



# More Than a Decade after Sendong: Examining the Condition of the Resettled Survivors in Iligan City and Cagayan De Oro City, Philippines

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DOI: <https://doi.org/10.51584/IJRIAS.2025.10120056>

Received: 26 December 2025; Accepted: 31 December 2025; Published: 15 January 2026

## ABSTRACT

It has been more than a decade already since Tropical Storm Sendong (International name Washi) devastated most of the areas in Northern Mindanao, Philippines. Among the cities most affected were Iligan City and Cagayan de Oro City, which registered thousands of lives lost, injured, and displaced as a result of the tragedy. This study assessed the impact of resettlement on the economic, social, and environmental conditions of the Sendong survivors in these cities, employing 590 research participants. The findings indicate that the current situation of the resettled families is not generally in good economic shape, given job unavailability and income falling below the minimum poverty threshold. They have been able to socially adapt to the new environment despite the breakup of their social ties before Sendong. However, some relocation sites did not protect the resettled families against environmental risks like flooding or possible landslides. Inquiry into whether they have obtained full recovery after the disaster remains a challenge when compared to their pre-disaster conditions.

**Key Words:** build back better; post-disaster reconstruction; resettlement; recovery; Sendong/ Washi

## INTRODUCTION

Tropical Storm (TS) Sendong was the second tropical storm that affected Mindanao in 2011. It brought devastating rain and floods, registering 1,268 fatalities, 6,071 injuries, and 181 reported as missing. Cagayan de Oro City and Iligan City were the two most affected cities in Northern Mindanao by this natural disaster. The 2012 Post Disaster Needs Assessment (PDNA) reported that the damages and losses brought about by Sendong were estimated to be around 12 billion pesos. However, the cost of damages to housing alone stood at almost 8 billion. This is the amount to be spent on reconstruction and recovery of the housing sector, including the site development of resettlement projects in all affected areas. (<https://reliefweb.int/report/philippines/tropical-storm-sendong-post-disaster-needs-assessment>).

The flood-prone resettlement communities of those affected by Sendong were characterized by rapid and unplanned urbanization. The disaster altered the ways of life of the affected ones from the moment the tragedy hit them until the time they were finally resettled in their chosen resettlement areas.

The post-disaster reconstruction framework known as “build back better” (BBB) was introduced in 2004 after the Indian Ocean tsunami. Over the years, BBB has grown prominent in many organizations involved in disaster recovery, rehabilitation, and reconstruction. As an approach, BBB includes efforts to prevent the re-creation or exacerbation of pre-disaster vulnerabilities during reconstruction by strategically embracing and optimizing institutional, financial, political, human opportunities, and other positive externalities that contribute to safer and more resilient communities.

Aside from the BBB framework, sustainable housing was also stressed by Oleg Golubchikov and Badyina (2012). The term embraces both physical and social systems seeking to enhance and harmonize the environmental, social, economic, and cultural dimensions of housing sustainability. Housing is not simply



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reckoned as units or clusters of self-sufficient green buildings but as socially-enhancing and environmentally friendly residential practices integrated into a wider urban/settlement system.

Sustaining urban resettlements also depends on the strategies, approaches, and mechanisms to make it become places where people want to live and work, now and in the future. Sustainable resettlement communities should meet the diverse needs of existing and future residents, be sensitive to the environment, and contribute to a high quality of life. They are safe and inclusive, well-planned, built, and run, and offer equality of opportunity and good services for all (ODPM, 2006).

It has been more than a decade since Sendong wreaked havoc in Northern Mindanao. It is interesting to examine the conditions of the resettled families, as there are several frameworks advanced related to appropriate post-disaster reconstruction parameters. Despite the presence of legal provisions and structures created to proactively deal with the phases of disasters in the Philippines (RA 10121), there is a need to document field-based strategies and practices to identify areas of strength and weakness where intervention gaps might be necessary and addressed appropriately.

## **Objectives of the Study**

Generally, this study intends to examine the condition of the Sendong survivors relocated in the housing resettlement areas in Iligan City, Cagayan de Oro City, and Opol, Misamis Oriental, based on the build-back-better principle enshrined in the Sendai Disaster Management Framework. Specifically, this study intended to examine the selection process in getting a unit in the resettlement area, their conditions before Sendong, and now in terms of their proclivity to disaster vulnerability, housing quality, livelihood opportunities, community facilities, social organization and support, and environmental aspects.

## **LITERATURE REVIEW**

### **Current Status of Housing and Resettlement of Sendong Survivors**

With the overwhelming number of displaced families due to Sendong in Iligan City and Cagayan de Oro City, it is of interest to examine the existing studies on this topic. An article titled *Rebuilding from disaster: It doesn't end when housing aid projects finish* written by Carrasco et al. (2020) explored how and why the residents have improved the houses first built in 2012 when they were relocated after Typhoon Washi hit the City of Cagayan de Oro. Accordingly, the research findings revealed that these modifications produced more habitable housing. The findings indicate the need to consider community views on post-occupancy issues and development opportunities. It is important to understand why resettled residents resort to their housing renovations. It is their way of coping with the impacts and shortcomings of humanitarian housing projects. The authors stressed that despite the outpouring of support from the government institutions and non-government organizations, the initiatives often have a limited understanding of the actual conditions of affected people and the support they need. This is usually the shortcoming of top-down project design, which lacks the participation and consultation of the intended beneficiaries.

