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Building Back Better Together: Exploring Community Engagement in Post-Disaster Recovery Efforts - A Review

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Abstract: Over the past decade, the Build Back Better (BBB) initiative gained traction after the 2004 Indian Ocean Tsunami, aligning with the priorities of the 2015 Sendai Framework for Disaster Risk Reduction (2015-2030). The initiative emphasizes involving "at-risk" communities in recovery efforts to enhance resilience. However, policymakers often neglect community involvement in post-disaster planning, leading to ineffective recovery and reconstruction. The term BBB lacks specificity, necessitating clearer direction. While it outlines principles for rebuilding, it overlooks integrating community participation for successful reconstruction. In this commentary, a comprehensive literature review examines the rebuilding of four case studies: the earthquake and tsunami in Tohoku (Japan), the volcanic eruption in Yogyakarta (Indonesia), Typhoon Yolanda (Philippines), and the Wenchuan Earthquake (China). The author draws upon insights into building back better with community participation. The review highlights how community participation has been embraced in major post-disaster reconstruction projects. It argues that fostering extensive community participation in post-disaster recovery and reconstruction planning and decision-making processes can provide a comprehensive framework for successful recovery initiatives aligned with community expectations. This paper aims to familiarize disaster studies scholars with literature that has received little attention in this field. By so doing, it seeks to refocus the minds of disaster scholars and relevant authorities on the fact that the only way to build back better in post-disaster situations is through engaging with affected communities.

Keywords: *Build Back Better, Community Participation, Reconstruction, Recovery*

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1. Introduction

Global disasters' escalating frequency and severity of disasters, the imperative for meticulously coordinated efforts toward fostering disaster-resilient communities cannot be overstated (Bongo et al., 2013). Nevertheless, the post-disaster recovery process often falls short due to inefficiencies and poor management (Mannakara et al., 2019). Following the devastating impact of the 2004 Indian Ocean Tsunami, former United States President Bill Clinton introduced the concept of "Build Back Better" (BBB) in 2006 as a means to instill a more systematic approach to disaster recovery (Potutan, 2019) Since then, BBB has evolved into a pivotal strategy for catastrophic recovery, reconstruction, and rehabilitation. President Clinton, who served as the United Nations Secretary-General for Tsunami Recovery, outlined the "10 Key Propositions to Building Back Better," which underscore the importance of bottom-up recovery processes, good governance practices, information dissemination, equity, multi-stakeholder coordination, accountability, sustainable livelihoods, risk reduction, and resilience building (Clinton, 2006).

The BBB concept has garnered significant attention, particularly among disaster reduction practitioners and specialists in recovery and reconstruction, as an indispensable strategy for disaster recovery in recent decades (Dube, 2020). Over the past decade, it has provided a framework for numerous efforts in disaster risk reduction and recovery, as enshrined in the latter part of Priority 4 of the Sendai Framework for Disaster Risk Reduction 2015-2030 (UNDRR, 2015). Priority 4 advocates for enhancing disaster preparedness to facilitate effective response and emphasizes the importance of building back better during recovery, rehabilitation, and reconstruction phases. Simply put, BBB leverages these phases to enhance

resilience by integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems (UNDRR, 2017). The initiative underscores the necessity of avoiding the recreation or exacerbation of pre-existing vulnerabilities in post-disaster recovery and rehabilitation efforts (Mulligan et al., 2012).

While the overarching objective of BBB—to improve upon pre-disaster conditions—is clear, the term itself has become somewhat nebulous for governments and researchers to fully grasp. Nonetheless, it serves as a comprehensive umbrella term for disaster recovery efforts (Fan, 2013). This study delves into the issues and implications of building back better with community participation in post-disaster recovery and reconstruction planning through the analysis of four international case studies. These case studies provide valuable insights into the challenges and opportunities associated with integrating community engagement into BBB initiatives.

1.1.The Evolution of the Build Back Better over the past decades

Build Back Better is a citizen-centered approach that calls for better outcomes for disaster-affected communities and achieves community resilience (Mannakkara, 2019). As already pointed out earlier, (UNDRR, 2017) asserts that Build Back Better is the use of the recovery, reconstruction, and rehabilitation phases of the disaster to increase the resilience of countries and communities through integrating disaster risk reduction into the restoration of infrastructure, societal systems, revitalization of economies, livelihoods and the environment. The BBB concept proposes using a variety of recovery goals, ranging from a broad integration of development ideas to specific improvements to structural safety (Maly, 2017). The mantra's birth resulted from the 2004 Indian Ocean Tsunami, and the Build Back Better was a counter-response to the need to create safer communities by improving post-disaster reconstruction and recovery practices.

