



**THE EFFECTS OF ENVIRONMENTAL DISASTERS ON THE SOCIO-ECONOMIC DEVELOPMENT OF INTERNALLY DISPLACED PERSONS IN MAGUINDANO DEL SUR: A QUALITATIVE STUDY**

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**Abstract**

This study attempted to understand the effects of environmental disasters on the socio-economic development of IDPs in Maguindanao del Sur in terms of housing conditions, health, security, livelihood, and education. This qualitative research envisaged analyzing community sectors' narratives, views, and opinions—farmers, business representatives, and barangay officials. In addition, the study sought in-depth knowledge from a Non-Government Organization (NGO), women, youth, and protracted IDPs who have thorough knowledge and experiences in dealing with the challenges of environmental disasters amid displacement situations.

Based on the findings, this study concluded that IDPs in Maguindanao del Sur experienced man-made and environmental disasters. These disasters affected the socio-economic development of IDPs, particularly in terms of housing conditions, health, security, livelihood, and education. Although they had coping mechanisms to adapt to the disasters' effects, they usually needed support to rebuild their lives and return to normalcy. To achieve this, preventive, responsive, and solutions-oriented support must be provided, including implementing an Early Warning System (EWS), strengthening faith-based resiliency, and fully implementing the existing disaster risk reduction (DRR) relevant laws, policies, and ordinances.

**Keywords:** Environmental Disaster, Socio-economic Development, Internally Displaced Persons, Maguindanao del Sur

**INTRODUCTION**

Globally, the number of people living in internal displacement reached an all-time high. The Internal Displacement Monitoring Centre (IDMC, 2022)

reported that 59.1 million internally displaced people worldwide were displaced at the end of 2021, 53.2 million due to conflict and violence and 5.9 million due to disasters. In addition, millions more fled their homes in 2021 as the war in Ukraine evolved into the largest displacement crisis in the world. Furthermore, disaster displacement continues to represent a significant global challenge, with its impacts being felt in every corner of the world (IDMC, 2022).

In the Philippines, the IDMC Global Report on Internal Displacement (2022) mentioned that environmental disasters triggered 5.7 million internal displacements in 2021, of which storms accounted for 91%. Typhoon Rai, known locally as Odette, led to the country's most significant number of disaster displacements of the year. Around 3.9 million were recorded, particularly in Western Visayas, Eastern Visayas, and Caraga regions. Rai also destroyed approximately 415,000 homes across the archipelago and damaged about 1.7 million. As a result, IDPs' livelihoods were disrupted, and food prices increased, heightening the risk of food insecurity. Over 590,000 people were still displaced as of the end of December (IMDC, 2022).

In the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), thousands of families continue to forcibly displace each month due to cyclical conflict and violence, recurring rido or family feuds, and environmental hazards due to climate change. Further, thousands more live in repeated and protracted displacement situations, particularly but not exclusively in Marawi City, the Island Provinces of Sulu and Basilan, and Maguindanao del Sur. Durable solutions to their displacements have been very elusive. Hence, they find it challenging to regain normalcy and are likely to be displaced repeatedly.

In Maguindanao del Sur, forced displacement of civilians often continues yearly or more due to armed conflicts, such as the Armed Forces of the Philippines (AFP) operations against the Bangsamoro Islamic Freedom Fighters (BIFF) and local Islamic State in Syria and Iraq (ISIS)-inspired group, crime and violence, and clan feuds or rido. In fact, according to protection reports released by the Community and Family Services International (CFSI) and Magungaya Mindanao Incorporated (MMI) in the first quarter of 2023, more than 11,000 families or approximately 50,000 individuals experienced displacement due to conflict and violence. These civilians came from Ampatuan, Datu Saudi Ampatuan, Pagalungan, Rajah Buayan, and Sultan sa Barongis, all in Maguindanao del Sur. The causes of displacement were the occurrence of the Focus Military Operations (FMO) against the BIFF in parts of Pagalungan Municipality, clan feud-related incidents and internal conflict between forces of the Moro Islamic Liberation Front (MILF) in parts of the municipalities of Ampatuan, Datu Saudi Ampatuan, Rajah Buayan, and Sultan sa Barongis.

## METHOD

The study applied a qualitative descriptive research design. It aimed to describe, explain, and understand the effects of environmental disasters on the socio-economic development of IDPs in Maguindanao del Sur accurately and systematically based on the views and narratives of multi-sectoral groups. Therefore, the researcher used a qualitative method in data collection and

analysis. The data and information on the subject matter were collected from different sectors—IDPs, farmers, business representatives, barangay officials, women, youth, and an NGO representative.

The researcher conducted the study in the municipalities of Ampatuan, Guindulungan, and Datu Paglas, particularly in Barangay Saniag in Ampatuan, Barangay Datalpandan in Guindulungan, and Barangay Malala in Datu Paglas, all in the Province of Maguindanao del Sur. The researcher selected these barangays based on the following criteria; 1.) residents had been displaced from 2019 to 2022 by the armed conflict, 2.) had already returned to their habitual residences, 3.) participation of the IDPs and conflict and disaster-affected population, 4.) cooperation of the barangay officials, 5.) accessibility and safety of the researcher.

Historically, the barangays had been affected by the armed confrontation that displaced civilians since the “All Out War” in 2000 and the massive armed conflict between AFP and MILF in 2008. The three barangays were also affected by the “Surgical Operation” by the AFP in 2019 and the “Military Focus Operation” in 2021. Moreover, the three barangays form part of the three previously acknowledged major MILF camps in Central Mindanao. For instance, Barangay Saniag, Ampatuan is part of Camp Omar, Barangay Datalpandan, Guindulungan is part of Camp Badre, and Barangay Malala, Datu Paglas is part of Camp Rajamuda. The three barangays are also worst affected by environmental disasters, such as flash flooding and rising temperature due to climate change in 2022.

## RESULTS AND DISCUSSIONS

### Environmental Disasters Experienced by Internally Displaced Persons

At the end of the data gathering, 52 respondents participated in the in-depth interview, FGD, and KII. The respondents were distributed from various sectors as follows: 20 protracted IDPs in the in-depth interviews, 27 farmers, business representatives, and barangay officials in the FGD, and two youth, two women, and one NGO representative in the KII.

Table 1. Environmental Disasters Experienced by IDPs

Theme	Significant Responses/Narratives
1. Flooding disasters	- <i>Niya mas mapasang na baha ka aden minatay a ina endu duwa kataw a wata nin.</i> (Flooding was more severe as this caused death of a mother and her two children.)

