



# UNRAVELING THE NEXUS

A PARTICIPATORY ACTION RESEARCH ON THE DYNAMICS  
OF CLIMATE CHANGE, CONFLICT AND HUMAN MOBILITY  
IN THE BANGSAMORO REGION, PHILIPPINES

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## MESSAGE OF ACKNOWLEDGEMENT

We congratulate the Mindanao Peoples Caucus (MPC) and the IOM team for conducting the research, “Unraveling the Nexus: Participatory Action Research on the Dynamics of Climate Change, Conflict, and Human Mobility in the Bangsamoro Region, Philippines.” This is the first research that examines the interlinkage between the triple climate nexus in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM). Through the lens of individual stories, the research illustrates the impact of the nexus and how the intersectionality with contemporary environmental risks and hazards are affecting people’s lives and decision-making.

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We hope that the findings of this participatory action research will trigger more dialogue at the regional and community levels; inspire further evidence-gathering on the impact of climate change and effective adaptation and mitigation strategies; and support key stakeholders to develop policy recommendations and response mechanisms to increase the resilience of conflict- and climate-prone communities in the Bangsamoro.

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## EXECUTIVE SUMMARY

The Bangsamoro Autonomous Region of Muslim Mindanao (BARMM) has increasingly seen the interrelation between climate change, conflict, and displacement. Despite being more at-risk of disasters and biodiversity loss in the Philippines, the mainland and island provinces of BARMM remain underserved areas for adaptation and protection support. Disasters and calamities have significantly affected the region's agriculture and fisheries industry, its major economic driver. Conflict, on the other hand, continues to perpetuate among its communities. These conditions have made the BARMM a priority area in the Philippines to study the nexus between climate and conflict and displacement.

Using a qualitative methodology, this paper explores the dynamics between climate, conflict, and displacement, as manifested in the experiences of residents in select BARMM provinces. The BARMM has a unique and complex nature of conflict, risks of climate change associated risks, and history of displacement. As such, this paper discusses BARMM residents' understanding of the dynamics between environmental risks that relate to climate change, the socioeconomic implications when these risks manifest, the conflict, and security risks, as well as the initiatives and gaps in the efforts undertaken by the government.

**Environmental Risks in Relation to Climate Change.** Both the mainland and island provinces of BARMM<sup>1</sup> are experiencing the effect of environmental risks brought about by climate change. Whereas mainland provinces are exposed to more frequent and worsening typhoons and droughts, island provinces face rising sea levels, resulting in loss of and changes in biodiversity. Despite the different risks facing these provinces, both are exposed to the same consequences – flooding, changes in the ecosystem, and loss of shelter and livelihoods.

**Socioeconomic Implications of Environmental Risks.** Flooding as a result of typhoons and sea level rise has a direct effect on agricultural land and fishing grounds in the BARMM, slowing down value chain production and killing crops and water resources. Many of the floodwaters especially along the riverbanks have not subsided for a long time, expanding the size of the river, and losing residential, agricultural and aquacultural areas and displacing the locals. In contradiction, there are also drying marshes and rivers due to higher temperatures which have resulted in both socio-economic opportunities and

increased tensions due to the expansion of agricultural and aquacultural areas. Residents acknowledge that illegal logging, farming, and mining activities as major factors contributing to the destruction of the environment, however, these industries also serve as major sources of livelihoods. As environmental risks hinder economic stability in the region, the BARMM's peaceful transition will remain uncertain.

**Conflict and Security Risks Identified.** Emerging conflicts and security risks pose a threat to full implementation of the peace agreement in the BARMM. Environmental risks such as improper garbage disposal and competition over natural resources and areas (i.e. coastlines, marshes, and fish catch) induce tensions among community members, disrupt livelihoods and social structures, and act as catalysts for armed conflict. The combination of these factors can result in forced displacement and/or migration as an adaptation mechanism. The loss of livelihoods of seaweed farmers has also led to increased radicalization and violent extremism among local populations. Clan feuds or “rido” was also identified as a displacement driver, in addition to contributing to the destruction of natural resources.