To understand the BBB concept more integrated and diversified, Mannakkara et al. (2019) used the 10 Key Prepositions to develop a framework to explain the components of building back better, as indicated in Figure 1. As a result, the framework has gained international recognition (Dube, 2020). However, despite the recognition, the paper's author argues that the Sendai Framework for Disaster Risk Reduction has conceded its momentousness towards attaining palmy recovery of communities after catastrophic disasters.

Build Back Better							
Risk Reduction			**Community Recovery**		**Effective implementation**		
Health Sector Resilience	Risk-Based Zoning	Early Warning and Risk Reduction Education	Psychological and Social Recovery	Economic Recovery	Institutional Mechanism	Legislation and Regulation	Monitoring and Evaluation

Figure 1: BBB framework: Adapted from (Mannakkara et al., 2019)

The Sendai Framework for Disaster Risk Reduction (SFDRR) is structured around key components, namely Risk Reduction, Community Recovery, and Effective Implementation, each crucial for guiding post-disaster recovery efforts (Mannakkara et al., 2019).Within the Disaster Risk Reduction component, the SFDRR delineates guidelines aimed at enhancing structural resilience, implementing land use planning strategies that account for multiple hazards, establishing early warning systems, and fostering disaster risk reduction education. Meanwhile, Community Recovery efforts encompass a spectrum of dimensions including psychological, economic, and social aspects. Effective implementation of the framework relies on establishing institutional mechanisms, enacting relevant legislation, and implementing robust monitoring and evaluation frameworks (Mannakkara et al., 2019).

While the SFDRR underscores the importance of non-structural measures in achieving resilient recovery, such as community participation in post-disaster recovery, some scholars argue that the framework lacks explicit directives on integrating community engagement into the planning and rebuilding process (Maly, 2017). This gap raises concerns about the framework's efficacy in truly addressing the needs of affected communities and fostering genuine recovery. To ensure the SFDRR effectively fulfills its objectives, it is imperative for governments and stakeholders to prioritize meaningful consultation with affected communities throughout the recovery process. By actively involving beneficiaries in decision-

making processes, governments can better tailor recovery efforts to reflect community needs and aspirations, ultimately facilitating a more robust and inclusive approach to building back better.

1.2. Community Participation in Building Back Better

The concept of Building Back Better (BBB) emphasizes not only the structural aspects but also the social aspects of recovery in local communities post-disaster. Consequently, there is widespread recognition of the necessity for community involvement in post-disaster relocation and housing rehabilitation efforts (Maly, 2017; Mannakkara et al., 2018; Dube et al., 2021). Various global studies have illustrated how community participation can significantly enhance the effectiveness of recovery and relocation processes following disasters. By actively engaging in relocation and housing rehabilitation, affected communities can better assess their critical needs and evaluate the risks associated with settling in high-risk areas (Ichsan, 2011). Moreover, participation in disaster risk reduction operations fosters heightened awareness and interest among people in mitigating future disaster risks (Hamideh, 2020; Ngulube et al., 2023).

The October 2010 Mt. Merapi volcanic disaster in Indonesia serves as a pertinent example of affected communities actively participating in recovery and future preparedness efforts. Their direct experience with the disaster and witnessing its repercussions heightened their awareness of the hazards of residing near the volcano's crater (Trigunarsyah et al., 2015; Iuchi and Mutter, 2020). Consequently, disasters can serve as catalysts for community involvement in recovery and rebuilding programs, aligning with the principles of the Build Back Better initiative.

Empowering communities through involvement in recovery planning is pivotal for ensuring their active participation in decision-making processes, particularly regarding issues like relocation and housing reconstruction (Ngulube et al., 2023). Even marginalized individuals within society can contribute to decisions concerning the reconstruction of their homes or public facilities, as demonstrated in a study conducted in India post the 2001 Gujarat Earthquake in Bittu Village (Samaddar et al., 2017).

Research has consistently shown that involving end-users in recovery projects fosters a sense of ownership among beneficiaries (Samaddar et al., 2015). Additionally, a decentralized approach to recovery and reconstruction empowers local populations and tends to yield higher satisfaction with the outcomes (Davidson et al., 2007; Lyons, 2009; Kitagawa and Samaddar, 2022).

However, community engagement in relocation and reconstruction processes is not straightforward due to their complexity and dynamism. Studies have highlighted significant challenges, including low levels of community involvement, which hinder effective post-disaster reconstruction efforts. The failure of numerous reconstruction projects, particularly in housing, has been attributed to inadequate community participation, as projects lacking active engagement with affected communities are more likely to encounter difficulties (Sadiqi et al., 2016).

Often, government authorities and planners adopt a centralized, top-down approach in post-disaster reconstruction, neglecting substantial community involvement or consultation in the planning and execution phases. This approach has frequently led to the failure of relocation and housing reconstruction projects (Trigunarsyah et al., 2015).