	<ul style="list-style-type: none"> <li>- <i>Mabilis ang pagbaha (flash flooding)</i></li> <li>- <i>Galing sa bundok ng Guindulungan at talayan ang baha sa amin.</i> (Floodwaters come from mountainous parts of Guindulungan and Talayan)</li> <li>- <i>Flash flooding last week lang at nagka-landslide pa sa taas ng parte ng barangay.</i> (Flash flooding that happened just last week in the upper part of Barangay saniag.)</li> <li>- <i>Pana-panahong pagbaha ang nararanasan namin.</i> (We experienced seasonal flooding in our area.)</li> <li>- <i>Degang (flash flooding)</i></li> <li>- <i>Masla a degang sa kanu Paeng</i> (Mass flooding during the Paeng)</li> </ul>
2. Extreme weather condition	<ul style="list-style-type: none"> <li>- <i>Matinding init at pag-ulan</i> (Extreme heat and extreme rain)</li> <li>- <i>Kapagulan sa subla siya sa lekmi na paka-landslide</i> (Extreme rain here caused the landslide.)</li> </ul>
3. Conflict-related disasters	<ul style="list-style-type: none"> <li>- <i>Pagidsan bun e padsa na kapedtimbaka sa kapegkadalem enggu linog.</i> (armed conflict shares the same effects as flooding.)</li> <li>- <i>Mas mahirap ang bakbakan</i> (fighting was worse.)</li> <li>- <i>Ananto na pedtimbaka na pedsalengaan e kadalem, kayaw, bagyo, enggu kapegkatutong.</i> (Armed fighting sometimes happen simultaneously with floods, heat, storm, fire, and burning.</li> <li>- <i>Bakbakan, talangang hindi madali para sa amin.</i> (Armed conflict—it was not easy to us.)</li> <li>- <i>Inatak a BIFF e Datu Paglas kanu May 2021 na madakel nakambakwit.</i> (BIFF attacked Datu Paglas last May 2021 that caused massive evacuation.)</li> <li>- <i>Giyera sa pagitan ng MILF at BIFF</i> (armed fighting between MILF and BIFF)</li> </ul>
4. Landslides	<ul style="list-style-type: none"> <li>- <i>Landslide talaga nangyari last week lang sa sa taas ng Barangay Saniag.</i> (It's really landslides that occurred just last week in the upper part of Brgy. Saniag.)</li> <li>- <i>Bigla na lang dumating na wala kami kaalam-alam, gaya nuong Paeng, umakyat</i></li> </ul>

	<i>ang mga tao sa matataas na lugar pero yun pala baha at landslides ang nakuha nila mula sa bundok. (It happened by surprise, without warning. For example, during Paeng, people climbed to higher ground only to be suddenly met by a landslide or flash flood from the mountains.)</i>
5. Politics-related disasters	<ul style="list-style-type: none"> <li>- <i>Ang conflict ay minsan pinalala pa ng kaguluhan sa politika at interes sa pulitika ng mga lider. (Conflict was sometimes aggravated by political chaos and leaders' political interest.)</i></li> <li>- <i>Ananto problima sa lupa enggu pageletan nu mga kaunutan sa LGU na pakalunsan pan sa katamanan nu mga IDPs. (Issues related to land conflict and political dynamics among LGU officials worsened the IDPs' situation amid disaster situations.)</i></li> </ul>
6. Earthquake	<ul style="list-style-type: none"> <li>- <i>Makagilek abenal e linog. (Earthquake—it was fearful.)</i></li> <li>- <i>Su linog siya sa Tulunan kanu 2019 na nagedam e bagel nin siya sa lekami. (The earthquake in Tulunan in 2019 was also felt here in our area.)</i></li> <li>- <i>Nanggula bun e linog siya salkami kanu 2022. (Earthquake was also experienced here in November 2022.)</i></li> </ul>

*Sources: Primary data from the in-depth interview, FGD, and KII*

Based on the responses and narratives of respondents on the environmental disasters experienced by IDPs, it was observed that for all respondents, the most common environmental disaster experienced by IDPs was flooding, followed by extreme weather conditions, such as extreme heat and rainfalls. In addition, many respondents also claimed armed conflict, rido, and politics shared the same effects as natural disasters. According to them, the presence of the military and armed groups in their barangay appeared to have similar effects on environmental disasters since people would usually evacuate. Thus, many believed armed conflict was a man-made disaster that can equally affect people, like environmental disasters. Finally, some respondents also cited that earthquakes and landslides were also commonly experienced by IDPs.

Flooding was observed as the primary disaster experienced in Barangay Datalpandan, Guindulungan Municipality. According to all respondents from the barangay, the barangay is a basin of waterfloods from mountainous parts of the Guindulungan and Talayan municipalities. To illustrate, most participants shared that during the Severe Tropical Storm (STS) Nalgae (Paeng), flash floods

cast away many houses within the barangay and caused the death of a mother and her two children at night time.

Aside from landslides, it was also observed that another primary concern of all respondents in Barangay Saniag was related to man-made disasters, including armed conflict, rido, and politics. In fact, during the conduct of the FGD and KII in Barangay Saniag in Ampatuan Municipality, mortar shelling was ongoing toward the mountainous part of the barangay. In addition, according to some respondents, the upper part of Barangay Saniag was the subject of frequent mortar shelling and military operations because of the presence of local ISIS-inspired groups hiding in the areas.

Moreover, it was further observed that residents of Barangay Malala in the Municipality of Datu Paglas experienced frequent seasonal flooding and earthquakes. In addition, residents experienced significant earthquakes in 2019, during which a 6.8 magnitude earthquake brought havoc to populations in the nearby Tulunan and M'lang municipalities in the Province of North Cotabato.

In the KII, one woman interviewee cited the armed conflict was more challenging because wives like her were usually separated from their husbands who were combatants. Unlike during environmental disasters, she was with her husband to face the disasters' effects and care for their children during evacuation. *"Mas mahirap ang bakbakan dahil kami at mga anak ko ay naihiwalay sa asawa ko na kasama sa nakikipagbakbakan sa mga sundalo."* (FGD, 2023) (An armed conflict was more challenging because my kids and I were separated with my husband who then fought against soldiers.)

On the other hand, another woman interviewee narrated that flooding is more severe than other disasters that took place in their community. *"Sa pinagdaanan naming mga sakuna, pagbaha ang pinakamatindi dahil ito ay nagdulot ng pagkamatay ng isang ina at kanyang dalawang anak sa gabi."* (Of the disasters that we experienced, flooding was the most severe as this caused the death of a mother and her two children at nighttime.) She also added that flash flooding was difficult as she once needed to use a rope to escape from their house to a safer ground. *"Ako ay nakaranas na gumamit ng malaking lubid kasama ang aking pamilya upang makaalis ng bahay papunta sa ligtas na lugar sa panahon ng bagyong Paeng."* (I experienced holding a rope through a pulley with my family to escape from our home to a safer ground during the STS Paeng.) Barangay Datalpandan is a water basin of floodwaters from the mountains of the municipalities of Guindulungan and Talayan.

In the interview with Mr. Abedin Tuya, the Community Development Officer of CFSI, he narrated that it should be understood that the displacement of civilians is not only limited to natural disasters. Conflict-related disasters sometimes happen simultaneously with natural disasters such as floods, drought, storm, fire, burning, petty crime and violence, and family feuds or rido. Moreover, it was sometimes aggravated by political chaos and leaders' political interest. He added that issues related to land conflict and political dynamics among LGU officials worsened the IDPs' situation amid disaster situations.