**Government Initiatives and Gaps.** Local government units (LGU) have improved on disaster risk reduction and response, livelihood support, and collaboration and coordination among stakeholders. Despite notable efforts to address climate change, conflict, and displacement in the region, there continue to be gaps. These include inadequate support to internally displaced persons (IDP), insufficient environmental protection, lack of community engagement and consultation, weak hazard mapping and preparedness, and capacity and transition challenges.

**Knowledge Gaps.** While BARMM residents reported a high level of awareness on conflict due to the common narrative in the region, they were found to have a low level of awareness and knowledge of climate change and its link to disaster. Informed communities and policymakers are crucial to planning the BARMM's long-term adaptation strategies in relation to climate change and conflict. The Ministry of Environment, Natural Resources and Energy (MENRE) has been urged to strengthen its campaign for information dissemination on climate change and its impact on local government units in the BARMM.

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<sup>1</sup> BARMM is comprised of six provinces including Basilan, Lanao del Sur, Maguindanao del Norte, Maguindanao del Sur, Sulu, and Tawi-Tawi.



This study found a link between climate change, conflict, and human mobility in BARMM. While it does not present and prove a causal relationship, it does illustrate the interconnectedness and the substantial impact on communities. Violence and displacement, a core issue in the BARMM, are exacerbated by the intersection between environmental risks, economic

challenges, and governance gaps. By learning more, adapting better, and building capacity and inclusion, conflict and forced migration can be reduced. The BARMM has an opportunity during this transition period to plan thoroughly based on the evidence and execute existing policies to prevent the escalation of violent conflicts.



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## ACRONYMS

<b>ASG</b>	Abu Sayyaf Group
<b>AFP</b>	Armed Forces of the Philippines
<b>AHJAG</b>	Ad Hoc Joint Action Group
<b>ARMM</b>	Autonomous Region in Muslim Mindanao
<b>BARMM</b>	Bangsamoro Autonomous Region in Muslim
<b>BASULTA</b>	Basilan, Sulu, Tawi-Tawi
<b>BIAF</b>	Bangsamoro Islamic Armed Forces
<b>BLGU</b>	Barangay Local Government Unit
<b>BOL</b>	Bangsamoro Organic Law
<b>BTA</b>	Bangsamoro Transition Authority
<b>BIFF</b>	Bangsamoro Islamic Freedom Fighters
<b>CAB</b>	Comprehensive Agreement on the Bangsamoro
<b>CCCH-</b>	Coordinating Committee on the Cessation of
<b>CSO</b>	Civil Society Organization
<b>DRRM</b>	Disaster Risk Reduction and Management
<b>FGD</b>	Focus Group Discussion
<b>IDP</b>	Internally Displaced Persons
<b>IOM</b>	International Organization for Migration
<b>IP</b>	Indigenous People
<b>ISIS</b>	Islamic State of Iraq and Syria
<b>KII</b>	Key Informant Interview
<b>LCCAP</b>	Local Climate Change Action Plan
<b>LGU</b>	Local Government Unit
<b>MAFAR</b>	Ministry of Agriculture, Fisheries and Agrarian
<b>MENRE</b>	Ministry of Environment, Natural Resources and
<b>MILF</b>	Moro Islamic Liberation Front
<b>MILG</b>	Ministry of the Interior and Local Government
<b>MDRRM</b>	Municipal Disaster Risk Reduction and Management
<b>MDRRM</b>	Municipal Disaster Risk Reduction Management Plans
<b>MLGU</b>	Municipal Local Government Unit
<b>MNLF</b>	Moro National Liberation Front
<b>MP</b>	Member of the Parliament
<b>MPOS</b>	Ministry of Public Order and Safety
<b>MSU</b>	Mindanao State University
<b>NGO</b>	Non-Government Organization
<b>OFW</b>	Overseas Filipino Workers
<b>PAG</b>	Private Armed Group
<b>PAR</b>	Participatory Action Research
<b>PNP</b>	Philippine National Police
<b>POPSP</b>	Peace and Order and Public Safety Plans
<b>PSRO</b>	Peace Security and Reconciliation Office
<b>READi</b>	BARMM Regional Emergency Assistance and
<b>SGA</b>	Special Geographic Areas

