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Human Security and Disaster in Rural Japan: Reflections from the 2020 Kyushu Floods

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Abstract

The paper reflects on the challenges faced by rural communities in Japan from the combined perspectives of demographic shift and the impact of disasters, and their implications for community survival and resilience amidst such compounded insecurities. By presenting the interplay of human security, disasters, and rural living, the paper highlights the unique vulnerabilities and insecurities experienced by rural communities. Drawing on the human security approach, the paper reflects on the implications of protecting and empowering rural populations in the face of compounded crises. The authors examine the collective challenges faced by rural villages and the urgent need to ensure the well-being of the disaster-affected residents of Kuma-mura based on a case study of the 2020 Kyushu floods. The paper confirms the universality of human security, the importance of developing strategies that consider rural areas' sociocultural and demographic context, and the need for a comprehensive approach to addressing complex and interconnected challenges those areas face.

Keywords: Human security, Rural community, Disasters, Kuma-mura (Kumamoto), 2020 Kyushu Floods

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1. Introduction

Japan's geography exposes the country to a wide range of natural and climate-related disasters, prominently observed in large-scale seismic movements throughout its history and the increasingly frequent occurrence of extreme weather events today. These accumulated experiences have been the source of valuable learning in developing strategies to mitigate the effects of such disasters, which other countries have applauded and emulated. However, the iterations of these catastrophic events continue to increase in complexity, creating compounded impacts that vary in the population and areas affected.

In the dawn of January 1, 2024, a strong earthquake shook the predominantly rural Noto Peninsula in Ishikawa Prefecture, Honshu Island. By destroying the area's remote villages, old buildings, and limited infrastructure, the earthquake showed once more the devastating effects of disasters on rural regions. Six months onward, Ishikawa's prefectural government reported 281 deaths from the earthquake, with more than 2,000 people still in states of displacement - 970 staying in primary evacuation centers and 1,222 in secondary evacuation sites, such as hotels and other accommodation¹.

The 2024 New Year disaster also overlapped with the 20-year prevailing population decline in the northern Noto area². As rural areas try to adapt to depopulation and degradation, the impact of disasters in the immediate and subsequent long-term will impact them differently. In late September of the same year, the Noto area experienced heavy rains that resulted in flooding and mudslides, bringing considerable setbacks to its recovery³. These recent calamities remind us of people's complex insecurities, particularly in communities experiencing the longstanding impacts of aging and depopulation amid a disaster.

The predicament of an aging society, particularly in rural areas, is not new; but when coupled with other natural hazards or climate-related disasters, it can develop compounded crises that even developed countries like Japan grapple to confront and resolve. Almost a decade after the 2011 Great East Japan Earthquake and during the height of a global pandemic, the flooding that took place in Southern Japan in 2020 highlighted the fact that despite the accumulated expertise of a country like Japan has in confronting disasters, various factors, including the current state of rural areas, the compounded crises of disaster and infectious disease can weaken the capacity of relevant stakeholders to ensure the complete protection and empowerment of an affected population.

¹ See: <https://japannews.yomiuri.co.jp/society/noto-peninsula-earthquake/20240701-195863/#:~:text=According%20to%20the%20Ishikawa%20prefectural,a%20lack%20of%20construction%20workers.>

² See: Aoki 2023.

³ See: <https://www3.nhk.or.jp/nhkworld/en/news/backstories/3575/>

This paper is a brief thought piece that reflects on the interplay of human security, disasters, and rural living, based on data from a case study on empowerment amidst disaster displacement developed as part of the JICA research project, Human Security and Practices of Empowerment in East Asia^{4,5}. This paper begins by conceptualizing the intersection of human security, rural communities, and disasters. The case of the 2020 Kyushu floods is used to further illustrate this juncture by identifying the insecurities of the affected residents, the multidimensional challenges faced by rural village residents, and their collective action toward the village's survival and disaster resilience. It reiterates the importance and urgency of protecting and empowering rural communities against complex and compounded challenges and crises.

2. Human security, Japan's rural areas, and disasters

The concept of *human security* has been elaborated in various scholarly and international documents in analyzing and understanding how people's new and evolving challenges are addressed, with the individuals and communities experiencing these imminent threats as the referent object. Among these documents, the UNDP 1994 Human Development Report and the 2003 Commission on Human Security Report are seminal works in the broader definition of human security we know today. As defined in the latter report, Sadako Ogata and Amartya Sen elaborated on this broader definition of Human Security that puts together the basic elements of human freedom: *Human security means protecting vital freedom by protecting people from critical and pervasive threats and situations, building on their strengths and aspirations; and creating systems that give people the building blocks of survival, dignity, and livelihood* (Commission on Human Security 2003, 4).

This characterization has been a significant guide in examining human security across different themes, such as disasters, conflicts, environmental degradation, and development challenges, mainly experienced by those in developing states. In the context of developed nations, human security is prominently embedded in their foreign policy agenda. For Japan, it has adopted the concept of human security as a guiding principle for development assistance in 1999, thereby contributing to its evolving role as an important actor and donor in Southeast Asia and Africa (Tadjbakhsh and Chenoy 2007, 1–2; Muto and Ishikawa 2018, 72). While human security remains a key element in Japan's foreign policy agenda (Tanke 2021; Kamidohzono, Gómez, and Mine 2016), the occurrence of disasters and compounded crises like the 2011 Great East Japan Earthquake (GEJE) reactivated the rethinking of human security as an approach in examining the domestic context (Mine and Gómez 2013; Bacon and Hobson 2014).