The findings related to the environmental disasters experienced by IDPs supported the Philippines Disaster Management Reference Handbook (CFE-DM, November 2021), which reported that the Philippines has primarily experienced the following natural hazards in the past four decades (1970-2020): storm (55%), flood (25%), earthquake (5%), landslide (5%), and volcano (4%).<sup>82</sup> In addition to these, other disasters the country deals with include epidemic, drought, mass movement, and wildfire.

The findings also confirmed the results of the Mindanao Protection Profiling for Ampatuan (UNHCR, CFSI 2019) that the population from the Barangay Saniag in the Municipality of Ampatuan in Maguindanao del Sur had experienced numerous displacements due to armed conflict, flood, and landslide. Tracking the displacement from ten years back up to the present, most of the repeated displacements in the municipality have been caused by armed conflict, natural hazards, and crime and violence. In addition, Rido, or family feud, had also caused the displacement of the population.

### Causes of Environmental Disasters Experienced by Internal Displaced Persons

Table below shows the thematic presentation of the findings on the causes of the environmental disasters experienced by IDPs. Based on the overall findings, the primary causes were armed fighting caused by politics, armed groups' disunity, and rido; climate change; abusive human activities, including mining, quarrying, and cutting trees; fitnah or God's trial, air pollution, and a lack of drainage system.

Table 2. Causes of environmental disasters experienced by IDPs

Theme	Significant Responses/Narratives
1. Climate change	<ul style="list-style-type: none"> <li>- <i>Siya nami katawan e pantag sa climate change sa news sa TV, sa radio, enggu social media tulad ng Facebook.</i> (We learned about climate change through news in TV, radio, and social media, like Facebook.)</li> <li>- <i>Kapag sobra ang init at pag-ulan ibig sabihin may climate change.</i> (When it is extremely hot and raining, it means climate change.)</li> <li>- <i>Amaingka matay su mga pinamula nami enggu mayaw sa subla enggu krisis na niya nin mana aden climate change.</i> (When our crops are damaged and it is extremely hot weather, and we have a crisis, it means climate change.)</li> <li>- <i>Ang climate change ay dahilan ng sobrang init at pag-ulan, at alndslides.</i></li> </ul>

	<p>(Climate change caused extreme heat and extreme rainfall, and landslides.)</p> <ul style="list-style-type: none"> <li>- <i>Ang El Nino ay sumisira sa mga pananim namin kaya walang kita.</i> (El Nino affected our farm crops—thus, no income.)</li> </ul>
2. Conflict and rido	<ul style="list-style-type: none"> <li>- <i>Niya tatap na kapedtimbaka na MILF enggu BIFF, enggu rido sabap sa lupa endu kapebpapataya</i> (Usually, armed fighting between MILF and BIFF and family rido due to land conflict/violence.)</li> <li>- <i>Kapedtimbaka siya mana bun disaster ka pakambakwit bun e madakel a taw.</i> (Armed fighting appears to have similar effects as disasters since people would usually evacuate.)</li> <li>- <i>Rido sabap sa lupa enggu kapebpapataya</i> (Family feuds or rido due to land conflict/violence)</li> <li>- <i>Ananto na aden pon kapedtimbaka na AFP kontra MILF</i> (There is still conflict between AFP and MILF happening.)</li> <li>- <i>Kapedtimbaka sabap sa mga personal a la't a ginawa</i> (Conflict due to personal grievances)</li> <li>- <i>Sabap sa kina siya enggu kina-reposition na BIFF siya sa lekami sa Datu Paglas</i> (because of the presence and repositioning of BIFF troops in Datu Paglas)</li> <li>- <i>Sabap sa niya den e kapegkadakel a sinapang enggu matalem</i> (because of the increased weapons, rifles/arms)</li> <li>- <i>Niya bun tatap na kapedtimbaka niya sabap di pakadtuntaya sa Mapiya enggu sabap sa pulitika.</i> (The conflict is due to misunderstanding and politics)</li> <li>- <i>Isa pan a sabap na di ka-isa e mga kumander siya.</i> (Another cause of conflict is the disunity of commanders.)</li> <li>- <i>Sabap sa kapeb-pulitika, mga grudge, enggu niya ba di kapedsabuta sa mapiya nu mga involved</i> (because of political rivalry, grudges, and misunderstanding among parties involved in the conflict)</li> <li>- <i>Pegkadakel e pagamong sa mga armed group sa bala-bala den</i> (emerging and</li> </ul>



	expansion of armed group membership in various areas)
3. Abusive human activities	<ul style="list-style-type: none"> <li>- <i>Sabap sa pedsupak su taw sa kanu mga kitaban enggu atulan nu gobirno, mana namaba illegal logging atawa kapanibpad sa mga masla kayo</i> (because people violate government laws and rules, for example, illegal logging)</li> <li>- <i>Fitnah sabap sa galbekan nu taw, niya ba kaped-zina</i> (fitna or trial because of people's actions, and adultery.)</li> <li>- <i>Niya ba kapanibpad sa mga kayo</i> (Cutting down of trees)</li> <li>- <i>Niya ba kapanutong sa mga plastic</i> (Burning of plastics)</li> <li>- <i>Kapanibpad sa mga kayo na kadsabapan na kadalem.</i> (Cutting off trees causes flooding.)</li> <li>- <i>Kapanibpad sa mga kayo na kadsabapan bun na landslides.</i> (Cutting down trees also caused the landslides.)</li> <li>- <i>Sabap sa illegal logging, mining, enggu quarry</i> (because of illegal logging, mining, and quarrying)</li> <li>- <i>Apiya endaw den a niya kapanibpad sa mga kayo</i> (mass cutting of trees)</li> <li>- <i>Mining enggu quarry, labi den sa ubay na poblacion na Datu Paglas</i> (Mining and quarry, especially near Poblacion of Datu Paglas)</li> <li>- <i>Kapedtimbaka niya sabap sa pulitika</i> (Conflict is due to politics.)</li> <li>- <i>Sabap bun sa kanu galbekan nu taw. Kapegakadakel a mga kompaniya, factory, kapamidsul, enggu kapanutong.</i> (because of the activity of the people themselves—companies, factories, cars, burning of fossils, carbon emissions.)</li> </ul>
4. Fitnah or God's trial	<ul style="list-style-type: none"> <li>- <i>Pedsuli su kalikasan</i> (nature's revenge)</li> <li>- <i>Sabap bun sa kanu galbekan nu tao a pedsu bla</i> (it's because of people abusing nature.)</li> <li>- <i>Pedsu bla su galbekan nu taw na kalipunget su kadnan</i> (Human aggression and abuses that cause God's curse and anger)</li> </ul>