## THE BANGSAMORO CONTEXT

The long history of the creation of the Bangsamoro Autonomous Region of Muslim Mindanao (BARMM) continues to be the core foundation of the peace and development agenda of the interim BARMM government. Following nearly two decades of peace negotiations, it was only on 15 October 2012 when the Philippine Government and Moro Islamic Liberation Front (MILF) agreed to replace the previous Autonomous Region of Muslim Mindanao (ARMM) with the BARMM.<sup>2</sup> Within the framework of the peace talks, the Bangsamoro Organic Law (BOL) established the new region on 26 July 2018. Two distinct but interrelated tracks are encompassed within the Peace Process: 1) the Political Track, which established the transitional political bodies and outlines steps leading to the creation of a new autonomous entity; and 2) the Normalization Track to transform armed struggle into peaceful political participation and citizenship, through security, transitional justice, socioeconomic support, and confidence building measures. It also commits to decommissioning 40,000 MILF-Bangsamoro Islamic Armed Forces (BIAF) combatants and supporting conflict-affected communities by 2025. Furthermore, the 80-member interim parliament or the Bangsamoro Transition Authority (BTA) is formed.<sup>3</sup> The new entity renewed hopes among its leaders to build off the progress and challenges of the previous ARMM and forge a more inclusive and forward-looking future for the people in the region based on the principle of moral governance. The initial timeframe of the BARMM for full implementation of the Peace Agreement was extended until 2025 to continue building the systematic foundations of the BARMM bureaucracy.<sup>4</sup>

The BTA has since faced several challenges that have slowed the delivery of peace agreement results and effectively reaching communities with its peace dividends. The old and emerging issues that continue to plague the region are attributed as the main factors. First, the COVID-19 pandemic in 2019 was a critical roadblock that resulted in a standstill of decommissioning combatants and other reintegration efforts encompassed within the normalization process. Furthermore, horizontal and vertical conflicts in many communities continue to form splinter groups, such as the Bangsamoro Islamic Freedom Fighters and the ISIS-Maute groups. Clan feuds or *rido* also persist, involving traditional families with known political interests. These security

risks are further discussed in this study. Lastly, since 2018 the BARMM has been at the receiving end of disasters and calamities which have significantly affected the region's agriculture and fisheries industry the BARMM's major economic driver. Destruction caused by these events has been increasingly felt across the BARMM throughout the transition period and these factors are negatively impacting the effectiveness of key activities under the BTA. As such, adaptation and mitigation measures have been put forward and prioritized in the newly revised Bangsamoro Development Plan.<sup>5</sup>

This preliminary research is focused on the BARMM due to the increasing manifestations of climate change, conflict, and displacement in the region compared to other parts of the Philippines. The multi-faceted impact of the dynamics between conflict, climate change, and human mobility will be further discussed according to the lived experiences of people across the Bangsamoro provinces and its Special Geographic Areas (SGA). The study explores the linkages and push-and-pull dynamics between conflict, climate change and human mobility. It will not, however, establish causality of these phenomenon.

First, it is necessary to discuss the economic situation in the BARMM as a major factor in the current conflicts and a hindrance to effective adaptation against natural hazards. The economic profile of the BARMM is considerably lower compared to other regions in the Philippines. The national poverty threshold is currently at 18.2 per cent<sup>6</sup> while the BARMM is 37.4 per cent, or 1.71 million of its 4.94 million population.<sup>7</sup> The demographics is one of the most diverse in the Philippines that is comprised of Filipino Muslims, Christians, and Indigenous Peoples (IP) which include Moros and the non-Moro IPs. The population relies mainly on its natural resources, including vast agricultural land and water resources such as lakes, marshlands, and the Sulu Sea. The service industry has also grown from 6.1 per cent in 2021 to 9.8 per cent in 2022, which is mainly attributed to increasing urbanization and development in metropolitan areas i.e. Cotabato and Marawi. As of 2022, the region is among the ten fastest growing economies in the country at 6.6 per cent economic growth. The economic indicators suggest that the region's development, with support of the peace process, is on track.