The consequences of neglecting the needs of affected communities are evident in various case studies. For instance, following the 2008 Wenchuan Earthquake in China, reconstruction efforts succeeded on several fronts, but the failure to incorporate community perspectives resulted in insufficient stakeholder involvement (Guo, 2012). Similarly, after the 2010 Chilean earthquake, dissatisfaction arose due to the lack of integration of local community views in the reconstruction process (Boano and García, 2011). The 2016 Samasarakanda landslide in Sri Lanka further highlights the adverse outcomes of limited community participation, leading to abandoned relocation housing (Sangasumana, 2018).

The adverse effects of inadequate community participation in relocation and housing reconstruction include issues related to house design, lengthy legal procedures, delayed documentation, substandard housing, inadequate compensation, concentration of power in authorities, and improper housing locations (Buckle et al., 2002; Steinberg, 2007; Ruwanpura, 2009). Therefore, the success of relocation and housing reconstruction programs hinges on the active involvement of end-users and the consideration of critical variables. Factors such as insufficient consultation, lack of baseline data, subpar planning, budgetary constraints, technical expertise shortages, institutional capacity, and monitoring programs are frequently cited as causes for the failure of resettlement projects (Zaman, 2002). Thus, addressing these factors is imperative for ensuring successful post-disaster recovery and reconstruction efforts.

1.3.Theoretical Framework

As delineated in earlier sections, the core concept underpinning Build Back Better (BBB) is the notion that the community should serve as the driving force behind the recovery and rehabilitation endeavors. Scholars have underscored the pivotal role of comprehensive community engagement throughout the post-disaster recovery continuum, spanning from initial planning stages to project fruition (Dube, 2020; Mannakkara et al., 2019; Maly, 2018). Community participation, a cornerstone of this process, has been defined in various contexts over the years. It encompasses the involvement of citizens in decision-making processes, whether through mere observation or possessing the power to

influence outcomes (Baum, 2001). Previous research has intertwined community participation with terms such as community-based disaster management, community-based disaster preparedness, and participatory disaster risk management (Pelling, 2006; Allen, 2006; Pandey and Okazaki, 2012; Samaddar et al. 2017). Despite the wealth of research on this subject, achieving genuine community participation post-disaster has proven challenging, particularly in the realm of decision-making, prompting researchers and scholars to advocate for alternative engagement strategies (Allen, 2006; Pelling, 2006;Shaw, 2012; Samaddar et al., 2015).

Sherry Arnstein, a seminal figure in the realm of public participation, conceptualizes and illustrates community involvement through a metaphorical "Ladder of Citizen Participation," as depicted in Figure 2. This ladder portrays citizen participation as a democratic process wherein the redistribution of power among all stakeholders is imperative for its authenticity. Within this framework, citizen participation equates to citizen power. Without a genuine transfer of power, including decision-making authority, to citizens, those in positions of power can merely claim to represent the interests of the masses without true accountability (Arnstein, 1969).

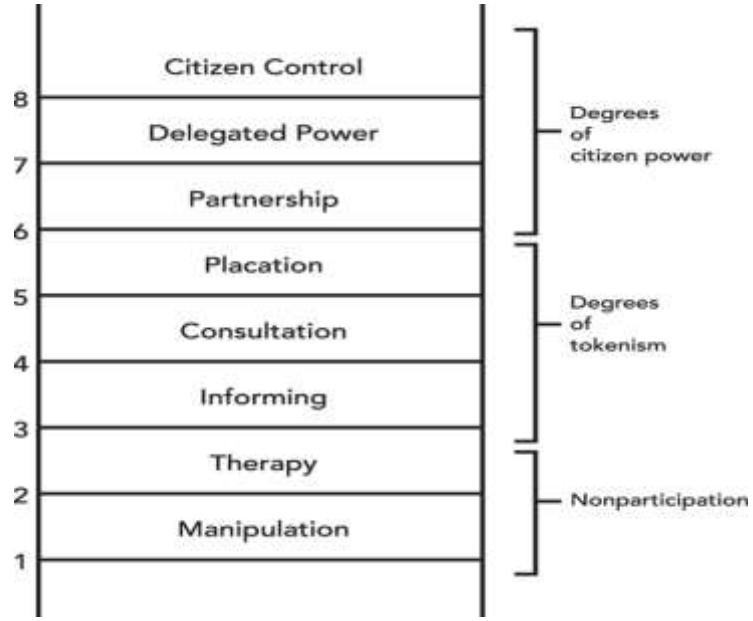

Figure 2: Ladder of Citizen Participation adapted from (Arnstein, 1969)

The ladder delineates participation across three overarching categories, comprising eight distinct levels. At the bottom rung, communities or intended beneficiaries may be consulted regarding their preferences and concerns, yet there's no guarantee that their input will be heeded. This scenario, characterized by minimal to no influence over planning and decision-making processes, falls short of genuine participation and borders on tokenism. Conversely, the pinnacle of the ladder represents citizen power, wherein individuals or community members are empowered to wield substantial decision-making authority (Davidson, 2007). It is incumbent upon governments, stakeholders, and experts to embrace a genuinely participatory approach in disaster risk management, granting local communities meaningful influence over decision-making processes throughout the continuum (Samaddar et al., 2017).