### **Building Back Better (BBB) Studies**

Literature on BBB has been numerous since the early 2000, but the understanding, indicators, and application of this concept remained problematic, especially as applied to post-disaster recovery or reconstruction. A case in point is the study of Rahmayati (2016) in Aceh, Indonesia's post-tsunami housing reconstruction project which used a qualitative methodology employing in-depth interviews of selected research participants. The findings have shown that the term "building back better" is not a familiar term for housing recipients, regardless of their socio-economic background. These researchers argued that the BBB concept works only at the policy level, but it is not understood by the beneficiaries on the ground. BBB, when applied to the housing design, created confusion and dissatisfaction among the resettled families because the new houses changed their cultural orientations. The study recommended that the BBB should be reframed using the lens of cultural sensitivity and communal practices to suit the needs of the beneficiaries during the post-disaster reconstruction process.

In 2011, Typhoon Sendong/Washi destruction triggered a large-scale resettlement program in Cagayan de Oro City. The study of Carrasco et al. (2016) examines the actual situation of four villages located in the Barangay Calaanan resettlement site in Cagayan de Oro. The study aimed to identify the pros and cons of resident-initiated building extensions and whether there are vulnerabilities created that may lead to the creation of unsafe environments. Since it was a government-initiated program, its approach was top-down in terms of decision-making and coordination. The beneficiaries were not allowed to make renovations or house extensions to ensure that there would be no unsafe and precarious structures on the site. The findings reveal that the building of housing extensions is unavoidable since they are based on the desires of the residents to enhance their living conditions. Moreover, the researchers found deficiencies in the conventional materials being used in the renovations, which have implications on the absence of multiple stakeholders and beneficiary consultation, plus guidelines to enable support for better building practices.

Another perspective on looking at BBB is articulated by the study of Maly (2018). Her paper examines build back better using the concept of People-Centered Housing Recovery or PCHR. It uses guidelines at multiple scales, which were used in two cases of post-disaster housing recovery and relocation, specifically, the REKOMPAK program after the 2010 volcanic eruption of Mt Merapi, north of Yogyakarta, Indonesia. The other one was the two housing recovery projects in Tacloban City, Philippines, after the 2013 Typhoon Yolanda, with new housing provided by 1) the National Housing Authority (NHA) and 2) a consortium of NGOs. The term build back better (BBB) has been widely used to describe the goals of recovery plans and projects, yet the specific meaning and application of BBB vary and are often unclear. In terms of housing relocation, there is also a potential for BBB to be interpreted narrowly, prioritizing avoidance of risk over other factors that support residents' lives and livelihood recovery.

### **Current Status of Housing and Resettlement in the Philippines**

In many resettlement projects, the goal of providing affordable decent housing and basic services to the less fortunate, particularly those in the resettlement areas, as mandated, has remained far-fetched. The study on "Assessment of the Housing for the Urban Poor in the Four Local Government Units in Southern Mindanao revealed that there is a gap between what is needed and what is delivered. Urban poor prefer to stay in urban centers despite of the provision of resettlement projects due to different reasons such as proximity to facilities such as public markets, church and entertainments, proximity to government offices where they can easily access government subsidies and offers, accessibility to transportation facilities and high security in terms of peace and order. Findings also revealed that most of the resettlements are located outside urban centers, while the movement of people is from rural to urban, mainly due to livelihood prospects in urban areas (Malaque, Gonzaga, Viloan & Arcega, 2005).

Does relocation result in a better life for the displaced families? This query is addressed by the study of Gilles and Tomeldan (2012) titled "Humanizing Socialized Resettlement Housing Towards Sustainable Communities". The authors revealed that despite the relocation efforts, the quality of life of the relocatees worsened after relocation. This is because of the very limited income opportunities and failure to utilize skills acquired from livelihood training due to lack of capital and equipment, or materials. The survivors also lack employment opportunities and are forced to incur more expenses. Some community facilities are also not fully operational. Social issues like illegal activities such as gambling, stealing, and drinking alcohol are massive. Children also dropped out of school due to the distance of the relocation site (Gilles and Tomeldan, 2012).

The findings of recent studies on resettlement (Carrasco, Ochiai & Okazaki, 2016) revealed that the majority of the respondents in the resettlement experienced a lack of water provisions, absence of electricity, and their livelihood to sustain the basic needs, especially food.

A review of the World Bank-funded resettlement projects found that oversight of those projects often had poor or no documentation, lacked follow-up to ensure that protection measures were implemented, and some projects were not sufficiently identified as high-risk for populations living in the city (WB Report 2015). World Bank Group President Jim Yong Kim found several major problems in resettlements. Accordingly, the implementers have not done a good job in overseeing projects involving resettlements; proper



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implementation is poor, and there is an absence of strong tracking systems to make sure that the policies are being followed.