⁴ Interviews conducted between September 2021 and June 2024, and materials from local organizations and the local government. (See: List of in-depth interviews at the final page of the paper)

⁵ See: Robles, 2024.

Following the 2003 Human Security Report, the UN General Assembly Resolution of 2012 (A/Res/66/290) redefined human security as *the approach to assist the Member States in identifying and addressing widespread and cross-cutting challenges to the survival, livelihood, and dignity of their people*. This brings a more comprehensive interpretation attuned to the changing and evolving insecurities of the times and affirms the universality of the human security, wherein the challenges go beyond territories and transcend even a nation's level of development. An excellent example of such a condition is Japan's experience with disasters (especially those in rural areas). The triple disaster that struck northeast Japan on March 11, 2011, confirmed that localized disasters can also be understood from a human security context (Sato 2016). While Sato based his claim on the issue of nuclear power and its implications for human security for the people in the Tohoku area, a similar argument can be made in the context of rural areas, where human security—defined as protecting life, livelihood, and dignity—becomes especially notable in difficult or catastrophic situations. For rural areas already facing exceedingly difficult demographic and socioeconomic conditions and an uncertain future in “normal” times, the challenges posed by external threats require not only the protection of people in their communities but also the means to empower them against multiple threats. Such concerns are primary considerations for declining regions.

Aligned with this paper's intention to analyze the human security of rural area residents, it is necessary to elucidate the features of a rural community to better comprehend their current context. Rural sociologists emphasize the richness of examining rural areas. As a discipline, rural sociology analyzes the comparative interpretation of dichotomizing rural and urban communities, highlighting the former's deep dependence on political and economic decisions made for them in the latter's centers of power (Jaffe and Gertler 2017). The unequal relationship between urban and rural areas sidelines rural areas and isolates them from the social and economic progress experienced in other parts of the country. (Lützel, Manzenreiter, and Polak-Rottmann 2020, 4). This creates a complex scenario of powerlessness and overlooked insecurities, even during times of relative stability. Therefore, when [natural] disasters strike, they cause greater damage to already vulnerable rural regions. In recent decades, rural areas have continued to experience decline, restructuring, and adaptation to ongoing development occurring globally. As Jaffe and Gertler state, “rural people find themselves threatened from without, and frequently from within” (2017, 449), implying the complex and multifaceted challenges that rural communities face, which require them to navigate pressures from outside influences that lead to economic decline, the loss of community identity, and increased outmigration, as well as the internal struggles that hinder the community's ability to address external threats effectively and ensure their survival and prosperity. Such predicaments persist in rural areas regardless of the entire nation's level of development.

In Japan, the impacts of an aging population and low fertility can be felt even in urban centers like Tokyo (Masuda and Kawai 2015). However, the countryside overall is undergoing massive changes due to depopulation and economic decline with the less favored hilly and mountainous areas experiencing this development at an even greater rate (Odagiri 2011, 4). The decline can be observed in various areas that interconnect and influence one another. The current degradation of the rural population started with the rapid post-war economic growth when the rural population migrated into urban areas in search of better education and employment (Ministry of Land, Infrastructure, Transport and Tourism 2014, 5–8). The continued outmigration of young people left rural areas with aging populations where the number of deaths surpasses the number of births (Odagiri 2011, 4).

Combined with this decline of the rural population came farm and forestry land degradation. A shortage of the rural labor force and the establishment of a fiercely competitive global market are interlocking reasons for the dramatic decline in land utilization since the 1980s in Japan (Lützel, Manzenreiter, and Polak-Rottmann 2020; Odagiri 2011; Ota 2002). The drop in the rural population meant a substantial decline in the workforce, and the changing economic situation made it much harder for the people working in the agricultural and forestry sectors to make a living. With a shrinking and aging population and only little economic opportunity, more and more communal tasks must be shouldered by the remaining older population. As places of community, like schools, and standard practices start to vanish, it becomes much harder to uphold a sense of community in rural towns and villages (Matanle, Rausch, and the Shrinking Regions Research Group 2011, 177-178, 315-316; Odagiri 2011, 6).

Despite how dark the current situation and future predictions may be, research has also shown that rural areas can be very resilient, and it would be wrong to evaluate the rural population only by their perceived insecurities. The 1970s to 1980s was a period of rethinking rural sociology, capturing the influence of international development theories and practices in understanding the complex experience of rural places (Jaffe and Gertler 2017, 448-450). This paved the way for a more interdisciplinary introspection of rural areas, shifting from the original definition of rural areas as spaces and places created through unequal processes of development to a more functional approach in viewing rural areas as spaces with social, demographic, physical, and geographic features. With such features, rural areas, with their smaller population, involvement in primary production, and interaction with nature, are characterized by the *community (Gemeinschaft)*, where people's roles, values, and beliefs are based on personal ties and face-to-face social interactions.