<sup>2</sup> Official Gazette (Ed.). (2012). Retrieved from <https://www.officialgazette.gov.ph/bangsamoro2/the-2012-framework-agreement-on-the-bangsamoro/>.

<sup>3</sup> Arellano Law Foundation (Ed.). (2018). Retrieved from [https://lawphil.net/statutes/repacts/ra2018/ra\\_11054\\_2018.html](https://lawphil.net/statutes/repacts/ra2018/ra_11054_2018.html).

<sup>4</sup> Arguillas, C. O. (2022, July 4). Bangsamoro's extended transition starts; at OPAPRU, still no peace adviser, no OIC. MindaNews. Retrieved from <https://www.mindanews.com/top-stories/2022/07/bangsamoros-extended-transition-starts-at-opapru-still-no-peace-adviser-no-oic/>.

<sup>5</sup> 2<sup>nd</sup> Bangsamoro Development Plan 2023-2028.

<sup>6</sup> Asian Development Bank (Ed.). (2023). Retrieved from <https://www.adb.org/countries/philippines/poverty>.

<sup>7</sup> Tula, A. G. (2022). Retrieved from <https://rssoarmm.psa.gov.ph/release/content/press/55883>.



At the backdrop of this economic progress lies the history and on-going conflicts that continue to take place in Bangsamoro communities. The main actors involved in violent conflicts include the security sector (Philippine National Police and the Armed Forces of the Philippines); political groups (MILF and Moro National Liberation Front (MNLF)); political and/or wealthy families in the region; indigenous peoples; private armed groups (PAGS); and terrorist groups such as the Abu Sayyaf Group (ASG), BIFF, and Jemaah Islamiyah. These conflicts reportedly erupt from a range of political tensions, clan feuds, extremist ideologies, and land or resource competition. Following the peace agreement in 2018, the reduction of armed encounters between the MILF and the government contributed to the decrease in the overall conflict incidence around the region.<sup>8</sup>

The lack and presence of natural resources have been considered a blessing and a curse to the region, as it grapples with a population that relies heavily on these resources for daily sustenance. Land dispossession is still considered a key driver for violent conflict in the BARMM, with linkages to political power, control over resources, and cultural identity.<sup>9</sup> This dynamic is critical for understanding the risks that communities face in times of a climate related event, disaster, and/or a violent conflict. The total displacement from conflict and disasters in Mindanao as of November 2022 is 32,216 families (approximately 158,725 individuals), of which 53 per cent (16,986 families or 84,930 individuals) are currently located inside the BARMM, and a significant portion were previously BARMM residents and now reside with host communities in other areas of Mindanao.<sup>10</sup> These displaced populations are locally called *bakwits*, a slang from for the word ‘evacuees’. Aside from the human toll, disasters and conflicts pose a threat to biodiversity loss, food insecurity, and intensified natural resource extraction activities across the BARMM. These factors contribute to the vicious cycle of conflict, displacement, and an inability to effectively adapt to the impacts of climate change.

The following chapters will discuss overlapping elements that determine the nexus of climate change, conflict, and human mobility in the BARMM, as illustrated by respondents of this study. This report will discuss environmental risks, followed by socio-economic challenges in relation to the impact of these risks. This will then open the discussion on the conflict and security risks, government efforts and gaps, and finally the knowledge gaps. At the end of this document, is the illustration of the nexus in BARMM and recommendations for further action.

## METHODOLOGY

### Research Questions

This preliminary research examines the linkages between climate, conflict, and human mobility in the BARMM, and its impact on livelihoods, natural resources, and community resilience dynamics. It also recommends concrete actions through which the BARMM can institutionally adapt to and mitigate the impact of climate change. To examine these linkages, the research attempted to answer the following questions:

1. What are the existing dynamics of climate, conflict, and displacement in the BARMM?
2. What are the distinct effects of the nexus in the region?
3. How is the government addressing the issues of climate change, conflict, and displacement?