The appropriateness of the relocation site to the economic needs of the relocatees is another issue. Stephanie N. Gilles (2012) mentioned in her study that various attempts have been made at relocating slum dwellers; however, about 30 to 40% of the relocatees returned from their tenement houses back to their place of origin. In the long term, the percentage increased up to 80% in the 1990s due to few job opportunities and other unmet needs at these resettlement sites. In this case, there is a gap between what is needed and what is delivered. The good intention of the policy fails to get translate into good practice.

These issues and concerns may be attributed to the poor performance in urban management, an ill-conceived resettlement strategy, and an ill-equipped resettlement agency, coupled with rapid population growth.

## METHODOLOGY

This study used a mixed-methods approach in collecting and analyzing data. The researchers employed a survey method, in-depth interviews of key informants, a review of secondary materials, and field observations. Triangulation enriches the collection of quality data and in developing a comprehensive understanding of phenomena (Patton, 1999). In getting samples in this study, systematic sampling was used, employing the Kish Grid probability sampling technique in respondent selection. The most important aspect of the grid is that it assigns an equal probability of selection for each possible survey participant (Lewis, Beck et al., 2003). For the key informant interview participants, officers of homeowners' associations and program implementers were selected as they are the most knowledgeable persons regarding the process of relocation of the housing beneficiaries. Data for the survey were analyzed using descriptive statistics, and thematic analysis was employed for the qualitative data.

### Locale of the Study

There were three research sites covered in this study to include the following: Iligan City with 281 research participants, Cagayan de Oro City with 262, and Misamis Oriental, specifically Opol, with 28 for a total of 571 survey respondents. There were five (5) relocation sites covered in Iligan City, namely Blissville-Brgy. Upper Hinaplanon (22), Red Cross- Brgy. Digkilaan (70), Kapuso Village - Brgy. Mandulog (41), Deus Caritas-Brgy. Luinab (91), and Deus Caritas- Brgy. Suarez (67).

From among these relocation/resettlement sites, Barangay Mandulog, Suarez, and Digkilaan are located in upland communities. The relocatees from Mandulog and Digkilaan are mainly Sendong/Washi survivors who lived near the banks of the Mandulog River, which swelled up during the flood. Their relocation sites were funded by private institutions, namely, the GMA Foundation for the Kapuso Village in Mandulog and the Red Cross in Digkilaan. Conversely, those living in Deus Caritas, Tominobo are those who lived on the riverbanks of the Hinaplanon River whose houses were fully devastated during Sendong/Washi. This is one of the farthest relocation sites for the Sendong survivors, and the fare in going to the city and vice versa is prohibitive, which restricts the mobility of the relocated families.

### Ethical Considerations

The MSU-IIT format for Informed Consent (IERC Form 13) was used to secure permission from the research participants. They were also oriented as to the purpose of the research before administering the survey and in-depth key informant interviews. Respect for their privacy, anonymity, as well as do no harm principle and beneficence, were all observed during data collection.

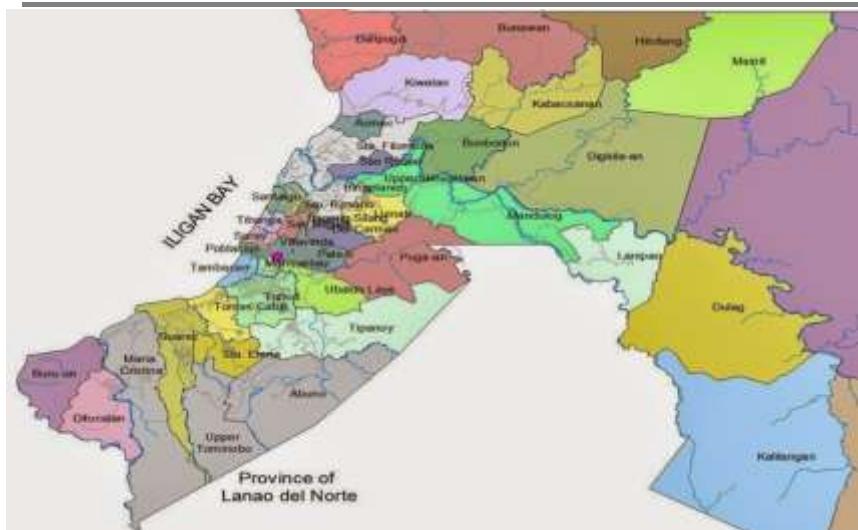


Figure 1: Map of Iligan Iligan City

Source: <https://mymappinas.blogspot.com/2014/06/map-of-iligan-city.html> escaped fragment