Given that the community is positioned as the focal point of the recovery phase, the foundational principles of the BBB framework champion citizen power in decision-making and planning processes. Embracing a community-centric approach, policies advocate for attention to areas such as community empowerment, tailored solutions to address local needs, and the active involvement of communities in the recovery process. The fundamental tenet of the BBB philosophy posits that affected communities should spearhead the recovery efforts, with community participation permeating all stages, aimed primarily at benefiting those affected (Mannakkara and Wilkson, 2014). Thus, a decentralized approach to rehabilitation empowers local communities and yields higher satisfaction with project outcomes.

2. Materials and Methods

This study adopts a qualitative research approach, utilizing documentary analysis as the primary method to examine the potential contributions of the Build Back Better (BBB) initiative in enhancing community participation in post-disaster recovery and reconstruction processes. The documentary analysis focuses on a thorough literature review, encompassing four international case studies: the 2011 Great East Japan Earthquake (Japan), the 2010 Mt. Merapi Volcanic Eruption (Indonesia), the 2013 Typhoon Yolanda (Philippines), and the 2008 Wenchuan Earthquake (China). These case studies

were selected for their global significance and diverse disaster types, offering a comprehensive lens through which to analyze the BBB initiative's effectiveness across different contexts.

2.1. Data Collection

The data collection process was conducted through a rigorous desktop research methodology. The research entailed systematic retrieval, evaluation, and synthesis of various scholarly publications, including peer-reviewed journal articles, government and NGO reports, books, policy briefs, and media coverage. The search strategy was structured to cover global and localized perspectives on post-disaster recovery, focusing on the intersection of BBB and community engagement. Literature sources were selected based on their methodological rigor, relevance to post-disaster reconstruction, and contribution to the understanding of community involvement in recovery processes.

Scholarly databases such as Google Scholar, Elicit, and Connected Papers were used to identify high-quality, peer-reviewed journal articles, ensuring that the latest research developments in BBB and community participation were captured. Priority was given to publications from the past decade, allowing the study to capture current trends and evolving practices in disaster recovery. In addition, non-academic sources, such as reports from international organizations (e.g., UNDRR, World Bank), were included to provide a broader perspective on policy-level frameworks and implementation challenges.

2.2. Analytical Framework

The analysis was guided by a comparative case study framework, where each case was examined in isolation and in relation to the others to identify common patterns, divergences, and lessons learned. The selection of the four case studies was informed by their representation of different disaster typologies—earthquakes, volcanic eruptions, and typhoons—providing a diverse set of scenarios for understanding the dynamics of BBB in varying post-disaster contexts.

The study's theoretical foundation is drawn from participatory planning and disaster recovery theories, mainly focusing on Arnstein's Ladder of Citizen Participation and the principles of resilience theory. These theories underpin the analysis of how community participation can be effectively integrated into the BBB initiative. The methodological triangulation of qualitative data from academic literature, policy documents, and media reports helps cross-validate the findings, ensuring the conclusions' robustness.

2.3. Selection Criteria

Several criteria guided literature selection: (1) relevance to the BBB initiative and post-disaster recovery, (2) evidence of empirical research on community participation, (3) contribution to the theoretical discourse on participatory governance in post-disaster settings, and (4) methodological transparency in the study's design and execution. By focusing on these criteria, the study aims to contribute to the academic discourse on disaster recovery by offering a nuanced understanding of the role of community participation in BBB frameworks.

2.4. Data Analysis

The documentary analysis was structured around key themes, such as the role of community participation in disaster recovery planning, governance structures in post-disaster scenarios, and the operationalization of the BBB initiative. Data were coded using thematic analysis to identify recurring patterns across the case studies. This thematic coding allowed for a nuanced understanding of how community participation was operationalized in each context and how it contributed to or hindered the success of the BBB initiative.

A comparative matrix (Table 1) was developed to analyze the link between BBB and community participation across the four case studies. This matrix identified best practices and challenges in integrating participatory approaches into post-disaster reconstruction planning. This comparative analysis also highlighted the interplay between local governance, international aid, and community agencies in shaping the outcomes of BBB strategies.