	<ul style="list-style-type: none"> <li>- <i>Tanda inan sa malgan den magubal su dunya</i> (Signs of nearing Judgement Day)</li> <li>- <i>Sabap sa pegkadakel den e fitnah, kapegkiyuga, enggu kapedsupak nu mga taw</i> (because of the rampant fitnah, immoral, illegal, and criminal activities of people)</li> <li>- <i>Kapagabuso nu taw</i> (Human abuse of nature)</li> </ul>
5. Pollution	<ul style="list-style-type: none"> <li>- Pollution from vehicles</li> <li>- <i>Sabap sa pegkadakel su mag factory enggu mas masla building</i> (because of increasing number of factories and establishments)</li> <li>- <i>Sabap sa kapegkatutong</i> (because of fire)</li> <li>- <i>Sabap sa kapembidsul sa mga plastic</i> (because of burning of plastic materials)</li> </ul>
6. No proper drainage system	<ul style="list-style-type: none"> <li>- <i>Sabap sa di kakontrol su ig sabap sa di kaayos su mga drainage</i> (Uncontrolled water flow because of uncleaned drainages)</li> <li>- <i>Sabap sa kanu kapembarado nu pagutan nu ig enggu mga dike.</i> (because of the blockage of waterways and dikes.)</li> </ul>

Sources: Primary data from the in-depth interview, FGD, and KII

The study's findings showed that all respondents believed the most common cause of environmental disasters experienced by IDPs was armed fighting caused by politics, disunity, and rido. In addition, most respondents raised that environmental disasters were also caused by climate change and human activities, including mining, quarrying, and cutting trees, while some respondents claimed that the environmental disasters were due to fitnah or God's trial and nature's revenge. Other respondents believed that pollution and the lack of a drainage system also caused cause environmental disasters.

The findings also showed that politics and disunity were common in Barangay Datalpandan and Barangay Saniag, while conflict/rido was common in Barangay Saniag and Barangay Malala. On the other hand, climate change was mainly observed in Barangay Saniag and Barangay Datalpandan. In addition, illegal human activities, including mining and quarrying, and the lack of a drainage system were common in Barangay Malala and Barangay Saniag.

In the in-depth interview, many IDPs thought that climate change, cutting of trees, burning of plastics, and pollution from vehicles were the causes of

environmental disasters that IDPs experienced. To act on the effects of the disasters, they mentioned that their families opted to borrow or loan money from friends, relatives, and businesses with available funds and look for sideline income-generating activities or other sources of livelihood.

Many respondents in the KII also cited that political dynamics among the LGUs and disunity among commanders of the armed groups caused armed conflict and rido-related disasters that resulted in frequent and multiple displacements of civilians. “Madalas ang dahilan ng paglikas namin ay dahil sa politika at mga commanders na hindi magkasundo at magkaintindihan, lalo na kapag magkaiba ang partido ng kanilang sinusupportahan politiko.” (Often the reason for our evacuation is due to politics and commanders who disagree and understand each other, especially when the politicians they support are from different parties.)

Other respondents mentioned “Ito ay fitnah dahil sa makasalanang gawain ng tao, gaya ng zina o imoral na pakikipagtalikit, ang mga tao ay lumalabag sa mga tuntunin ng gobyerno, halimbawa, ilegal na pagtotroso, at mga taong umaabuso sa kalikasan.” (It was fitnah (God’s trial) because of people’s transgressive acts, including zina or immoral sexual relationship, people violate government rules, for example, illegal logging, and people abusing nature.) They also mentioned that environmental disasters, like flash flooding happened by surprise, without warning. For example, during Paeng, people climbed to higher ground only to be suddenly met by a landslide or flash flood from the mountains.

The findings on the causes of environmental disasters experienced by IDPs in Maguindanao del Sur supported Calderón Patier et al. (2003), IASC (2009), and World Bank et al. (2013) that distinguished natural disasters as causes of environmental disasters that affected the physical, social, and economic well-being of IDPs. Likewise, FEMA (2018) distinguished earthquakes, floods, tsunamis, and hurricanes as causes of damage between direct physical and direct losses.

At the national level, the findings also supported the findings of Perceptions of Disaster Resilience and Preparedness in the Philippines (Vincenzo Bollettino, Tilly Alcayna, Krish Enriquez, Patrick Vinck, June 2018), which reported that in addition to the typhoon as the most primary cause of disasters in the Philippines, other causes were very heavy rainfall, floods, and earthquakes.

Locally, the study’s findings also supported the Bangsamoro READi (November 2022), that reported that the leading causes of displacement in Mindanao were armed conflict and natural hazards. In the BARMM, the estimated number of displaced populations in 2022 was 58,915 due to natural hazards and 68,911 due to armed conflict and rido. In Maguindanao provinces, including Maguindanao del Sur, 3,390 individuals were displaced by inter-group conflict and rido, while 2,515 were displaced by natural hazards in 2022.

## Effects of Environmental Disasters on the Socio-economic Development of Internally Displaced Persons

Table below shows the thematic presentation of the findings on the effects of environmental disasters on the socio-economic development of IDPs. The findings showed that environmental disasters affect the IDPs' housing conditions, health, security, livelihood, and education.

Table 3. Effects of Environmental Disasters on the Socio-economic Development of IDPs

Theme	Significant Narratives of Respondents
- Housing conditions	<ul style="list-style-type: none"> <li>- <i>Malgen e kapegkuwa sa walay. U aden ipagenggay a tabang na paido.</i> (Access to housing is difficult or insufficient)</li> <li>- <i>Madakel a walay enggu kagamitan na nabinasa.</i> (Many houses and things inside were damaged or destroyed.)</li> <li>- <i>Mga gamit endu kasanhkapan a natagak sa kinambakwit na pinanguwa.</i> (Personal belonging and properties left at home were stolen during displacement.)</li> <li>- <i>Sabap sa nabinasa su walay na siya den paka silong sa trapal, sa baba na mga kayo, sa gym, atawa siya sa kanu mga pagali.</i> (Destroyed houses make IDPs stay in a makeshift made of tarps, sleep under the tree, stay in a gym, or even with relatives.)</li> <li>- <i>Su ped na di makambalay siya "No Build Zone" ka inisapal a gobirno.</i> (Others cannot build homes in areas declared as "No Build Zones" by the government.)</li> <li>- <i>Su ped menem na di makambalay sa bakwitan ka kena lekanin su lupa.</i> (Others cannot also build their houses where they evacuated because they do not own the land in the host community.)</li> <li>- <i>Walay ko nasugat a mga pangelu.</i> (Stray bullets hit my house.)</li> <li>- <i>Ped a mga walay na natutong sa kinadtimbaka.</i> (Some houses burned during firefights.)</li> </ul>