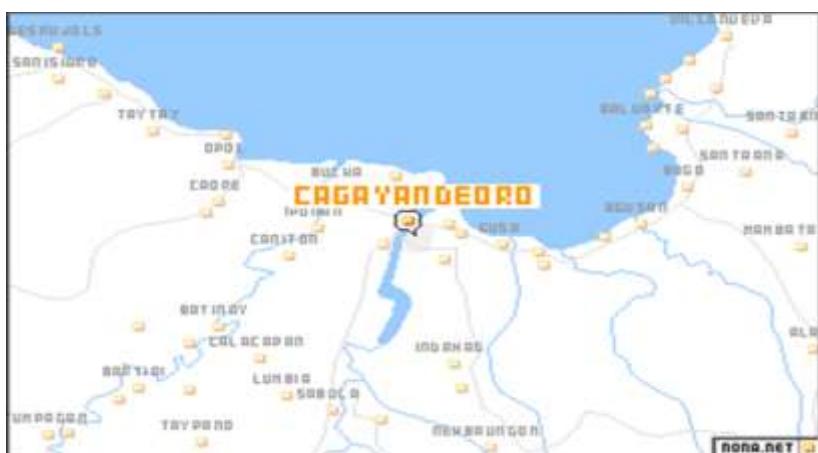


Figure 2: Map of Cagayan de Oro City

Source: <https://nona.net/features/map/placedetail.1471462/Cagayan%20de%20Oro/>

On the other hand, the resettlement areas located in Hinaplanon and Luinab are lowland communities. The families who are relocated here have better access to transportation, school, market, and other facilities. But since the areas dedicated to resettlement are limited, only many relocated families are served by these sites. The Diocese of Iligan City had a big role in the resettlement of the Sendong survivors in Iligan City through the Deus Caritas relocation sites in Barangay Luinab and Suarez

The picture is different when compared to Cagayan de Oro City. There are diverse relocation sites in this city, distributed mostly in the rural communities. However, most of the relocated families are situated in Barangay Canitoan (139), Indahag (57), and Pagatpat (66). These are also the places from which the samples of study samples were selected. Moreover, there are also relocated families in Patag, Opol, and Misamis Oriental, a town next to Cagayan de Oro City, in which 28 samples were drawn. Overall, the total research participants is 590, with 571 survey respondents and 19 key informants.

## RESULTS AND DISCUSSION

## Profile of the Research Participants

The survey participants are mainly married females across all research sites, comprising 54% (Table 1). The modal age is between 50-59 years old. This means that when Sendong/Washi hit them, they were within the

age bracket of 40 to 50 years old. They are predominantly Roman Catholics and Cebuano in dialect. About half have seasonal jobs with a monthly earnings of less than PhP 10,000. As of 2021, the poverty threshold was estimated at PhP 12,082, which is the monthly average income for a family of five as of 2022. It is equivalent to PhP 80.54 per day (2.24 AUD) per capita expenses. When the economic situation is measured in terms of subsistence incidence or the proportion of Filipinos whose income is not enough to meet even the basic food needs, the average monthly food threshold for a family of five was estimated at PhP 8,393 (PSA, 2021). An individual is expected to spend PhP 56.00 (1.55 AUD) for food alone, or if translated into 3 square

Table 1. Summary of the Respondents' Characteristics

Characteristics	Iligan City		Cagayan de Oro City/Misamis Oriental		Total	
	n	%	n	%	N	%
Female	160	53	150	52	310	54
Age						
50 - 59 yrs. Old	115	40.93	108	.37.24	223	39.05
Civil Status						
Married	176	62.5	167	57.5	343	60.07
Ethnic Affiliation						
Cebuano	166	58.8	249	85.9	415	72.68
Religion						
Catholic	235	83.6	244	84.2	479	83.89
Short-term/ seasonal, or casual job	127	45.2	120	41.4	247	43.9
P5,000.00 - P9,999.00	151	53.6	130	44.8	281	49.21
1-2 dependents (15 years and below)	111	39.5	140	48.28	251	44.0
1-2 dependents (ages 60 up)	48	17.1	73	38.4	121	21.2
Education						
College Level	112	39.86	129	44.48	241	42.21

meals a day, the person would have to allocate PhP 19.00 (.5AUD) per meal. Forty-four percent have 1-2 young dependents, and about half of this figure (21.2%) have senior dependents at home. Moreover, the respondents are highly educated, with having a college level (42.21%) as their modal education.

### Agency Support in the Resettlement Sites

The agencies taking charge of the relocation sites in general are the local government units (LGUs) of Cagayan de Oro City and Iligan City, followed by religious and private organizations. However, the role of LGU Cagayan de Oro City was enormous as its staff was directly responsible for the resettlement and follow-up of the relocated beneficiaries even after their final stay in the new site. In the case of Iligan City, the government is not alone in the resettlement task, as private and religious sectors contributed to the goal of making the Sendong survivors bounce back after the calamity.



## Selection Process Before Resettlement

Getting a slot in the relocation site is not easy. Tedious paper work, competition for slots, and the long process of waiting for their names to be raffled were their major difficulties before relocation. Despite all these odds, their consolation is that the priority for the lot award was given to families with totally devastated homes. The respondents also had to render the so-called sweat equity of P5,000.00. They do this by delivering calculated service hours equivalent to this amount to serve as their counterpart in the completion of their unit.