There is a tendency in the broader public to portray rural areas as idyllic spaces where the community is still intact and people live their lives in harmony with each other and nature; in the context of Japan, the term "*furusato*" comes to mind (Thelen 2022, 27-29). While such notions must be questioned and critically analyzed, the importance of local communities, which define and shape their space, cannot be understated. In Japan, rural hamlets are disappearing at a slower rate than previously anticipated (Yamashita 2012), and there are success stories of rural revitalization in Japan and other countries, even if their numbers are limited (Matsuda 2004; Li, Westlund, and Liu 2019; Shinohara 2014). Rural revitalization is thus a complex process, but in the simplest terms, it involves working toward a resilient and diverse local economy and a strong community (Li, Westlund, and Liu 2019, 140). What sounds easy on paper is difficult to realize in the real world because rural areas must find ways to overcome global trends and developments and combat structural decline that extends far beyond their municipalities' borders. Yet the qualities that constitute rural communities are critical to the survival and resilience of rural areas against the threats of natural hazards, climate-induced disasters, and even the spread of infectious diseases (Sasaki and Ichinose 2022).

While establishing a robust and effective disaster response framework, nations must confront the complex interplay of destabilizing factors and their disproportionate impact across regions. The urban-rural divide plays a role here as well, as the balance of attention regarding disaster vulnerability and resilience tilts toward urban areas—especially in developed countries (Cutter, Ash, and Emrich 2016, 1238). While every place has distinct characteristics and disaster resilience must be adapted to the specific local context, research suggests that there are notable differences between urban and rural areas that must be taken into consideration (Cox and Hamlen 2015; Cutter, Ash, and Emrich 2016; Jerolleman 2020; Safapour, Kermanshachi, and Pamidimukkala 2021). A study by Safapour, Kermanshachi, and Pamidimukkala suggests that ineffective coordination and management, along with insufficient financial resources, negatively affect the recovery and resilience of both rural and urban areas (Safapour, Kermanshachi, and Pamidimukkala 2021, 4). However, research conducted in rural areas in the U.S. that examined the variables driving resilience found that community capital was more important for rural resilience, whereas economic capital was a dominant factor for urban resilience (Cutter, Ash, and Emrich 2016, 1249). Since relocation processes—whether for the short or long term—can lead to communities scattering and breaking apart, their social capital and, with it, their resilience can be seriously threatened (Maly, Vahanvati, and Sararit 2022, 11). The aftermath of the Great East Japan Earthquake illustrated how insufficient attention to the local context and a prolonged reconstruction phase can lead to a “drastic population outflow” (Muroi 2022, 8), which is a detrimental outcome for areas already confronted with depopulation (Maly, Vahanvati, and Sararit 2022, 11).

Exploring this intersection of human security, the conditions in Japan's rural areas, and the occurrence of disasters, the experience of the Kuma-mura⁶ residents during the 2020 Kyushu flood offers significant insights. Addressing the interconnected issues comprehensively requires a human security approach to effectively examine the experiences of rural communities across three critical phases of disaster: pre-disaster, during the disaster, and post-disaster, and how rural communities navigate their vulnerabilities and enhance their resilience. In applying a human security framework to analyze the intersections of rural living, disaster, and a pandemic on the residents of Kuma-mura, the authors use these three individual-based questions as a guide: *Security of whom? Security from what? Security by what means?* As Tadjbakhsh and Chenoy put it, these questions are addressed by viewing the individual as the fundamental basis of security, whereby people become “agents” who can actively engage in identifying potential security threats and participate in efforts to mitigate them (2007, 18). The first question aims to describe the village and its pre-disaster/pre-pandemic context and condition. This will be followed by an exploration of the causes of these insecurities, describing and elaborating on how a small village like Kuma-mura confronted the devastating impact of the Kuma River flooding during the COVID-19 pandemic. The final question addresses how people can be protected and empowered against these insecurities. The paper places particular emphasis on the importance of the temporary housing built after the disaster in understanding how rural communities navigate their disaster recovery and village revitalization.

3.1 Security of whom? Kuma-mura: Rural living and resilience

Kuma-mura is a village in the southern section of Kumamoto Prefecture that can be categorized as one of the more precarious sites within struggling rural regions. The village stretches 207.58 km² from north to south, with only 8% of the area covered by flatland and the remaining 92% consisting of mountainous forest (Kuma Village 2021b, 6). A total of 79 settlements are sprinkled throughout the village, and some of the more remote settlements are accessible only by narrow roads through the deep forest. Many residents decided to settle near the Kuma Riverbank, where the local government office and train facilities are situated. Neighboring the village is the relatively larger and more populated town of Hitoyoshi⁷, which is a 20-minute car ride from the village center.

During the 1940s, Kuma-mura experienced a short period of prosperity until the population began to decline steadily in the 1960s (Kuma Village 2015a, 1). This is evident in the decrease of village inhabitants from 12,833 residents in 1955 (Kuma Village 2015b, 1) to 2,693 residents as of July

⁶ The Japanese term *mura* refers to a small rural village and is usually included as part of the village's name - as in the case of Kuma-mura.

⁷ As of February 2025 the population of Hitoyoshi City is 29,608 inhabitants. (Source: https://www.city.hitoyoshi.lg.jp/kurashi/juminhyo_koseki/juminhyo_koseki_oshirase/2324791)

2024⁸. According to the census, the percentage of people 65 and older was 41% in 2015,⁹ but had increased to 50.4% by June 2024 (Kuma-mura Yakuba Fukkō Suishin Ka 2024b, 18). This pattern can be observed in many other rural areas. For example, the town of Aso, also in Kumamoto Prefecture, has a similar population development; its population peaked in 1955 with 41,617 inhabitants (Aso City 2015, 2) and declined to 24,262 as of July 2024¹⁰.