<p>- Health</p>	<ul style="list-style-type: none"> <li>- <i>Malgen endu paido e tabang pantag sa helath.</i> (Access to health facilities and supplies is difficult or insufficient.)</li> <li>- <i>Batok enggu kapegkayaw na mga wata enggu su mga senior citizen.</i> (Diseases such as coughs and colds, especially among children and senior citizens.)</li> <li>- <i>Sakit a trangkaso, mayaw, kapagudo, enggu, batok sa kanu mga wata enggu matuwa.</i> (Illness, such as flu, high fever, diarrhea, and cough, especially among children and elders)</li> <li>- <i>Sakit sa kapagitong, manggiginawa, enggu trauma</i> (Mental health issues, profound distress, and trauma)</li> <li>- <i>Subla kayaw na gay na kadsaban na skin allergies enggu ped pan a sakit ku mga wata.</i> (Extreme heat causes skin allergies, and diseases, especially in children)</li> <li>- Malnutrition</li> <li>- <i>Kapenggutem na kadsabapan bun na disasters a kadsabapan menem a kadalul na taw.</i> (Starvation can also result from disasters leading to illness.)</li> <li>- <i>Sakit a leptospirosis enggu sepu</i> (Illness, such as leptospirosis and flu)</li> <li>- <i>Pegkulang su ig</i> (Water shortage)</li> <li>- <i>Kulang su penggamot enggu su mga gamut sa timpo na disasters</i> (Lack of medical personnel and supplies during disasters)</li> </ul>
<p>- Security and safety</p>	<ul style="list-style-type: none"> <li>- <i>Malgen enggu kulang e safety sa disaster</i> (Access to safety is difficult or insufficient during the disaster.)</li> <li>- <i>Penggilek su taw sa kabinasan enggu kadedag nu mga kagamitan</i> (Fear of damages and lost properties)</li> <li>- <i>Aden minatay a naulugan na madidis enggu naudtangan na lending a walay.</i> (Disasters caused deaths due to fallen debris and wall.)</li> <li>- <i>Pegkalubay su palitiya sa Kadnan na ananto pakasakuto su taw amaingka aden disaster.</i> (Weakening faith for some leading to “sakuto” or blaming God in disaster.)</li> </ul>

	<ul style="list-style-type: none"> <li>- <i>Pakapanendit su taw kanu kalikasan, di kena su galbekan mismo nu taw.</i> (Blaming nature instead of abusive human activities)</li> <li>- <i>Malubay su security enggu dikena safety su mag taw</i> (Fragile security and safety of people affected)</li> <li>- <i>Su kalubay nu security, mga kitaban nu LGU na pakalunsan sa kapasang nu katamanan nu mga bakwit enngu su kaped pan.</i> (The lack of security mechanisms and policies of the LGUs worsened the security situations of IDPs and others affected.)</li> <li>- <i>Di den miyog muli su mga pamilya sabap sa di kena ligtas su dalpa nabpunan nilan.</i> (Families not willing to return due to insecurities in their origin.)</li> <li>- <i>Ananto katampulan na landslide e mga ayam.</i> (Animals buried by the landslide.)</li> </ul>
- Livelihood	<ul style="list-style-type: none"> <li>- <i>Malgen, paido e tabang sa ukit a kapaguyag a katalima.</i> (Access to livelihood is difficult or insufficient.)</li> <li>- <i>Su mga pinamula na nabinasa.</i> (Crops are either damaged or destroyed.)</li> <li>- <i>Paido e kapagagani kanu mga pinamula</i> (Lesser/fewer harvest/produce)</li> <li>- <i>Apiya aden bun pantiyaliyan mana sari-sari, bakery na paido menem e pamasa</i> (Even if livelihood is not affected, for example, sari-sari stores or bakeries, there are fewer to no consumers/buyers)</li> <li>- <i>Pegkapulo abenal e alaga na mga pinamula enggu abuno sa timpo na kadalem, kapagugulan</i> (An increase in the price of crops and fertilizer during flooding/rainy season)</li> <li>- <i>Bagiseg su kapulo na interest nu utang</i> (An increased amount of loans with a high interest)</li> <li>- <i>Di kapagagani su mga pinamula, di bun kasabpet sa mga ayam</i> (Failure to harvest crops and livestock)</li> </ul>

	<ul style="list-style-type: none"> <li>- <i>Malgen e kapangilay sa pantiyliyan sa bakwitan.</i> (Exploring new means of livelihood in the evacuation sites is difficult)</li> <li>- <i>Peglkulang su pegken/begas</i> (Food insecurity)</li> <li>- <i>Kapanegkaw e mga dagangan a natagak sa kinambakwit</i> (Business stocks left during displacement stolen)</li> </ul>
- Education	<ul style="list-style-type: none"> <li>- <i>Malgen, paido e tabang sa education sa timpo na disaster</i> (Access to education is difficult or insufficient in the disaster.)</li> <li>- <i>Kaangga su mga klase</i> (Interruption/suspension of classes)</li> <li>- <i>Pegkalubay su gastos sa kanu kapangagi</i> (Constraints in financial support for children)</li> <li>- <i>Malgen e modular class sabap sa malubay e internet</i> (Hardship in learning modular classes due to a very weak internet connection)</li> <li>- <i>Kagilekan su lukes papangagi sa wata nin sa timpo na disaster</i> (Fear among parents to send children to school during disasters)</li> <li>- <i>Pegkapaido e kasabutan, ilmo sabap sa kapegkatebped a klase</i> (Little knowledge was gained and learned due to the suspension of classes)</li> <li>- <i>Pigkadaleman su mga eskwela sa timpo na Paeng</i> (Disasters submerged schools in floodwaters during Paeng.)</li> <li>- <i>Su mga pamandu a di kena Muslim na di den miyog mangay sa eskwela sa timpo na kapedtimbaka.</i> (Teachers, especially non-Muslims, were unwilling to come to school during the conflict.)</li> </ul>

Sources: Primary data from the in-depth interview, FGD, and KII

The study's findings on the effects of environmental disasters on the socio-economic development of IDPs showed that for housing, all respondents cited that many houses destroyed made IDPs stay in makeshift made of tarps, sleep under the tree, stay in a gym, or even with relatives and that access to housing was difficult and insufficient during disasters. Many respondents also mentioned that some houses were burned during firefights and that houses and things

inside were damaged or destroyed. In addition, some respondents claimed that personal belonging and properties left at home were stolen during displacement. Other respondents claimed that stray bullets hit their houses and that they could not build homes in areas declared as “No Build Zones” by the government. Finally, a few respondents mentioned that they could not build their houses where they evacuated because they do not own the land in the host community.

For health, findings showed that all respondents raised that access to health was difficult and insufficient. Illness, such as flu, high fever, diarrhea, and cough, especially among children and elders, were common. In addition, many respondents also cited mental health issues, profound distress, and trauma. For some respondents, malnutrition and water shortage were other common effects. On the other hand, other respondents believed starvation could also result from disasters leading to illness, and extreme heat causes skin allergies and diseases, especially in children. Finally, a few respondents mentioned the lack of medical personnel and supplies during disasters and illnesses, such as leptospirosis and flu.

For security, findings showed most respondents feared damages and lost properties during disasters. In addition, many respondents claimed that disasters caused deaths. Furthermore, some respondents blamed nature instead of abusive human activities and believed people had weakening faith leading to “sakuto,” or blaming God. Many respondents also mentioned that many families were unwilling to return due to insecurities in their origin. Moreover, some respondents explained that the fragile security and safety of the people affected and the lack of security mechanisms and policies of the LGUs worsened the security situations of IDPs and others affected.