Understanding the context of housing recovery, Schilderman and Lyons (2011) argue, based on Turner's theory, that the housing process empowers people relevant to housing recovery after disasters because such an approach can strengthen disaster survivors' capabilities and resilience. They are empowered to take another step in their survival by basically going through the process of house ownership. Their contribution to the completion of their house through sweat equity is a major step towards this empowerment. Moreover, according to the aforementioned authors, and to quote, "to strengthen their capabilities to cope, survivors should play key roles in decision-making and resource management". But in most instances, they are glossed over in top-down designs of housing construction for disaster survivors. So, building back better becomes a technocratic approach whilst reproducing pre-disaster inequalities if socio-political transformations are avoided (Fan, 2013).

## Comparison of Respondents' Condition before Sendong and at the Current Site

To examine if the respondents have experienced the build back better condition, a comparison of their pre-Sendong and current realities is explored. The coverage of the discussions includes disaster vulnerability, housing quality, and facilities inside the house, among others.

### Disaster vulnerability

The idea that the resettled families would be out of potential disaster risks upon relocation is seen in Table 2. As indicated, 72.40% of them affirm that their pre-Sendong residence was flood-prone. However, most of them (85.80%) consider their current site as not vulnerable to flooding anymore. It has to be noted, however, that 17.80% stated they did not experience flooding in their previous residence, and that the enormous flooding brought by Sendong was their first experience. What is interesting also is that there are still a few (6.40%) who still experience flooding at the current site. This is the case of those relocated families in Blissville, Hinaplanon, Iligan City whose residents are, until now, suffering from flooding during heavy rains. This is caused by the absence of a drainage system that suspends all excess water within the home vicinity, or even causes rainwater to enter the houses and flood them. The complete idea of building back better, safeguarding the environmental protection of the resettled families, has not been thoroughly achieved in Iligan City, but it is manifested in the relocation sites of Cagayan de Oro and Misamis Oriental. The data show that still 24.90% of survivors experienced disaster vulnerability even after being relocated, which has implications for the application of the BBB principle, coupled with ineffective post-disaster governance, which is more pronounced in Iligan City.

Table 2. Whether the current residence is flood-prone

Pre Sendong Residence is flood-prone	Resettlement Sites						Total	
	Iligan City		Cagayan de Oro City		Misamis Oriental			
	n	%	n	%	n	%	N	%
Yes	151	53.70	235	90.40	26	92.90	412	72.40
No	76	27.00	23	8.80	2	7.10	101	17.80
Sometimes	54	19.20	2	0.80			56	9.80



<b>Total</b>	<b>281</b>	<b>100.00</b>	<b>260</b>	<b>100.00</b>	<b>28</b>	<b>100.00</b>	<b>569</b>	<b>100.00</b>
<b>Current Residence is flood-prone</b>	<b>Resettlement Sites</b>						<b>Total</b>	
	<b>Iligan City</b>		<b>Cagayan de Oro City</b>		<b>Misamis Oriental</b>			
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>N</b>	<b>%</b>
Yes	34	12.80	1	0.40			35	6.40
No	199	75.10	241	95.60	26	100.00	466	85.80
Sometimes	32	12.10	10	4.00			42	7.70
<b>Total</b>	<b>265</b>	<b>100.00</b>	<b>252</b>	<b>100.00</b>	<b>26</b>	<b>100.00</b>	<b>543</b>	<b>100.00</b>

### Housing quality

Table 3 data below presents the comparative figures on the type of materials used in their pre-Sendong residence and at the current site. As indicated, 65.5% of the survivors stated that their pre-Sendong houses were made of light materials, while 24.80% of them had homes that were built of semi-concrete materials. At the current site, on the other hand, the majority of the survivors now have (72.80%) concrete homes, and 19.40% claim they have homes made of semi-concrete materials. Only a few houses (7.80%) at the current resettlement sites, especially in Iligan City, are made of light construction materials. These data trends are distributed across all the sites. However, it is notable that Iligan City showed more respondents who have light housing materials at their current sites. Based on field observations, houses constructed in Cagayan de Oro City and Misamis Oriental are stronger compared to the structures in Iligan City. Although there is a decrease in the number of respondents from 195 to 43 who have houses with light materials in Iligan City, the fact that they are relocated and deserve to be treated equally with the greater majority remains debatable.

The relocatees are given a pre-specified one-story core house, and it is already the beneficiary who is responsible for the partitioning of the space into functional areas like bedrooms or kitchens to address their spatial needs. The provision of a simple core house limits the opportunities for incremental or vertical extension, especially for those who are financially incapable. Their houses generally have basic amenities like electrical and water connections, toilets, and baths.