Given the village's topography, forestry has been for the longest time the village's most important sector. However, with changes in the market and the availability of cheaper wood from outside Japan, the village struggled to compete, and the forestry sector is no longer profitable.¹¹ Like in most rural areas in Japan, farming is also an everyday livelihood; however, with only 8% of the village area consisting of leveled ground, the available space for intensive agricultural use is very restricted.

As part of an effort to develop strategies for revitalizing and becoming a more attractive place to live and work, the local population of Kuma-mura was surveyed in 2015 on their problems regarding life in the village¹². When asked what they regarded as a necessity to continue living in the village, most residents (46.8% out of 740 persons surveyed) answered that they need to be able to make sufficient income (Kuma Village 2015a, 10). More than five years later, little has changed. A member of a local revitalization organization explained that if people in the village could earn 200,000 Yen per month, no one would leave; however, there are no jobs in the area that pay this much¹³. The survey underlined that it was not the lack of opportunities in the village, but the small wages that are considered the most challenging. Financial insecurities also influenced family planning and were the main reason families gave for having fewer children than they would have wanted¹⁴ (Kuma Village 2015a, 10). Therefore, initiatives that supported families financially, like free medical services, subsidies for school lunches, and childbirth bonuses, were deemed the most helpful by parents (14).

Lastly, a challenge of everyday life that troubled all age groups, as noted in Kuma-mura's General Plan (2015, 17), was mobility and transportation. The village had no big shops or supermarkets, so everyday shopping had to be done in the neighboring town. As in most rural areas, a car is an undisputable necessity, the lack of which particularly limits the movement of children and older

⁸ Source: Kuma Village (<https://www.kumamura.com/gyousei/>).

⁹ Source: <https://www.e-stat.go.jp/en/regional-statistics/ssdsviw/municipality>.

¹⁰ Source: Official homepage of Aso City (<http://www.city.aso.kumamoto.jp>).

¹¹ Local Resource Person (LRP) 1, September 21, 2021.

¹² See: "Kuma-Mura Machi Hito Shigoto Sōsei Sōgō Senryaku" [Kuma Village General Plan for Town Building, People Empowerment, and Job Creation] (Kuma Village. 2015a).

¹³ LRP 1, September 21, 2021.

¹⁴ Of the 278 persons surveyed, 28.1% answered that financial insecurities are the reason for having fewer children than they wanted.

people who can no longer drive. For high school students, the journey to school was exceptionally long, as they had no other option but to go to the school in the next town, Hitoyoshi. In short, daily life in Kuma-mura came with many struggles, but the local government and community tried to find solutions to these problems. For example, a community bus and taxi service were available and frequently used by the older villagers to access shopping or medical services in Hitoyoshi. However, most of the villages' problems were structural, and quick fixes could only do so much. As a member of the revitalization organization put it, the village's funds are insufficient and cannot tackle its problems effectively¹⁵.

Before the pandemic and the 2020 Kyushu flood, the village had thus already been experiencing a rapid decline. Even so, while it was a difficult situation, it was still somewhat manageable. During in the first months of the pandemic, the village protected its mostly older population by further reducing social contact. Thus, the compounded impact of the pandemic and the flooding meant that the existing protection of the local community and their resilience was seriously challenged.

3.2 Security from what? Compounded threats of a pandemic and extreme weather condition

The previous section laid out the existing conditions in Kuma-mura. Although multidimensional challenges rooted in the village's depopulation and increasingly aging population persist, the village's residents have found ways to manage these hardships. However, 2020 brought unique challenges as the village was caught between two disasters.

