be included as much as possible to mitigate environment impacts.

⁸ SFDRR Priority 2, Para 26. Relevant Articles: 27 (f) To assign, as appropriate, clear roles and tasks to community representatives within disaster risk management institutions and processes and decision-making through relevant legal frameworks, and undertake comprehensive public and community consultations during the development of such laws and regulations to support their implementation; 27 (h) Strengthening disaster risk governance to manage disaster risk. To empower local authorities, as appropriate, through regulatory and financial means to work and coordinate with civil society, communities and indigenous peoples and migrants in disaster risk management at the local level.

⁹ SFDRR, Preamble

¹⁰ Joint Communique on Inclusion for Resilient Recovery, World Reconstruction Conference 4. 14 May 2019.

¹¹ Joint Communique on Inclusion for Resilient Recovery, World Reconstruction Conference 4. 14 May 2019.

4.4 SENDAI FRAMEWORK FOR DRR PRIORITY FOR ACTION 4: 'BUILDING BACK BETTER'

SFDRR Priority for Action Four specifically calls for recovery, rehabilitation and reconstruction processes to "Build Back Better"¹² including minimization of disruption of basic services, among them health, and education.¹³ It also recognizes psychosocial support as a priority in recovery.¹⁴ Building Back Better also refers to training various stakeholders in disaster response and strengthening technical and logistical capacities to ensure better response in emergencies.

Emphasizing social cohesion for psychosocial recovery: Psychosocial programs for children have had positive results, but many parents report ongoing anxiety about their own futures. Close community bonds have been found to not only facilitate evacuation during crisis, but are also an important part of psychosocial well-being and post-crisis recovery. Promoting community networks and 'salons' in non crisis times has been an essential part of building and maintaining this social cohesion and should be continued.

A critical but often overlooked group when considering community ties is youth. This demographic can provide

important assistance during emergency times. Strengthening community links with and among this group should be prioritized.

Enhancing business continuity plans at schools is essential to the continuity of education after crisis. Disruption of school education has repeatedly occurred in Japan after disasters by using the school facilities as evacuation center. It is not enough for schools to strengthen collaboration with the community on operating evacuation centers smoothly. Schools should also prepare for where to resume education for children in a case that the school is occupied by evacuees.

Disaster management training and exposure for local leaders: The research found that government actors with disaster management experience or previous training were able to identify needs, make important decisions and take quick response actions. Training for municipal leaders, actors and decision makers on disaster management and risk reduction is critical.

ANNEXES

05

5.1.1 Persons Consulted

Ms. Ito Kaori	Mayor, City of Kurashiki
Mr. Hara Tadashi	Ex Director, Mabi Recovery Planning Committee, City of Kurashiki
Ms. Namba Tae	Director, GPSP Support Bureau, AMDA
Mr. Mitani Junjiro	Director, Gender Equity Dept., City of Kurashiki
Mr. Hinobayashi Norihito	Director, Mabi Office, Council of Social Welfare, Kurashiki (Shakyo)
Ms. Shibata Yuko	General Manager, Emergency Response Division, Japan Platform
Ms. Yamamoto	Community Welfare Section, Council of Social Welfare, Kurashiki
Ms. Shikanae Junko	ICT Officer, Okayama NPO Center
Ms. Yamanaka Yumiko	Disaster Nurse' Support, NPO "Friendship"
Ms. Kataoka Natsuko	Chair, SOUL Visiting Nurses' Station
Dr. Kenmotsu Katashi	Visiting Lecturer, Okayama University of Science
Ms. Ando Kyoko	Board Chair, Parents' Support STEP (NPO)
Mr. Kanbara Kazuyoshi Ms. Kanbara Mitsuyo	Owner, Kanbara Gofukuten

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15. Sanyo Shimbun: Still commuting temporary school after eight months from the 2018 flooding disaster-Half of Kurashiki Makibi Special Needs School students, March 6, 2019. . 和文タイトル山陽新聞:豪雨8カ月経てもなお仮校舎通学 倉敷まきび支援学校生の約半数
16. "Saving Lives with Better Disaster Warnings", NHK World Japan, June 27, 2019.
17. Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030
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¹² SFDRR Para 33 (c) To promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, hospitals and other health facilities, to ensure that they remain safe, effective and operational during and after disasters in order to provide life-saving and essential services;

¹³ SFDRR Priority (d) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;

¹⁴ Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction 33. (o) To enhance recovery schemes to provide psychosocial support and mental health services for all people in need;