**Table 3. Materials used in the house**

<b>Pre-Sendong</b>	<b>Resettlement Sites</b>						<b>Total</b>			
	<b>Iligan City</b>		<b>Cagayan de Oro City</b>		<b>Misamis Oriental</b>					
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>N</b>	<b>%</b>		
Concrete	13	4.60	41	15.80	1	3.60	55	9.70		
Semi Concrete	72	25.70	62	23.80	7	25.00	141	24.80		
Light materials	195	69.60	157	60.40	20	71.40	372	65.50		
<b>Total</b>	<b>280</b>	<b>100.00</b>	<b>260</b>	<b>100.00</b>	<b>28</b>	<b>100.00</b>	<b>568</b>	<b>100.00</b>		
<b>Current site</b>	<b>Resettlement Sites</b>						<b>Total</b>			
	<b>Iligan City</b>		<b>Cagayan de Oro City</b>		<b>Misamis Oriental</b>					
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>				
Concrete	157	57.70	230	90.60	14	56.00	401	72.80		



Semi Concrete	72	26.50%	24	9.40	11	44.00	107	19.40
Light materials	43	15.80					43	7.80
<b>Total</b>	<b>272</b>	<b>100.00</b>	<b>254</b>	<b>100.00</b>	<b>25</b>	<b>100.00</b>	<b>551</b>	<b>100.00</b>

It is stated in most literature that the design and construction of the survivors' houses should be participatory; that is, the recipient shall be able to have a say in this. It is of interest to note that the respondents were only able to participate in the construction of their houses through the required labor counterpart, which totaled 500 volunteer hours, or otherwise known as sweat equity. They were not consulted as to the size, design, and other nitty-gritty aspects of the plan and the construction of their houses.

### **Housing Renovations**

The question of whether the respondents have done some renovations in their current houses is presented in Table 4. As shown, the majority (67.9%) of the respondents affirm that they made some renovations at their current house, while a few of them (32.1%) did not. It is important to understand why resettled residents resort to housing renovations. It is their way of coping with the impacts and shortcomings of humanitarian housing projects that do not fit the needs of the family. Since structures constructed for the relocated families only consist of a core house, the families are forced to renovate their houses to suit their needs. The better-off ones may opt for a two or three-story building. Others may utilize extra spaces in their lot to accommodate their plans, such as erecting a sari-sari store or providing the family with a kitchen or porch.

In the study of Carrasco et al. (2020), among the Sendong resettled families in Calaanan, Cagayan de Oro City revealed that the relocatees modified their houses to make them more habitable. It is their way of coping with the impacts and shortcomings of humanitarian housing projects, the designs of which are not tailored to their needs.

Table 4. Have you made any renovations in your current house?

Response	Resettlement Sites						Total	
	Iligan City		Cagayan de Oro City		Misamis Oriental			
	n	%	n	%	n	%	N	%
Yes	178	67.70	182	69.70	15	53.60	375	67.90
No/ None	85	32.30	79	30.30	13	46.40	177	32.10
Total	263	100.00	261	100.00	28	100.00	552	100.00

### **Livelihood opportunities**

Livelihood training/projects at the resettlement sites in Iligan City that were conducted by some private and government institutions include baking, organizing a cooperative that manages a minimart for the community, bag making, massage, water refilling station, poultry raising, and seedling distribution for farmers provided by the City Agriculture office. The latter was conducted last March 2022 at Digkilaan Red Cross Village for the Sendong Livelihood Farmers Association in Iligan City. Other than these initiatives, some respondents earn their living through driving and working in construction. A few others are engaged in small businesses, such as opening a bakery or a water refilling station.

Most of the livelihood initiatives in Iligan City, however, did not last. The daily baking sessions at Deus Caritas-Luinab relocation site were stopped when their baker/trainer was no longer available. The second



initiative was organizing a cooperative, which also did not last long since a few survivors put up their own sari-sari stores. One survivor confided that the livelihood initiative did not prosper as it was not supported by the religious sisters who are monitoring the relocated families at the site.

At the resettlement sites in Cagayan de Oro City, a Sendong survivor claimed that for them to be economically capacitated, they underwent livelihood trainings through the City Housing and Urban Development Department (CHUDD) that still supports them until the present.

*"We received livelihood training from CHUDD. Its support is still ongoing in the relocation site until the time we become self-sufficient".*

*Female, 62 years old, HOA Vice-President*

### Social organization and support

All the resettlement sites in Iligan, Cagayan de Oro, and Opol have organized housing associations. The Home Owners Association (HOA) in the resettlement sites in Iligan City is registered with the Department of Labor and Employment (DOLE), one of which was organized in 2014. The HOA in some sites in Cagayan de Oro City were organized in 2012 and in 2013, respectively, and were registered with HLURB (Housing and Land Use Regulatory Board).

However, those sites that are managed by the Archdiocese of Cagayan de Oro (ACDO), although organized in 2014, still need to be formally registered at the local government unit (LGU) and HLURB. This was confided by one of the HOA officers stating that they abide by the rules of the Archdiocese of Cagayan de Oro (ACDO) in all the relocation sites supervised by the Columban Fathers and Calibrean Sisters. The following are the relocation sites organized by ACDO: 1) Caritas Village in Indahag, 2) Ecoville in Lumbia, 3) Tabang Cagayan relocation sites in Mambuaya, and 4) Mother of Divine Mercy Village – Patag, Opol. The said informant further added that they had ratified their constitution and by-laws (CBL) incorporating the ACDO rules represented by its governing board. This means that its CBL has to be sanctioned by ACDO as it is the religious body that is taking charge of the resettlement sites.