3. Results and Discussion

3.1. Great East Japan Earthquake

A 9.0 magnitude earthquake in March 2011 in the Tohoku Region of north-eastern Japan triggered a Tsunami wave that negatively impacted the area. It was Japan's first significant triple-scale disaster (earthquake, tsunami, and nuclear catastrophe). According to government reports, over 470000 people were evacuated, 2500 were listed as missing, and about 20000 people were presumed to have died due to the tsunami and an economic cost of over USD 235 Billion (Reconstruction Agency, 2016). The disaster affected over 200 municipalities across Miyagi, Iwate, and Fukushima and

hence needed an inclusive, participatory approach between the National Government, Local Government Municipalities, and affected communities. Since the disaster damage varied across the municipalities, the National and Local Governments became attentive to the reconstruction and rehabilitation initiatives to guard against future earthquake and tsunami impacts. Therefore, structural and non-structural measures such as raising and elevating land and relocating communities from the coast were crucial to ensure that communities are safe from future disaster impacts (Iuchi and Mutter, 2020).

To build back better and safer, the Japanese Government introduced laws and agencies to provide a holistic approach to developing safer communities. The Basic Act of Reconstruction Act No 76 was passed in 2011 to ensure that the country mobilizes all its efforts towards the full recovery of the disaster-affected area. As a legislative measure of the Basic Act for Reconstruction, the Reconstruction Council Design was initiated. Through it, the report Towards Reconstruction Hope Beyond the Disaster was released to provide recommendations on the potential path for recovery, and this became the reconstruction blueprint for the recovery of the affected areas (Iuchi and Mutter, 2020; Cabinet Secretariat, 2011). The reconstruction and rehabilitation process were estimated to cost 19 Trillion yen and 23 trillion yen over five and ten years (Cho, 2014).

As a way to promote a participatory approach in building back better, the Government, through the National Reconstruction Guidelines, formulated the principle of empowering communities by promoting a more decentralized decision-making process in the reconstruction process by ensuring that communities are at the center of the recovery process through, the Local Empowerment of Special Zones for Reconstruction and extending the relocation of coastal communities using the 1972 Collective Relocation Promoting Program for Disaster Prevention which had been used in previous relocations as a way of promoting citizen voices on how they were going to be relocated collectively (Iuchi and Mutter, 2020). Each municipality had to develop its recovery plan. Though the plans were not comprehensive, they were meant to help municipalities and communities decide how to build back. Citizen participation was a governance tool in the reconstruction process, showing how crucial citizen involvement and approval were. To further encourage participatory planning, the Government extended the use of the Machizukuri system, accelerating bottom-up, citizen-initiated participation in city planning programs. The Machizukuri was meant to encourage communities to take an active role in planning their cities and living environments.

Despite encouraging the public's participation in the planning and recovery processes through initiatives like the Machizukuri and in drafting recovery plans after the earthquake and tsunami of 2011, there were considerable differences in citizen participation between the various municipalities. Every city in Tohoku had a different strategy for rehabilitation and reconstruction that included community involvement in various ways. According to (Iuchi and Mutter, 2020) in Miyagi prefecture, Kensennuma City promoted two methods of involving community residents: (i) the community-council style and (ii) the city-led style. The community-council style allowed residents to take the lead in choosing new relocation sites. Here, smaller fishing towns were targeted, whilst the city-led style targeted urban towns and managed all recovery process steps. In Miyako City, the Local Government implemented participatory recovery and reconstruction through local study meetings and constant collaboration and consultation with the residents; relocation was decided as a recovery initiative by the residents (Ubaura and Akiyama, 2015). Communities in these cities could closely work with the local government officials in selecting public housing beneficiaries, house design, and livelihood restoration, especially in small fishing villages and towns.

Though municipalities did promote participation in the recovery and reconstruction decision-making process, scholars like Cho (2014) argue that during the reconstruction process, there was more of a top-down approach in policy formulation by both the National and Local Governments, especially concerning issues such as the sea wall construction along the coast in which communities had little or no say over. Other scholars have also supported this notion that even though there were numerous discussions with the affected communities, in some cases, the recovery plans failed to incorporate and represent the views of the affected communities (Cheek, 2020; Ranghieri and Ishiwatari, 2014) in some instances during the recovery and reconstruction planning the local Government and communities could not reach a consensus on the type of reconstruction to be adopted thus delaying the reconstruction process especially in Ogatsu city where the local Government could not agree and reach an agreement in relocating communities from downtown Ogatsu (Ranghieri and Ishiwatari, 2014). Delays in consensus agreements could have been attributed to the fact that many local municipalities lacked prior experience in working with communities, especially in reconstruction planning after a triple disaster scenario where recovery time was limited, and there was a great urge for communities to return to normalcy by the local governments.