For livelihood, findings showed that all respondents claimed that access to livelihood was difficult or insufficient. In addition, most of the respondents relayed that crops were either damaged or destroyed. While some respondents explained that even if livelihood was not affected, for example, sari-sari stores or bakeries, there were fewer consumers/buyers in disasters. For other respondents, lesser/fewer harvest/produce was also experienced during disasters. In addition, other respondents explained that exploring new means of livelihood in evacuation sites was difficult. On the other hand, a few respondents enumerated that failure to harvest crops and livestock, an increase in the price of produce and fertilizer during flooding/rainy season, food insecurity, an increased amount of loans with high interest, and business stocks left during displacement stolen, were also common effects of disasters.

For education, findings showed that all respondents experienced constraints in financial support for children’s education, including food and transportation allowances, tuition fees, and school supplies. In addition, most respondents cited that interruption/suspension of classes was typical during disasters. Furthermore, some respondents insisted that learning modular lessons was challenging because of a very weak internet connection. Many parent respondents also expressed they feared sending children to school during disasters. Moreover, other respondents claimed that little knowledge was gained



and learned due to the suspension of classes and submerged schools in floodwaters during disasters.

The findings of this study on the effects of environmental disasters on the socio-economic development of IDPs confirmed Amito Nancy's conclusions in his 2017 research titled *"Amed Conflict and Socio-Economic Development of Persons in Internally Displaced Camps in Abia Sub-County, Alebtong District, Uganda,"* which argued that most internally displaced persons, especially children, are inaccessible to education. He justified that the government of Uganda had been reluctant to respond to the education needs of the IDPs in Abia Camp. Thus, this contributed to poor planning and management of the camp; therefore, lack of education might lead to poor societal morals, hindering the socio-economic development of Abia and Uganda at large.

Amito Nancy also mentioned a growing deterioration of health services for internally displaced persons caused by poor government policies such as bureaucracy. In addition, corruption has also significantly led to a lack of effective medical care for IDPs, such as a lack of sufficient medicines within the camp, poorly trained health workers, or volunteers. This has been a significant challenge to the IDPs since a number of persons have lost their lives due to a lack of timely medical care due to injuries and heavy breeding.

Additionally, Amito Nancy's study also concluded that insecurity has been one of the most critical challenges faced by most internally displaced persons since regular attacks have been carried out on the camp by several rebel groups in Uganda. This further discourages most IDPs, who are thus intimidated to live in the camp due to the repeated attacks by the Al-shaabab extremists/terrorists.

In addition, the findings of this study also support Calderón Patier et al. (2003) and the Inter-Agency Standing Committee (IASC) (2019, 2015). According to Calderon Patier et al., the type of damages brought by natural disasters of all kinds as direct effects (on physical assets) and indirect effects (less production of goods and services). Likewise, the IASC (2009) distinguished the impact of natural disasters by categories (population, shelter, health services, nutrition, and health). In addition, the IASC (2015) considered the primary effects of sudden occurrence of disasters as (damage to infrastructure), secondary effects (less economic flows and the impact of disasters generated as a consequence of a previous disaster), and humanitarian needs (mortality, morbidity, etc.)

### Coping Mechanisms of the IDPs to Adapt the Effects of Environmental Disasters

Table below shows the thematic presentation of the findings on the coping mechanisms of IDPs and others affected by environmental disasters. The overall findings showed that the main coping mechanisms included diversification of crops, exploring alternative livelihood activities, food storage, strengthening faith, preventive evacuation, and NGO interventions to support IDPs and others affected to cope with the effects of the disasters.

Table 4. Coping Mechanisms of the IDPs to Adapt the Effects of Environmental Disasters

Theme	Significant Narratives of Respondents
1. Diversification of crops	<ul style="list-style-type: none"> <li>- <i>Mibpamulan kami enggu namula kami sa mga kamon a makauyag salkami.</i> (We planted other crops and vegetables for our food.)</li> <li>- <i>Namagakata kami sa kapedtalimulan enggu kausal sa mga local a mga biodegradable a mga gamit.</i> (Encouraged planting/reforestation and use of local and biodegradable materials)</li> </ul>
2. Alternative livelihood activities	<ul style="list-style-type: none"> <li>- <i>Su ped na nangilay sa ped a pantiyaliyan.</i> (Others looked for sidelines.)</li> <li>- <i>Kapengginot</i> (Practiced frugal budgeting)</li> <li>- <i>Bagutang, pegkuwa sa aden isegin a kulta</i> (Borrowed or loaned money)</li> <li>- <i>Pangilay sa ped a ukit a uyag-uyag, pantiyaliyan</i> (Looked for sideline income-generating activities or other sources of livelihood)</li> </ul>
3. Food storage	<ul style="list-style-type: none"> <li>- <i>Kapedtago sa pegken/begas sa di pan kauma su disaster</i> (Stocking of rice and food ahead of the disaster)</li> <li>- <i>Kapedtago sa kulta a para sa makan sa timpo na disaster</i> (Saving money for food needs during the disaster)</li> </ul>
4. Strengthening faith	<ul style="list-style-type: none"> <li>- <i>Kapagapas</i> (Endured hardships)</li> <li>- <i>Kapangeni-ngeni</i> (Prayed)</li> <li>- <i>Tahajud</i> (Night prayer)</li> <li>- <i>Pimbagelan su palitiya, aqueeda</i> (Strengthened faith and aqueeda, or Islamic creed)</li> <li>- 'Bayanihan,' or acting together</li> </ul>
5. Pre-emptive displacement	<ul style="list-style-type: none"> <li>- <i>Mibpalin kami, limidtas sa disaster</i> (Moved to safer ground to secure our lives and avoid the disasters)</li> <li>- <i>Aden pa-ingat salkami, pinambakwit kami</i> (early warning and pre-emptive displacement)</li> <li>- <i>Niya ipedsabuta na Icom/radio pantag sa disaster</i> (used Icon/radio to</li> </ul>

	disseminate information related to disasters)
6. NGO initiatives to support IDPs	<ul style="list-style-type: none"> <li>- Partnered with UN agencies and international funding donors to support food security, IDP protection, DRRM-related projects</li> <li>- Facilitated the building of community assets for community resilience through agroforest, crop production, vegetable production, flood control dikes, waterway clearing, etc.</li> <li>- Facilitated DRRM training of LGUs</li> <li>- Provided psychosocial first aid</li> <li>- Provided Mental Health and Psychosocial Support (MPHSS)</li> </ul>

*Sources: Primary data from the in-depth interview, FGD, and KII*

The study's findings on the coping mechanisms of IDPs during disasters showed that all respondents adapted to the diversification of crops and explored alternative livelihood means as their primary coping mechanisms. In addition, most respondents believed that strengthening faith could effectively counter the challenges of disasters as they thought that Allah pre-determined the destination of every human being. Furthermore, some respondents appreciated the early warning system and pre-emptive evacuation strategies that they and the community implemented in every disaster that they experienced. For the NGO representative, their interventions, in partnership with UN agencies and international funding donors, to address food insecurity and disaster-related issues through capacity training, use of community assets, and psychosocial interventions, were seen as helpful and impactful to the IDPs and others affected by disasters.