## Impact of Resettlement on Sendong Survivors

### Economic Impact

With respect to the economic impact of the resettlement site on the families of the respondents, the data in Table 5 below shows that less than half, or 48.2%, affirm that the relocation site offers more income opportunities for the family. The rest said "No" (34.7%) or were uncertain (16.6%). Comparing modal results across sites, Cagayan de Oro respondents registered negative responses (47.3%) to the item, followed by those coming from Opol (39.3%). Inversely, research participants from Iligan City generally responded affirmatively to this query. The data would suggest that the sites where they are relocated do not generally provide them significant economic opportunities that could make their economic need sustainable, especially those living in Cagayan de Oro City. This could be due to the fact that the Sendong survivors in Cagayan de Oro City were those living in the urban area with better income opportunities before Sendong. Once relocated, they were resettled in remote places with limited access to livelihood means.

Table 5. Whether the relocation site offers more income opportunities for the family

Response	Resettlement Sites						Total	
	Iligan City		Cagayan de Oro City		Misamis Oriental			
	n	%	n	%	n	%	N	%
Yes	180	64.1	86	32.8	9	32.1	275	48.2



No	63	22.4	124	47.3	11	39.3	198	34.7
Uncertain	36	12.8	51	19.5	8	28.6	95	16.6
No response	2	0.7	1	0.4			3	0.5
<b>Total</b>	<b>281</b>	<b>100.0</b>	<b>262</b>	<b>100.0</b>	<b>28</b>	<b>100.0</b>	<b>571</b>	<b>100.0</b>

Table 6. Whether their current economic condition is much better than their pre- Sendong abode

Response	Resettlement Sites						Total	
	Iligan City		Cagayan de Oro City		Misamis Oriental			
	n	%	n	%	n	%	N	%
Yes	169	60.1	100	38.2	17	60.7	286	50.1
No	69	24.6	121	46.2	5	17.9	195	34.2
Uncertain	43	15.3	41	15.6	6	21.4	90	15.8
<b>Total</b>	<b>281</b>	<b>100.0</b>	<b>262</b>	<b>100.0</b>	<b>28</b>	<b>100.0</b>	<b>571</b>	<b>100.0</b>

On the other hand, the data in Table 6 above shows that 50.1% of the respondents are positive that their current condition at the site is better than their previous abode. However, the rest said otherwise. Looking at the marginal total, a comparative analysis of the percentage by area among those who said that their current condition is better than their pre-Sendong experience is higher by 10% in Iligan City and Opol, Misamis

Oriental. On the contrary, the figure is much lower in Cagayan de Oro City. This means that their economic recovery is muddled with uncertainty, which is also similar to the one cited by Bolin (2013), who notes that one dimension of recovery is economic. When this is not obtained, recovery and resilience are difficult to obtain.

### Social Impact

Recovery and resilience are not only economic but may range from infrastructural, social, or psychological dimensions. The relocated families are uprooted from their original base and can no longer choose their friends and neighbors after they lost touch with them. Social recovery refers to the ability of the relocated families to establish connections and linkages with people or institutions in their new communities to find peace and establish social harmony. In their current site, they find new circles like friends and neighbors as their social network, ready to help them in times of emergencies.

The overwhelming majority reported that they can rely on their neighbors for their support during emergencies. The neighbors become the social capital where the relocated respondents can find solace during unexpected moments, which is typical of a Filipino, closed-knit neighborhood. Filipinos share the high and low moments of their neighbors as manifested in weddings, baptisms, or funeral rites and other informal gatherings.

### Personal Impact

It is also relevant to ask the respondents if they are personally amenable to living in these relocation sites. To do this, they were asked if they were satisfied and happy living in their recent locations. Their responses are found in Table 7, showing that 86.9% answered affirmatively

Table 7. Whether they are satisfied and happy with the new site

Response	Resettlement Sites						Total	
	Iligan City		Cagayan de Oro City		Misamis Oriental			
	n	%	n	%	n	%	N	%
Yes	231	82.2	240	91.6	25	89.3	496	86.9
No	14	5.0	13	5.0	1	3.6	28	4.9
Uncertain	36	12.8	9	3.4	2	7.1	47	8.2
<b>Total</b>	<b>281</b>	<b>100.0</b>	<b>262</b>	<b>100.0</b>	<b>28</b>	<b>100.0</b>	<b>571</b>	<b>100.0</b>

against those who said "No" (4.9%) and those who were uncertain (8.2%). This may mean that even though their economic opportunities are not generally available in the current site and that they are cut off from their previous social networks, they have become adjusted to their existing resettlement areas. As elsewhere cited in this paper, they have already established new social sources of support or social capital in the new environment.