3.2. Merapi Volcanic Eruption

Mt Merapi, which translates to Mountain of Fire in Indonesian and Javanese, is Indonesia's active stratovolcano and has erupted regularly since 1548 (BCC, 2010). The 2010 Mt Merapi volcanic eruption was the most destructive in Indonesian history since the 1994 eruption. The eruption had 386 fatalities, 400000 forced to evacuate, and approximately 3300 buildings destroyed. In addition, the economic impact was significant, with US$360 million estimated for direct losses (Otani et al., 2018).

The Indonesian National Government adopted Merapi Build Back Better's recovery motto as the foundation of their recovery program. Due to the disaster impact, the Indonesian Government re-implemented the use of the Rehabilitaci dan Rekonstrukshi Masyarakat dan Permukiman Berbasis Komunitas (REKOMPAK), which is a community-based rehabilitation and reconstruction settlement program used had been during the 2004 Aceh and Nias recovery and also in the 2006 Central Java and Yogyakarta earthquakes. Through the REKOMPAK program, the Government encouraged the relocation of residents staying too close to the volcano crater and based on previous recovery efforts, such as the recovery efforts following the earthquakes in Central Java 2006, Yogyakarta 2006, and Aceh 2004 (Secretariat of MDF-JRF, 2012). Hence, community relocations were to be proceeded using a participatory approach using the REKOMPAK program. It aimed to promote community participation by keeping them at the center of the recovery decision-making process (Iuchi and Mutter, 2020).

A genuine participatory approach was evident as residents participated from the early stages of the reconstruction planning process. The World Bank stipulates that residents have an opportunity to make decisions that include (i)community site layout, (ii) members to benefit from the program, (iii)the design of the houses, (iv)housing maintenance, (v) neighborhood construction and (vi)long-term housing infrastructure maintenance (World Bank, 2012). Since the residents were not well equipped to manage the reconstruction process, the Government and relevant stakeholders were dispatched to different communities for procedural and technical support. Through this capacitation of the community, in coordination with the Government and technical support, could construct about 3000 new houses needed by the disaster victims to aid in effective relocation (Maly, 2017).

Based on the experiences of the previous disasters using the REKOMPAK, there was a high satisfaction approval from both the local community and the Government, as the program ensured a true form of participatory approach in decision-making and planning as voices of the community and the marginalized groups were incorporated in the recovery and reconstruction process. Hence, the extensive participatory approach shows that the REKOMPAK program focused on decision-making and the involvement of the residents on the community level scale (Maly, 2017). Though the REKOMPAK, in this case, was being used for the first time in relocation, the positive outcome of the use of the REKOMPAK program was that through involving the community in the recovery planning process, the communities understood the risk of staying close to the volcano through the role played in interpreting the risk maps, and their role in collaborating with the Government in the resettlement process (Iuchi and Mutter, 2020). Therefore, the REKOMPAK program was a positive tool for promoting the BBB guidelines as it advocates for building better infrastructure and encourages the involvement of communities in post-disaster recovery planning.

3.3. Wenchuan Earthquake

An 8.0 magnitude earthquake hit Wenchuan Country in Sichuan Province, China, in May 2008. Approximately 69000 people died, 3734 643 injured, and 17 923 reported missing and an economic cost of over US 20 billion (Guo, 2012; Huang et al.,2011).

In the post-disaster recovery planning process, the Government was faced with the mammoth task of opening up to participatory planning, since in the past, China had long been influenced by a highly centralized planning process where plans in all sectors from the economy, development, and administration, have been formulated and administered by the Government (Ying, 2009). The Ministry of Housing and Urban-Rural Development of China urged volunteer planners to support and draft reconstruction plans for the affected areas, including Wenchuan Country, Dujiangyan City, Shifang City, and so on (Ying, 2009). The Chinese Government also encouraged the participation of Non-governmental stakeholders, which was the first in the history of the Chinese post-disaster recovery process (Li, 2008). Two legislative tools: (1) Regulations on Post-Wenchuan Earthquake and Rehabilitation and Reconstruction and (2) Work Scheme for Post-Wenchuan Earthquake Reconstruction Planning were established by the Chinese State Council to become the be the main plans for formulating recovery projects of the affected areas following a government-led recovery planning process (Ying, 2009). Universities and major planning institutes in China actively participated in the early stages since this was the biggest earthquake to ever affect China.