In addition, as expressed in the FGD by some participants, the early warning system and pre-emptive displacement were essential mechanisms to secure lives of IDPs and avoid the effects of the disasters. One participant narrated, "*Nakatanggap kami ng maagang babala sa pamamagitan ng text at pre-emptive na impormasyon sa paglilikas mula sa aming mga pinuno nang malaman nilang may paparating na mga natural na sakuna at bakbakan. Sa pamamagitan ng Icom/radio, naabisuhan kami na maging alerto, mapagmatyag, at handa sa mga sakuna.*" (We received early warning through text and pre-emptive displacement information from our leaders when they learned there were upcoming natural disasters and conflicts. Through Icom/radio, we were informed to be alert, vigilant, and prepared before the disasters.)"

In the FGD, some participants narrated that they engaged in a high interest loan to survive their families during the disaster. "*Nanghiram kami ng pera sa mga kaibigan, kama-anak at negosyo na may pondo, gayundin ay naghahanap kami ng mga sideline income generating na aktibidad o iba pang*

*pinagkukunan ng kabuhasan upang mabuhay ang aking pamilya sa panahon ng kalamidad.”* (We borrowed or loaned money from friends, relatives and businesses with available funds, as well as looked for sideline income generating activities or other sources of livelihood.)

### Recommended Solutions to Mitigate the Effects of Environmental Disasters

The table below shows the thematic presentation of the findings on the recommended solutions to mitigate the effects of environmental disasters. The overall findings showed that the primary recommended solution was strengthening one’s Ibadah (worship) as influenced by the deep religious conviction and as the primary source of personal strength and support during disasters. Other recommended solutions were prevention and response mechanisms, implementing early warning systems, pre-emptive displacement, passing relevant ordinances and policies, and full implementation of disaster-related laws and policies.

Table 2. Recommended Solutions to Mitigate the Effects of Environmental Disasters

Theme	Significant Narratives of Respondents
1. Strengthen Ibadah (worship)	<ul style="list-style-type: none"> <li>- <i>Di enggulan su mga inisapal nu Allah.</i> (Avoid practices Allah does not allow.)</li> <li>- <i>Dua, sasambayang</i> (Pray to Allah.)</li> <li>- <i>Tahajud endu lumindong kanu Allah.</i> (Pray tahajud (night prayer) and seek refuge in Allah.)</li> </ul>
2. Prevention and response	<ul style="list-style-type: none"> <li>- <i>Sanggilan e kapanutong sa basura.</i> (Avoid burning trash/garbage)</li> <li>- <i>Telenan den e illegal mining, kape-quarry.</i> (Stop illegal logging, mining, and quarrying.)</li> <li>- <i>Atulen sa mapiya su kapedtiyakap kanu basura</i> (Proper waste management)</li> <li>- <i>Kalimpyo sa dike, drainage</i> (Dike and drainage clearing)</li> <li>- <i>Atulen sa mapiya su kapagidtog sa basura.</i> (Practice proper waste disposal)</li> <li>- <i>Mangaden sa mapiya atulan sa ka-kontrol sa kadalem.</i> (Have a good flood control management.)</li> <li>- <i>Munot sa atulan, pangitaban na gobirno.</i> (Follow government rules, regulations, and laws.)</li> </ul>

	<ul style="list-style-type: none"> <li>- <i>Mamula sa kayo, pamulan, kamon.</i> (Plant trees, crops, and vegetables.)</li> <li>- The reforestation program of BARMM (10,000 mahogany plants) has been started but stopped because of a lack of funds to sustain the labor needed.</li> <li>- <i>Menggay su gobirno sa kapital.</i> (Provision of start-up capital for livelihood from government)</li> </ul>
3. Collaboration	<ul style="list-style-type: none"> <li>- <i>Tabanga su mga kaunutan, LGU sa kano kaayos kanu conflict.</i> Collaboration among leaders and LGUs to settle the local conflict</li> <li>- <i>Su MILF, military, LGUs sa probinsya, sa munisipyo na imbityala sa panon e solution sa kapembunubuno.</i> (MILF officers, military, and LGUs (Province and Municipality) to talk and find solutions for man-made disasters)</li> </ul>
4. Early warning system	<ul style="list-style-type: none"> <li>- <i>Sambot a kambakwit</i> (Pre-emptive evacuation)</li> <li>- <i>Inggulalan su early warning system.</i> (Implement an early warning system)</li> <li>- <i>Siya embalay sa kapuluwan a di mauwa na kadalem.</i> (Build houses in the upper ground to avoid submerging in flood waters.)</li> </ul>
5. Lobbying and advocacy (NGO)	<ul style="list-style-type: none"> <li>- Conduct policy advocacy</li> <li>- Lobby LGUs to fully implement the PD 10121</li> <li>- Lobby LGUs to fully implement the Executive Order No. 24 Series of 2023, constituting the disaster response and management task force</li> <li>- Information dissemination, IEC, advocacy</li> </ul>

Sources: Primary data from the in-depth interview, FGD, and KII

Based on the findings on the recommended solutions to mitigate the effects of environmental disasters, all IDPs believed that strengthening one's Ibadah (worship) often, not only during disasters, could make a significant difference for them. In most cases, this belief was strongly influenced by the deep religious conviction of the people. They cited prayer as the primary source of personal strength and support during disasters. In addition, most respondents suggested that solutions would be both preventive and responsive to real situations amid

disasters. These could be through early warning systems, pre-emptive displacement, passing relevant ordinances and policies, and full implementation of disaster-related laws and policies.

In the KII, the NGO interviewee emphasized many laws, policies, and ordinances related to conflict and environmental disasters exist in the Philippines. However, according to him, the implementation of those mechanisms was weak. Thus, he suggested that it is vital to lobby LGUs to fully implement the Presidential Decree (PD) 10121 and fully implement the very recently signed Executive Order No. 24 Series of 2023 that would constitute the disaster response and management Task Force.

Furthermore, in the in-depth interview, many respondents suggested that the government should be impartial in assisting people, not only allies in politics but those who deserve the support, stop corruption, implement proper waste management, and stop illegal mining, quarrying, and cutting trees. He also recommended that every LGU has a distinguished evacuation center with complete and accessible water, sanitation, and hygiene (WASH) facilities.

In the FGD, some respondents illustrated that they should be adapted to climate change trends. “Kailangan namin sumunod sa paiba-ibang panahon. Halimbawa, kung tag-ulan mas mainam ang pangangisda, kaya dun kami naghahanap ng paraan. Kapag tag-arwa naman, nagsasaka kami depende sa panahon.” (We have to adapt to the changing climates. For example, if it is the rainy season, fishing is better. That is where we look for fishing strategies. When it is summer, we do farming depending on the weather.)

The findings on the recommended solutions to mitigate the effects of environmental disasters were supported by the following Philippines laws, policies, and plans on disaster management.

National Disaster Risk Reduction and Management Act (DRRM Act, 2010) Republic Act 10121 provided a legal and institutional basis for DRRM and lays the groundwork for development of plans and policies and for implementation of projects pertaining to DRRM. The DRRM Act outlined provisions for the establishment of NDRRMC and laid out the Implementing Rules and Regulations for National, Regional, and Local DRRMCs and their respective powers and functions.