### Community Facilities

The resettlement sites in Iligan City, Cagayan de Oro, and Opol have day care centers, electrical and water connections, drainage systems, gymnasiums, chapels, waiting sheds, community multi-purpose buildings, basketball courts, and playgrounds, among others. Some of the sites in both cities, however, are located near public schools. Unfortunately, there are a few areas in the three sites still facing problems with their drainage, as not all road networks are concrete. One informant stated that the roads and drainage are not that good, and not all areas have concrete roads. ("Dili pa ingon ana ka maayo ang drainage ug kadalan. Naa ra ang main road pero sa suok-suok, wala gyud.")

*Male, 63 years old, Male, Married, Former Kagawad.*

### Environmental Impact

Building back better approach rests on the expectation that the present site of the survivors is better and does not expose them to disaster risks that they had in their previous residence at the time of Sendong. As shown in Table 8, the majority (83%) affirmed that their current location is safe from floods, and the rest said "No" (8.9%) or "uncertain" (7.5%). The data would imply that although 8 out of 10 respondents feel environmentally safe in their current abode, the rest do not feel the same way since they still experience flooding. This is the case of Blissville, Hinaplanon, and Barangay Mandulog. It has to be known that the GMA Kapuso 1 Relocation Site in Mandulog has been on alert level since Typhoon Pablo in 2012 and Paeng in 2022. The Kapay River, which is located meters away from the site, would be inundated every time there are meteorological disturbances like tropical depressions or typhoons. These scenarios always make the relocatees worried after they had already experienced the destruction brought by Sendong.

Table 8. Whether the place is safe from floods

Response	Resettlement Sites						Total	
	Iligan City		Cagayan de Oro City		Misamis Oriental			
	n	%	n	%	n	%	N	%
Yes	216	76.9	231	88.2	27	96.4	474	83.0

No	43	15.3	8	3.1			51	8.9
Uncertain	21	7.5	22	8.4			43	7.5
No response	1	0.4	1	0.4	1	3.6	3	0.5
<b>Total</b>	<b>281</b>	<b>100.0</b>	<b>262</b>	<b>100.0</b>	<b>28</b>	<b>100.0</b>	<b>571</b>	<b>100.0</b>

Table 9. Whether the site is away from dangerous slopes

Response	Resettlement Sites						Total	
	Iligan City		Cagayan de Oro City		Misamis Oriental			
	n	%	n	%	n	%	N	%
Yes	228	81.1	197	75.2	20	71.4	445	77.9
No	20	7.1	24	9.2	7	25.0	51	8.9
Uncertain	30	10.7	41	15.6			71	12.4
No response	3	1.1			1	3.6	4	0.7
<b>Total</b>	<b>281</b>	<b>100.0</b>	<b>262</b>	<b>100.0</b>	<b>28</b>	<b>100.0</b>	<b>571</b>	<b>100.0</b>

Protecting the people against the risks/hazards of slopes that would possibly expose them to dangers is enshrined in Republic Act 10121, which is the Philippine Disaster Risk Reduction and Management Act of 2010. As shown in Table 9, 8 in 10 respondents confirm that they are living away from dangerous slopes. They believe their current location makes them safe from the onslaught of landslides and other natural calamities associated with sloping geomorphological structures. On the other hand, there are 8.9% of respondents who said that they are not away from the slopes, making them vulnerable to slope-related disasters. These are mostly pronounced in Cagayan de Oro City respondents, followed by those from Iligan City

## CONCLUSIONS

Economic recovery is an important ingredient to resilience and in building back better the lives of the resettled families in the sites studied. The current situation of the resettled families is not generally in good economic shape, as almost half of them are doing seasonal jobs, and three-fourths have an income falling below the minimum poverty threshold. The impact of resettlement on their lives shows that although there are indications that economic opportunities are available in the sites and livelihood trainings are offered, only half of them admitted that their current life is better than before Sendong hit them. These may or may not lead to the full recovery of the community, which is usually measured through the restoration of the pre-disaster conditions in the areas of economic recovery, social recovery, environmental recovery, infrastructural recovery, and institutional recovery.

Regarding the social impact of the resettlement on their lives, the majority admitted that the place provides them with much-needed social support through their new circle of friends and connections, reconnections with old ties at the site, leaders, and program managers. These conditions, among others, hammer down their feelings of disconnection with their pre-Sendong social environment. They are happy and satisfied with the life they have at the relocation sites. These realities make them more adjusted to their current life at the resettlement areas as social recovery is relatively smooth and fine.



To “build back better” and be resilient in the future, so to speak, does not necessarily mean to go back to the pre-Sendong disaster. According to the UNISDR (2007), resilience is “the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.” In the case of the resettled families affected by Sendong in Iligan City, Cagayan de Oro City, and Opol, Misamis Oriental, they have been taken care of by institutions that provide them with their needs like the LGUs, the religious communities, and the homeowners associations. Although it can be said that they have already “bounced back” after the disaster in many ways, but a complete recovery may still be a work in progress to achieve community sustainability.

### Authors' Bionotes

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