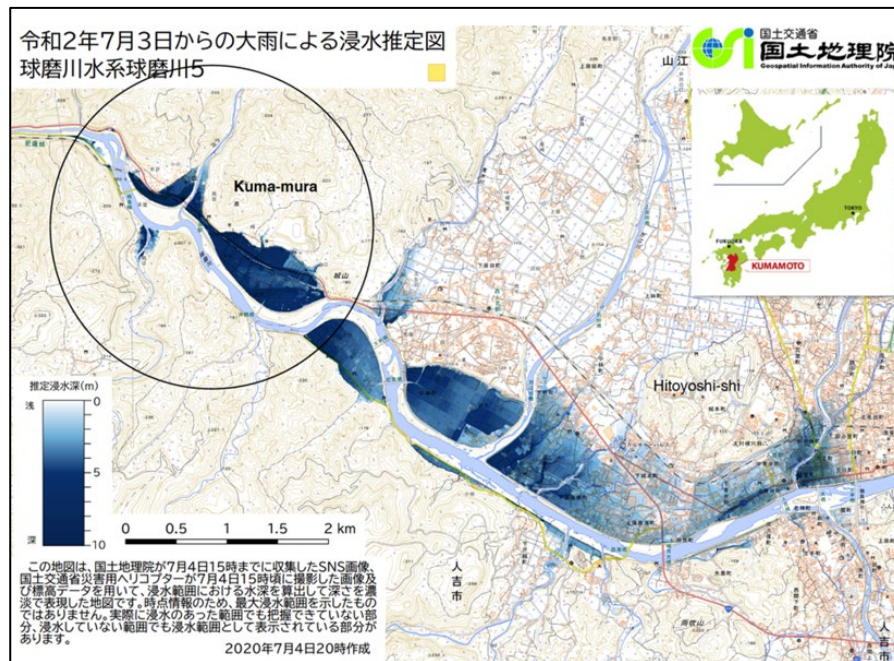
In July 2020, Kuma-mura experienced one of the worst floods ever recorded in the village, coinciding with the global COVID-19 pandemic. In the village's recorded history, the last severe flooding happened in 1965 when the water level of the Kuma River rose to 2.1 meters. In 2020, after heavy rain in the early hours of July 4th, the water of the Kuma River rose 4.3 meters. Where the river cuts through the mountains, it creates a V-shaped form with steep mountainsides rising from each side. Pictures taken from high places and rooftops that day show that the river water fully engulfed the houses near the riverbanks (Kuma-mura Kankō Annainin no Kai 2022). The river submerged the village, and even the more densely populated neighboring town of Hitoyoshi was flooded deep into the town's center (see Figure 1). Twelve hours after the heavy rain, the floodwater was still several meters deep in some areas, delaying rescue efforts and making the situation more dangerous¹⁶. The three main areas flooded in the village were also the most populated, being located alongside the river: Watari, Issochi, and Konose. Among these districts, the area of Watari incurred 56% of all damaged buildings in the village. Even though most of the damage occurred alongside the river, settlements high up in the mountains were also severely

¹⁵ LRP 1, September 21, 2021.

¹⁶ Temporary Housing Resident (THR) 1, October 13, 2021.

impacted. Small streams and water-filled rice fields overflow and caused sediments and even trees to rush down the mountains. The disaster resulted in 340 entirely and 117 partially destroyed (20-50% destruction) houses; this accounted for 31.3% of all households in the village during the flooding (Kuma Village 2021a, 5).

The many mudslides destroyed most of the village's infrastructure, from roads and bridges to the water and power supply. On July 9th, evacuees were first counted in the eight open shelters following the flooding. About 426 people who lost their homes or could not return to them stayed at the makeshift shelters in schools or community centers. The number declined as the roads cleared, and some could return home (Kuma Village 2021a, 11). The local government and the village population had to manage this unprecedented situation, trying to support the people who lost their homes while navigating the appropriate response to avoid spreading the virus into the village to protect its older inhabitants.



Source: Flooding map (https://www.gsi.go.jp/BOUSAI/R2_kyusyu_heavyrain_jul.html)

Figure 1: Map of Estimated Flooding Due to the Heavy Rains of July 2020, with an inserted Map of Kumamoto

When the COVID-19 pandemic hit Japan at the beginning of 2020, many were anxious about the well-being of the great number of older people in Japan's population. Initially, the pandemic had only little direct effect on daily life for the people in the village. Fearing social stigma, the Kuma-mura residents tried their best to be careful and reduced their social interactions - no one wanted

to be the person who brought the virus into the village¹⁷. However, the floods in July 2020 made the people of Kuma-mura experience the impact of what the COVID-19 restrictions meant for disaster support and relief.

During the first days after the flooding, the village was almost cut off from the outside, and support and help trickled in only sporadically. The people of the village had to rely on each other, sharing what little they could take with them to the shelter.¹⁸ Volunteers' entry remained restricted even when access to the village was restored. The recovery plan published by the local government showed that between July 10 and the end of December 2020, only around 5,000 volunteers were allowed to enter the village (Kuma Village 2021a, 13). The primary reason for this limited support from volunteers is associated with the nationwide restrictions in responding to the spread of the COVID-19 pandemic. Due to the limited number of volunteers allowed to enter the village, our interview partners (also village residents) felt alone, standing in front of their destroyed homes and trying to clear the rubble and clean what was left of their houses. Although strongly discouraged, some still sought help from family and friends outside the village¹⁹. The entry restriction to the village led the local revitalization organization, *Kuma-mura Sonsan Kasseika Kyōkai* (KSKK), to immediately take action while documenting the disaster to offer an explanation to the victims and leave a detailed account for future generations²⁰.

In the immediate aftermath and the months that followed, the local government made a clear choice to protect the most vulnerable (i.e., older people) from the adverse impact of the pandemic. Still, in doing so, the entire village (including the older population) suffered from a state of helplessness after the flooding. Disasters demand that people come together and support each other. However, the response to extreme weather events, which primarily requires gathering everyone to safety, contrasts with the recommended social distancing to avoid the spread of infectious disease. For the local government and village residents, everyone was navigating how to appropriately respond to this combination of crises.

¹⁷ LRP 1, September 21, 2021.

¹⁸ THR 1, October 13, 2021.

¹⁹ LRP 1, September 21, 2021 and THR 2, October 12, 2021.

²⁰ A guidebook published by the KSKK lists the three components that caused this catastrophic flooding event: 1) In parts where the river basin is very narrow, the water level rose quickly and turned the river into a raging stream; 2) The water level of the many small streams flowing down the mountainsides rose as well and lead to mudslides; 3) The water masses of the Kuma River pushed into the rivers that confluence into it, not being able to flow into the Kuma River the smaller rivers flooded the surrounding area (Suzuki 2021, 111).