As part of the recovery process, the Government set out to relocate entire communities in the affected communities to new counties. Providing safe accommodation was the main priority for the recovery plan, and most of the recovery funding was spent on housing and infrastructural development of the built environment (Wu, 2021). The relocation and housing reconstruction planning projects failed to engage communities. Residents failed to voice their opinions on whether they wanted to be relocated; the decision-making process took more of a top-down approach (Maly and Ishikawa, 2014). In a bid to build back better, the Government did not give disaster survivors the opportunity to participate actively in the housing and key community projects (Wu, 2021), showing that their needs and inputs were left out and not included in the entire reconstruction process posed by the fact that the reconstruction plan neglected the rural features of the affected communities. The affected districts were mainly rural folks used to staying in rural settlements characterized by traditional houses near their agricultural land since most depended on agriculture. Still, in the post-disaster, housing was characterized by urban residential community buildings with condominium buildings and modern facilities. Though the Government wanted to build back better, it failed to consider the participatory approach by ensuring that the views of the survivors and beneficiaries were effectively reflected in the recovery planning and reconstruction.

The Wenchuan earthquake reconstruction is a rare case of reconstruction success to some extent; even though the communities didn't take part in the process, there was still the non-return of communities to their original homes due to non-satisfaction in the reconstruction planning, mainly due to the centrality of the governance system.

3.4. Typhoon Yolanda

On 8 November 2013, a powerful typhoon and storm surge destroyed the coastal areas of the Leyte region and Tacloban City in the Philippines. The typhoon killed over 6,000 people, 1800 recorded missing, and affected more than 14 million people across 44 provinces, displacing 4.1 million people. In addition, the typhoon damaged approximately 1.1 million houses and disrupted the livelihoods of 5.9 million workers. The economic impact of the disaster was over USD 5.8 billion (World Vision, 2013). Most of the destroyed houses were in informal, low-lying coastal areas with high poverty levels (Maly et al., 2021)

The Yolanda Comprehensive Rehabilitation and Recovery Plan (CRRP) and the Reconstruction Assistance on Yolanda (RAY): Build Back Better became the blueprint policy documents used in the recovery and reconstruction process, and they emphasized the need to relocate the coastal communities (NEDA, 2013). The Reconstruction Assistance on Yolanda provided a framework for reconstruction to restore the socio-economic conditions of the pre-disaster levels. One of the core principles of the RAY in the recovery process was that the implementation of programs was to be the responsibility of the Local Government, supported by capacity development, to ensure that the response was tailored to local conditions and promoted community participation in the reconstruction phase (NEDA, 2013).

To achieve a more participatory approach, the Local Government set up a Local Inter-Agency Committee (LIAC) that comprised various stakeholders, such as representatives from the government departments, presidential commission, local city departments, and non-governmental organizations, to understand the voices and needs of the communities set for relocation. In addition, the city initiated the housing recovery process, which aimed to provide the disaster victims with safer housing, and most houses were built by the National Housing Authority (NHA) (Maly, 2017). Furthermore, through the NHA's housing materials assistance program, there were opportunities for the community to get involved with the process, further promoting their participation in building back better. In this regard, the city encouraged residents to participate in construction through sweat equity, offset a portion of their housing price, and receive priority for moving in (Iuchi and Mutter, 2020). Communities were further empowered through the roles they played in the Peoples Organisations, which were grassroots associations formed by farmers and fisher folks, and their part was in assisting project implementations and encouraging the participation of members in projects and providing local solutions to community issues which included poverty, livelihood restoration and community development (Tabate and Miyamoto, 2021).

However, although a participatory concept was adopted at the start of the reconstruction process, the governance system shifted in the third year, turning away from participatory efforts and instead focusing on the speedy reconstruction of relocation sites (Iuchi and Mutter, 2020). As a result, it had a negative taint on the program as it did not address the needs of the communities set for relocation, such as livelihood restoration. Communities were relocated to new areas without considering insufficient housing infrastructure in the new relocation sites, thus returning communities to their original homes in the disaster-vulnerable coastal regions. To some extent, though the reconstruction process first tried to rebuild better using a participatory approach, in a bid to have a fast recovery, community voices went unheard, leading them to abandon relocation housing, hence failing to build back better with community participation.

3.5. Comparative Analysis

The cases from Japan, the Philippines, Indonesia, and China adopted the same approach to recovery: relocation of at-risk communities. However, the impact and losses were also different since the four countries experienced different disasters. As a result, the national governments were compelled to implement different laws and policies on rebuilding after the disaster. Different strategies were also used to seek financial assistance for the affected local governments and communities.

The analysis indicated that the four cases adopted the build-back better concept after the disaster regarding infrastructural development and the programs that put people at the center of the recovery process, as indicated in Table 1. In Japan, for instance, communities were encouraged to participate in planning and decision-making through community study meetings, surveys, commentaries, etc., and the Machizukuri process (Rangahieri and Ishiwatari, 2014). However, because each municipality took its own approach, primarily due to differences in disaster damage and population distribution, it was difficult for some cities to have a truly participatory approach in the planning process. In Indonesia, the Government adopted a bottom-up approach to recovery using the REKOMPAK (Iuchi and Mutter, 2020). The approach ensured that the community played a significant role in the reconstruction process, showing community-level governance that resulted in resilience-building as communities understood their risk. In the Philippines, the Government encouraged multi-stakeholder participation (Maly et al., 2021). However, though the RAY encouraged community participation in planning the program's implementation, it downsized community involvement, failing to meet public expectations. China took a top-down approach towards recovery planning; the Government seldom implemented

community participation, though the Government did engage the involvement of other stakeholders, such as non-governmental organizations and members from the academic field. The reconstruction output failed to represent what the beneficiaries would have wanted.