The President of the Republic of the Philippines signed Executive Order No. 24 Series of 2023 to constitute and create the Disaster Response and Management Task Force. In addition, the Task Force shall organize Quick Response Groups, which can be deployed during, in advance, or anticipation of the imminent impact of a disaster. The Task Force shall directly report to the President, and shall be convened upon order of the President or the Chairperson of the Task Force. The Task Force shall be the lead implementing agency for disaster preparedness and response.

Meanwhile, the Department of Science and Technology (DOST) is responsible for monitoring and forecasting and serves as Vice-Chair for Disaster

Preparedness and Mitigation of NDRRMC. Under DOST, the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA) provides tropical cyclone warnings, flood bulletins and advisories, and weather forecasts. PAGASA's products include both steady state weather forecasts and emergency watches, warnings, and forecasts.

### *Disaster Rehabilitation and Recovery Planning Guide (2020)*

The Disaster Rehabilitation and Recovery Planning Guide has been formulated by NEDA and serves as the recovery and rehabilitation template for national and local government to use in post-disaster (and post-conflict) recovery planning. The guide provides templates for a recovery framework, planning process, institutional arrangements, coordination and implementation mechanisms, options for funding resources, and proposed monitoring arrangements.

## **Summary of Findings**

The study findings revealed that overall results showed that the most common environmental disaster experienced by IDPs was flooding, followed by extreme weather conditions, such as extreme heat and rainfalls, man-made disasters, including armed conflict, rido, and politics, earthquakes, and landslides were also commonly experienced by IDPs. The study also showed that the most common causes of these environmental disasters were armed fighting caused by politics, disunity, and rido; climate change; human activities, including mining, quarrying, and cutting trees; fitnah or God's trial and nature's revenge; pollution; and the lack of a drainage system also caused cause environmental disasters.

On the effects of environmental disasters on the socio-economic development of IDPs, the study's overall findings revealed that environmental disasters affected housing conditions, health, security, livelihood, and education of IDPs. For housing conditions, the primary effect was the destruction of many houses, yet access to housing after the disaster was difficult and insufficient. For health, the main effect pertained to difficulty and inadequate access to health and illness, such as flu, high fever, diarrhea, and cough, especially among children and elders. For security, the primary effect on IDPs was fear of damage and loss of properties and threat to death of residents. Furthermore, the most common effect on livelihood was that many crops were either damaged or destroyed, yet access to livelihood during disasters was difficult and insufficient. Finally, for education, all respondents were concerned about the constraints in financial support for children's food, transportation, tuition, and school supply needs during disasters.

As for the coping mechanisms of IDPs to adapt to the effects of environmental disasters, the study's findings showed that all respondents adapted to the diversification of crops and explored alternative livelihood means as their primary coping mechanisms. In addition, most respondents believed that strengthening faith could effectively counter the challenges of disasters as influenced by their strong convictions and trust in Allah. Finally, for the recommended solutions to mitigate the effects of environmental disasters, all respondents believed that strengthening one's ibadah (worship) could make a significant difference for them. In addition, most respondents suggested that solutions to the effects of disasters would be both preventive and responsive to real situations of IDPs.

## **Implications**

Based on the study's findings, most of the Province of Maguindanao del Sur residents experienced both man-made and natural environmental disasters. These disasters, caused by climate change, conflict, abusive human activities, pollution, and lack of proper drainage system, always resulted in the displacements of many residents, which affected social and economic disruptions and daily activities.

Moreover, recurring conflict and repeated natural environmental disasters can have implications on the planning, programming, and policy development of the government, LGUs, NGOs, UN agencies, CSOs, and other service providers, including Disaster Risk Reduction and Management (DRRM) lenses. Therefore, from the peace and development perspective, there is a need to apply a combination of humanitarian-development-peace approaches to change the lives of people in the Province. Likewise, prevention, response, and solutions to the current situation must simultaneously deliver lasting peace and development in the decade-long conflict-nested Province.

## **Conclusions**

With the implications, this study concludes that most residents, including IDPs in Maguindanao del Sur, have experienced man-made and natural environmental disasters. Man-made disasters include recurring armed conflict, rido, and crime and violence, while natural environmental disasters include flooding, extreme weather conditions, landslides, and earthquakes. The primary causes of the disasters are climate change, conflict, rido, pollution, lack of proper drainage system, and abusive human activities, including illegal logging, mining, and cutting of trees. In addition, fitnah, or God's trial because of human abuses, is also believed to cause disasters. These disasters significantly affect the socio-economic development of IDPs, particularly in terms of housing conditions, health, security, livelihood, and education. Although they have coping mechanisms to adapt to the disasters' effects, they usually need support to rebuild their lives and return to normalcy. To achieve this, preventive, responsive, and solutions-oriented support must be provided, including implementing an Early Warning System (EWS), strengthening faith-based



resiliency, and fully implementing the existing disaster risk reduction (DRR) relevant laws, policies, and ordinances.

## **Recommendations**

### *For the BARMM Government:*

- Prioritize and fast-track the passing of the IDP Rights Bill into law at the Bangsamoro Transition Authority (BTA). The law will significantly prevent or minimize the cycle of displacements and mitigate the effects of environmental disasters.
- Provide humanitarian and early recovery assistance to IDPs, especially those protractedly displaced, most vulnerable, and from far-flung areas, to address their primary concerns related to the findings of this study in terms of housing conditions, health, security, livelihood, and education

### *For Local Government Units:*

- Strengthen their visibility and presence to enhance protection and access to essential services, especially housing, health, security, livelihood, and education.
- Develop a Disaster Risks and Management (DRRM) contingency plan that reflects the realities experienced by the communities, including IDPs and other most vulnerable sectors, such as women, youth, elders, persons with disabilities, etc.
- The need for accessible housing, health facilities, security mechanisms, sustainable community-based livelihood opportunities, and school facilities and supplies was consistently expressed during FGDs, in-depth interviews, and KIIs. Therefore, the LGU should take into consideration this concern.
- Establish and strengthen an Early Warning System as a preventive measure for disasters.

### *For NGOs and other Civil Society Organizations (CSOs):*

- Advocate for government policy, legislation, and community actions to protect IDPs, especially those most vulnerable groups and others affected by environmental disasters.
- Facilitate conflict resolution and reconciliation across different groups to help protect IDPs and establish the relations and conditions conducive to durable solutions for IDPs;
- Support and enhance long-term local capacity in disaster preparedness and mitigation.
- Lobby LGUs to fully implement PD 10121 and Executive Order No. 24 Series of 2023, constituting the disaster response and management task force.

### *For the IDPs and local communities affected:*

- Follow the policies and ordinances of the LGU and participate in the programs and projects of the LGUs, NGOs, and CSOs.

- Continue the good practices and mechanisms implemented during disasters experienced.

The researcher would also like to recommend further study on Local Labor Market and Sustainable Livelihood for IDPs in Maguindanao del Sur.

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