3.3 Security by what means? Rising above the crises through temporary housing and finding a permanent home

The human security approach recognizes that threats cannot be addressed in isolation. It acknowledges how these threats are interrelated and also requires comprehensive solutions that are interconnected (Tadjbakhsh and Chenoy 2007, 18). In the aftermath of the heavy rain and flooding on July 4, 2020, and as Kuma River water receded, it revealed the extent of the damage incurred by the village and the heightened insecurity for the residents who lost their homes and feared the COVID-19 virus. This scenario confirms the diversity of issues that must be addressed after the disaster. Thus, multiple interconnected solutions are required to recover from the catastrophe and revitalize the village long-term.

Affected residents lived in shelters (including school buildings and other evacuation facilities) for about two and a half months from July 2020. Within the village, an open structure called “Sakura Dome,” located at a sports facility, served as an emergency evacuation center for the first few days (Das et al. 2021). After the emergency response phase, the next important step was to provide a transitional space for the displaced residents (See Figure 2). Adapting to the Disaster Relief Act, 90 apartments and 68 ready-made container houses were made available in the village. Additionally, 201 wooden houses for the flood victims of Kuma-mura were constructed by October of the same year. Given the limited space to build a temporary housing complex, 88 of the 201 wooden houses were built in the nearby town of Nishiki (Kuma Village 2021a, 12)²¹. Displaced residents were assigned a housing unit per household at the temporary housing. Additional rental types, such as private rental housing, were also used by the flood victims. By design, people from the same settlements were moved into the same temporary housing complex²².

COVID-19 regulations also impacted daily life in the temporary housing complexes. Community spaces were included in all the temporary housing complexes, but the inhabitants could hardly use them due to the pandemic restrictions. Gathering outside was an option, provided the weather was good, and with sufficient social distancing. The village experiences freezing winters and hot summers, including a rainy season in early summer, so outside was only a poor replacement for an actual community space. Another feature of disaster temporary housing is the presence of the Support Center (*sasaei sentā*). Local governments receive funding to create support structures for the inhabitants of temporary housing. In the case of Kuma-mura, the local Welfare Center took on this role. As the pandemic restrictions made it difficult for the community to help and support

²¹ Including all affected regions in Kumamoto prefecture, the number of people in temporary housing peaked in January 2021, totaling 4217 people (Health and Welfare Policy Division Kumamoto Prefectural Government 2023).

²² Flood-displaced residents staying at the Temporary Housing around Sakura Dome were mainly from Watari, who had lost their homes. Residents from Konose and others who could not return to their homes were staying mainly in the Temporary Housing in Nishiki.

each other, the role of the Support Center became much more important. They visited the inhabitants regularly to check on their well-being and helped them adjust to life in temporary housing²³.



Source: Authors, October 2021.

Figure 2: Temporary Housing in Kuma-mura (Two Types)

While temporary housing is essential for disaster recovery, it can only provisionally mitigate the housing crisis right after a disaster occurs. Therefore, moving people from the temporary into permanent housing was vital for the village's recovery. For the local government officers, this meant being able to refocus their work from disaster recovery to the village's revitalization (Kuma Village 2021a, 21). For the people living in temporary housing, this meant beginning the search for a new home as soon as they moved into the temporarily provided houses. Finding permanent housing proved to be a significant challenge. The three main concerns for those who chose to rebuild were place, cost, and time (Kuma-mura Kankō Annainin no Kai 2022, 113). Easily accessible and flat land for house rebuilding is rare in the village, and thus the local government decided and initiated to acquire land in a safe area to reconstruct houses. However, the land preparation was still ongoing in summer of 2024²⁴. At the same time, the population decline continued at great speed. Between July 1, 2020, and June 1, 2024, the village population shrank by 22.8% (802 persons), from 3510 to 2708 persons, and the number of households declined by 15.6%, from 1432 households to 1208 (Kuma Village Legislative Assembly 2023, 5–6)²⁵.

The village's post flooding Recovery Plan was released in March 2021, covering nine years from 2020 to 2028. The first four years (2020-2023) are intended for recovery, followed by the next five years (2023-2028) dedicated to the revival and development of the village. One of the key

²³ LRP 3, December 14, 2021.

²⁴ LRP 2, June 27, 2024.

²⁵ Source: Official homepage of Kuma 2024 (<https://www.kumamura.com/gyousei/>).

priorities in the village's recovery plan is rebuilding the lives of the affected residents. Of the 30% of Kuma-mura's residents whose homes were destroyed, most have remained in temporary housing. For the residents to return to the area where they are accustomed to living and create an environment where they can live with peace of mind, the local government plans to secure all residential land, support the rebuilding of private houses, construct disaster public housing, improve child-rearing, and ensure the early resumption of public transportation, among other initiatives (Kuma Village 2021a, 20). While these plans sound promising, people still await their full realization.

4. Discussion: Protecting and empowering disaster-affected rural communities

The previous section explored the insecurities faced by residents of Kuma-mura affected by flooding through three individual-focused questions. By identifying the village's characteristics before the disaster, examining the compounded challenges they encountered in 2020, and outlining strategies to overcome these insecurities for sustainable development, it provides a more comprehensive understanding of the residents' human security to ensure their freedoms, rights, and dignity.