### Data Collection

This research was guided by the Participatory Action Research (PAR) framework which emphasizes the active involvement of communities in understanding and addressing social issues. The research team considered community members as active partners throughout the research process in order to contribute to their empowerment as agents of change in their respective communities. Stakeholder engagement was incorporated into every step of the research to promote collaboration and raise awareness among participants.

Using a qualitative methodology, data for this research was collected through a desk review, key informant interviews (KIs), and focus group discussions (FGDs). A detailed research design and manual were developed to guide facilitators and interviewers, particularly for the FGDs and KIs. Photos were taken by the research team in communities where FGDs were conducted with full consent.

- The desk research and records review involved gathering and reviewing published reports, and documentation on climate change in relation to displacement caused by conflicts and disasters related to climate change in the BARMM region. Reviews on reports, documentation, and news articles related to natural hazard-related emergencies such as flooding, groundwater contamination, erosion, sea-level rise, and contamination due to extraction of natural resources. Relevant local government units (LGUs) were also contacted for information about conflict and climate change risks in the specific localities.

<sup>8</sup> International Alert. (2020). (rep.). Conflict Alert 2020 Enduring Wars.

<sup>9</sup> Guevara, M. C. C. (Ed.). (2016). (tech.). Report of the Transitional Justice and Reconciliation Commission. Transitional Justice and Reconciliation Commission.

<sup>10</sup> Philippines: Mindanao Displacement Dashboard, November 2022 - Issue No. 98 - Philippines. (2022, December 28). ReliefWeb. <https://reliefweb.int/report/philippines/philippines-mindanao-displacement-dashboard-november-2022-issue-no-98>.



- Key informant interviews included face-to-face and virtual interviews with climate change experts, climate justice activists, LGUs, civil society organizations (CSOs), research institutions, and representatives from the BARMM. Detailed guide questions based on pre-approved interview questions were used during the interviews. A total of 14 agreed to be part of research based on a list of identified experts recommended by BARMM ministries and CSOs.

#### List of Key Informant Interviews:

1. Municipal Disaster Risk Reduction and Management Officer
  2. Provincial Disaster Risk Reduction Management Office
  3. Bangsamoro Transition Authority Minister
  4. Ministry of Environment, Natural Resources and Energy (MENRE) Minister
  5. MENRE Director for Environment Management Services
  6. Director of Peace Security Reconciliation Office
  7. Tarbilang Foundation Executive Director
  8. OPPAP Regional Officer
  9. Mindanao State University-Institute of Oceanography and Environmental Science Professor
  10. Moro Historian and MSU Iligan Professor
  11. Community Coordinator of Philippine Extractive Industries Transparency Initiative
  12. Executive Director of Ecosystems Work for Essential Benefits
  13. Local Chief Executive from Basilan
  14. Local Youth Development Officer and Provincial Environmental Officer - Sulu
- Focus group discussions were conducted with representatives from various groups, including women, youth, internally

displaced persons (IDPs), indigenous peoples (IPs), the private sector, former and current members of the MILF-BIAF and MNLF, and a former Abu Sayaff Group (ASG) member. FGDs took place in different provinces including Maguindanao, Lanao del Sur, Sulu, Basilan, Tawi-Tawi, and select barangays<sup>11</sup> in North Cotabato. Moderators and documenters were trained on how to conduct FGDs, ensuring consistency in the approach and process across all sessions.

- For data validation, a regional dialogue was convened on 16-17 March 2023 participated by 47 key stakeholders from the LGUs, BARMM government (20F, 27M), including three Members of the Parliament (MPs) to present the initial results of the Participatory Action Research and gather additional input.

#### Location of the Study

The BARMM was chosen as the locale of the study because of its unique and complex nature of conflict, climate change risks, and history of displacement. The PAR was implemented in the provinces of Tawi-Tawi, Sulu, Lanao, and Maguindanao, and the BARMM Special Geographic Areas (SGA) in Cotabato province. This research started prior to the official division of the Maguindanao Province into Maguindanao Del Sur and Maguindanao Del Norte; thus, all data that pertains to Maguindanao represents the whole province of Maguindanao. The FGD areas were chosen based on the following criteria: 1) conflict drivers existing in the area; 2) climate change risks affecting the area; and 3) community's history of displacement. The team attempted to include Non-Moro IP groups and communities in this study, however, they declined participation on the basis of security issues.