Table 1: Comparison of post-disaster reconstruction programs

	GEJE, 2011	**Mt Merapi eruption 2010**	**Wenchuan Earthquake 2008**	**Typhoon Yolanda 2013**
Area /Country	**Tohoku Japan**	**Yogyakarta Indonesia**	**Sichuan Province China**	**Leyte Philippines**
Project type	Collective relocation for coastal communities with an inundation of over 2metres The Government planned to support public housing. Residents funded individual relocation.	Community-based relocation of communities that are close to the crater using the REKOMPAK	Relocation of affected cities using the Government-driven approach.	Relocation of communities from the coastal area using the Social Housing Programme
Residents' participation in decision making	**YES,** but varied across municipalities, but residents incorporated into recovery planning and decision-making	**YES** Community members participated extensively in the initial planning process and program implementation.	**NO** Communities did not take part in the decision-making process. A top-down approach implemented	**VARIED** In the government-initiated program, residents did not participate in the planning process. In the NGO-sponsored projects, e.g., housing, community participation was in decision-making and housing construction.
Recovery program outcome	The recovery program success levels varied in different prefectures; most municipalities reached a consensus with residents.	The recovery program was successful and had positive results as the targeted communities understood their risk, and there was community-level governance.	The reconstruction, to some extent, was the physical reconstruction was a success but failed to address community needs.	To some extent, the recovery plan failed to address the residents' concerns successfully.
Revival of Livelihoods	Communities, through government support, could revive livelihoods.	Yes, communities could revive livelihoods.	Could not continue the former livelihood—farming to tourism.	Not entirely revived due to change in governance structures.

After disasters, there is a great urge and pressure for governments to rebuild while building back better. The case studies used existing relocation and reconstruction programs used in previous disasters. In Indonesia, they used the REKOMPAK program, which aimed to relocate communities while promoting citizen power through participating in round table agreements and getting material support from the Government. In Japan, they extended the Collective Relocation Plan of 1972, which aimed at relocating communities without disrupting social ties amongst communities; communities were consulted as the National Government could not force them to join the relocation program (Iuchi and Mutter, 2020; Ishikawa, 2015). In the Philippines, they used the Social Housing Programme, which the Government wanted to relocate coastal communities and provide housing to the poor and vulnerable affected communities. Unlike the other cases, China used a new relocation and reconstruction program, the first regulation formulated for post-earthquake rehabilitation and reconstruction in China (Ying, 2009). Despite using existing programs under time-constrained events, the Japanese and

Indonesian governments use these to put people at the center of decision-making, unlike the Philippines, whose program could not include citizen voices.

4. Conclusion

Utilizing four case studies, the earthquake and tsunami in Tohoku (Japan), the volcanic eruption in Yogyakarta (Indonesia), Typhoon Yolanda (Philippines), and the Wenchuan earthquake (China), this study delved into the efficacy of the Build Back Better (BBB) initiative, as outlined in the Sendai Framework for Disaster Risk Reduction (SFDRR), in fostering community or citizen participation during the post-disaster recovery and rehabilitation phase. Employing a desk research approach, the study sought to explore how the initiative promotes inclusivity and empowerment of at-risk communities, thereby mitigating future disruptions and bolstering resilience.

Existing literature underscores the escalating intensity and frequency of disasters, underscoring the imperative of integrating at-risk communities into recovery and reconstruction efforts to foster resilience. However, despite this recognition, policymakers and local governments frequently marginalize community involvement in post-disaster policy planning and decision-making processes. This oversight often results in failed recovery initiatives or the implementation of inadequate reconstruction programs in certain regions.

Analyzing post-disaster recovery and reconstruction efforts in the case studies reveals that where community participation, particularly within the category of citizen power as articulated by Arnstein's Ladder of Citizen Participation framework— is acknowledged and embraced, communities demonstrate swift recovery and achieve resilience. This is evidenced by their active engagement in reconstruction efforts, fostering a sense of ownership, and restoring communal cohesion in the aftermath of disaster. The findings underscore the pivotal role of community participation in post-disaster recovery and reconstruction efforts. By embracing citizen power and facilitating community involvement in decision-making processes, policymakers can enhance the efficacy and sustainability of recovery initiatives, ultimately fostering resilience in disaster-affected communities.

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