Section 3.1 presented the pre-disaster condition of the residents in Kuma-mura. Describing the village reflects the combined crises of aging and depopulation. Life in Kuma-mura is not unique; rather, it mirrors the situation in most rural areas of Japan. As explained, the decrease in population has direct consequences, creating a domino effect on the overall well-being of the entire village. The decline in population results in a combination of a reduced workforce, underutilization of local resources, stagnant socio-economic conditions, and a weakening of the social fabric. These are longstanding challenges that village residents face, and the absence of viable solutions directly impacts the entire village. While such conditions may not be ideal, those who chose to stay have found ways to make life livable.

The occurrence of flooding at the height of the global pandemic inevitably revealed the pre-existing insecurities of the village and the limitations in enhancing the community's resilience, as illustrated in Section 3.2. These rippled even in the disaster response operationalized at that time. The year 2020 began with the COVID-19 pandemic as a salient global concern, and Japan's concern was no exception. Japan's experience with COVID-19 revealed the strengths and limitations of its crisis responses, especially in immediately addressing the needs of vulnerable and marginalized groups in society against widespread infectious diseases. As we know, crises do not wait in a queue. While communities grappled with the impact of the pandemic globally, other challenges, including extreme weather events, continued to arise, straining people's capacity to respond immediately and appropriately. Every phase of a disaster comes with its specific risks and insecurities. The challenges individuals and communities have to confront during and in the

immediate aftermath of a disaster often result from combined pre-disaster challenges and new risks resulting from heightened exposure. This drives new and complex vulnerabilities that can affect their long-term recovery. Although the devastating impacts of the flooding will shape the village for a long time, Kuma-mura proved that it was able to keep infections low, similar to other rural areas (Sasaki and Ichinose 2022).

The case of Kuma-mura further shows that rural areas need to be able to make quick decisions to strengthen their resilience after a disaster. It is important to address the compounded insecurities that the village residents experience as they can even prevent long-term insecurities for the residents and ensure the village's future. Section 3.3 detailed the support for the affected residents, anchored primarily in providing immediate temporary housing for those whose homes were extensively damaged. Their needs, contextualized with the limitations of the pandemic, were provided through the local government and the collective support of non-profit organizations (NPOs) and lesser-affected residents. One can see the provision of temporary housing as the pivotal protection mechanism to improve the lives of those affected by the flooding, and their empowerment stems from the support from the other village residents.

In disaster-affected Kuma-mura, the primary concern was securing a space for those who have been displaced to move or rebuild. The move to the temporary housing was a vital re-start point for most residents displaced by the flooding. A “place” implies a significant site for change and investment in natural and built capital, and equally so as a space for social constructs that imbue lives with meaning and security (Adger et al. 2018, 29–30). Especially during a crisis, where people are uprooted from where they live and stay, accompanied by the uncertainty of return or a new home, people continuously search for a site of reduced insecurities.

With rural areas embodied by the community itself, the issues that individual households face translate into the challenges of the entire rural community. As Gene F. Summers discussed, most threats to fulfilling perceived collective needs originate in individuals' proximal life space (1986, 352). The varied insecurities experienced by the village's residents cascade to the overall state of the village. As the flood-stricken residents faced their individual troubles, the compounded issues of disaster and infectious disease ignited the need to mobilize rural communities to address their immediate needs collectively and to fill the gaps in protecting them at that time. In Kuma-mura, this mobilization was noticeable in part through the work of the local revitalization organization and the Support Center for temporary housing. Both were staffed by village residents who offered assistance to the local community but also gained knowledge from the post-disaster work they provided. This knowledge can be invaluable for finding answers to the difficulties that the future will bring. However, housing became the main challenge for individual households and for the entire village, and displacement does not end once people are provided with temporary homes.

Each individual aspires to reach a durable solution, either by returning to their homes, integrating, or finding a new home. The predicaments of securing permanent homes and assisting the village residents in getting back on their feet are not just individual or family concerns; they also impact the lifeline of the entire village. Thus, the concern for the lack of permanent homes post-flooding is a shared need among those living in the village, and addressing the personal needs of finding shelter has implications for the life of the entire village.

This leads to a serious question that rural areas face in times of disaster: *How to revitalize a declining area with an aging population?* Returning to the concept of human security, it highlights not only the need to address insecurities but doing it in a way that ensures the dignity of people. The next step for those staying in temporary housing is to move to a permanent home eventually. Ideally, this transition would involve relocating pre-disaster settlement residents together in disaster public housing complexes, thereby preserving their existing social ties. However, despite efforts to adhere to the planned schedule, delays in the completion of the disaster public housing and allocation of plots for house rebuilding have resulted in many residents experiencing extended stays in temporary housing and reconsiderations of their options. For the older inhabitants of the village displaced by the flooding, this impending deadline to vacate temporary housing has heightened feelings of immobility and uncertainty regarding their future.

While people navigate their situations, the village also undergoes changes. For some, the flooding was the final push to leave the village and rebuild elsewhere. Others wanted to remain in the village but could not wait any longer for the plots of land to be completed. The loss of many families with young children was especially hard on the village community²⁶. The stark decline in the village population had been anticipated, and the outmigration due to the disaster was another critical factor that necessitated even swifter action of the local government to mitigate the village's decline.²⁷ Hence, the village steps into a new state of insecurity of finding a permanent place to live for the disaster-affected residents, while revitalizing the village, and addressing the needs of its growing silver population. These issues should not be treated in isolation, as they reflect the multidimensional security concerns that require comprehensive top-down protection and sustainable efforts to empower these individuals.

The meaning of resilience in the context of rural regions does not necessarily mean that they become growing and thriving areas - for many, this will not be possible (Li, Westlund, and Liu 2019; Odagiri 2011; Lützel, Manzenreiter, and Polak-Rottmann 2020). Due to its geography and assets, the possibilities for expanding tourism in Kuma-mura are limited, and the development of the forestry sector to make it profitable again lies outside the village's hands. However,

²⁶ LRP 2, June 27, 2024.

²⁷ LRP 1, September 21, 2021.

resilience is not a fixed state or an outcome but rather a process (Cox and Hamlen 2015, 223). Even if decline cannot be stopped, there is a need to consider how rural communities can be best supported so that they are able to act faster after disasters, manage their insecurities, and actively shape their future – and in doing so, become more resilient along the way.

5. Conclusion

This paper reflects on the universality of human security and posits that its features can also be a valuable approach to examining crises regardless of national boundaries or levels of development. Adopting the human security approach is essential for understanding the pre-disaster context of rural Japan (*Security of whom?*), identifying the overlapping challenges incurred from the crises (*Security from what?*), and finding ways to protect and empower people (*Security by what means?*). Examining these elements is necessary to create comprehensive solutions to individual problems and the collective insecurities of communities. In the case presented in this paper, ensuring the security of the Kuma village residents [the referent object] from the challenges of rural living, as well as the crises posed by COVID-19 and the floods[threats], required a combined effort to protect and empower them, initially by providing homes for the displaced residents [means]. Protection mechanisms for people affected by the disaster have a rippling effect on the survival of the entire village. The COVID-19 pandemic may not have directly impacted the village during the flooding, but there was a need for a delicate balance between protecting its local community from infection and supporting their recovery after a devastating disaster. Securing a permanent home for the flood-affected residents can aid in the disaster recovery and revitalization of the village, thereby avoiding further decline and outmigration. It requires the active involvement of the entire community and various stakeholders to ensure the residents' needs are met and that their agency is exercised against present and future threats.

Four years after the disaster, the focus of the village no longer revolves solely around the disaster or the pandemic but has pivoted back to the struggles of a declining rural area - only now on an even grander scale. The current situation of most rural areas in Japan is challenging, with regions and their communities experiencing decline and degradation for over half a century, making their residents more vulnerable when disasters occur. The plight of rural communities is indeed a multidimensional human security concern. Many communities face a range of insecurities, from acute to structural and short- to long-term challenges that must be addressed in diverse but concerted ways. When another crisis further challenges such volatile conditions in rural areas, it disrupts the resilience that these communities have built. Reflecting on the village before the disaster, facing the cascading effects of aging and out-migration, the local population had found ways to cope with the difficulties of living in Kuma-mura. And although the situation was challenging, it remained manageable, showcasing their resilience and determination.

All these aspects highlight the value of a human security approach, not only in understanding the extent of insecurities but also in the protection and empowerment strategies that enhance the resilience of rural residents and their entire community. It is imperative to develop genuinely people-centered, comprehensive, multistakeholder, and context-specific solutions to address the challenges of rural communities. The concept of human security emphasizes that protection alone will not resolve people's insecurities. Empowering communities and building their resilience are fundamental to supporting the complex and interconnected challenges faced by rural communities.

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In-depth interviews

- Local Resource Person (LRP)1 and LRP 2. 2021a. Interview by Signy Goto-Spletzer. Kumamoto, Sept. 21, 2021.
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- LRP 3. 2021. Interview by Lisette Robles and Signy Goto-Spletzer. Kumamoto, Dec. 14, 2021.
- Temporary Housing Resident (THR) 1. 2021. Interview by Lisette Robles and Signy Goto-Spletzer. Kumamoto, Oct. 13, 2021.
- THR 2. 2021. Interview by Lisette Robles and Signy Goto-Spletzer. Kumamoto, Oct. 12, 2021

Abstract in Japanese

要 約

本ディスカッション・ペーパーは、人口減少に影響された日本の地域コミュニティが、災害発生時にどのような課題に直面しているかを考察している。人間の安全保障、災害、地域コミュニティの相互作用を提示し、地域コミュニティが経験する固有の脆弱性と不安に焦点を当てる。人間の安全保障のアプローチに基づき、複合的な危機に直面した地域コミュニティの人々の保護とエンパワメントについての示唆を探究する。筆者は、令和2年7月豪雨を事例として扱い、特に大きな被害を受けた球磨村（熊本県）で、災害者の個人的な経験と村の復興に関する課題を調査した。本研究は、人間の安全保障の普遍性、地域の社会文化的小および人口的小な文脈を考慮に入れた戦略立案の重要性、また、地域の複雑で相互に関連する課題に対処するための包括的なアプローチの必要性を示している。

キーワード：人間の安全保障、農村社会、災害、球磨村（熊本県）、令和2年7月豪雨