Area of Study	Date of FGD	Male	Female	Total
Lamitan City, Basilan Province	1 Dec 2022	12	7	19
Municipality of Indanan, Sulu	11 Dec 2022	11	3	14
Municipality of Pagalungan, Maguindanao	15 Dec 2022	8	8	16
SGA or the 63 BARMM Expansion Areas-Pikit	15 Dec 2022	17	0	17
Municipality of Jolo, Sulu	17 Dec 2022	5	11	16
Province of Lanao Del Sur	20 Dec 2022	5	8	13
Municipality of Bonggao, Tawi-Tawi	10 Jan 2023	7	16	23
Municipality of Datu Mastura, Maguindanao	02 Feb 2023	14	11	25
<b>TOTAL</b>		<b>79</b>	<b>64</b>	<b>143</b>

<sup>11</sup> A barangay is the smallest political unit in the Philippines.

### Scope and Limitations of the Study

The study focused on gathering data on actual events in the BARMM, with emphasis on areas directly affected by natural hazard-related disasters. It is important to note that the study does not aim to establish a correlation among the elements studied in the climate-conflict nexus. Since this is a qualitative

research study, no statistical analysis was employed to organize the data. However, relevant quantitative data, such as statistical reports describing trends and tendencies concerning the nexus, were drawn from reliable publications to enhance, validate, and provide comprehensive context to the narratives that were provided by participants.



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## FINDINGS AND DISCUSSION

### ENVIRONMENTAL RISKS IN RELATION TO CLIMATE CHANGE

This section is divided into the two geographic areas of the BARMM - the mainland and the island provinces - which offer distinct but often common narratives on residents' experiences of environmental risks in their communities. Participants were asked to identify the environmental risks that they have experienced and/or observed in the past five years. The key risks identified in the mainland provinces include typhoons, drought, change to and loss of biodiversity, extraction of resources, use of chemical fertilizers, and urbanization. Meanwhile, residents of the island provinces reported experiencing sea level rise, crop infestation, and loss to and change in biodiversity. The section will solely discuss the manifestations of environmental risks and the following sections will further establish its dynamics with conflicts.

### Typhoons and Droughts in the Mainland

#### Stories from Maguindanao, Lanao Del Sur and Special Geographic Areas

The Bangsamoro region has been exposed to destructive storms and typhoons in the past decade, which are at par with its neighboring regions in the Philippines. These storms often bring strong winds, storm surges, and heavy rainfall which cause flash floods, landslides, and loss of or changes to the biodiversity of affected communities. Every year these storms bring devastation to the BARMM, but comprehensive data on actual loss and damage is not widely available. Below are the major storms and typhoons that have affected the region since 2012: which has been reported with key figures specifically for ARMM and BARMM only:

Typhoon/Storm	Local Name	Date	Affected Families	Affected Individuals	Damage in Agriculture and Infrastructure <sup>12</sup>
Typhoon Bopha <sup>13</sup>	Pablo	December 2012	50,050	250,622	PHP 4.5 million
Typhoon Vinta <sup>14</sup>	Tembin	December 2017	35,097	175,877	PHP 152 million (Lanao Del Sur) <sup>15</sup>
Typhoon Rai <sup>16</sup>	Odette	December 2021	30,086	130,556	PHP 10 million
Tropical Storm Nalgae <sup>17</sup>	Paeng	October 2022	202,598	557,000	PHP 640 million

Communities interviewed for this study observed an increased frequency and intensity of storms and typhoons, resulting in casualties and damage to infrastructure, livelihoods, and shelter. Maguindanao and Lanao Del Sur, located in the mainland of BARMM<sup>18</sup> and hosts majority of the region's population, are the most affected provinces.

In both provinces, especially in Lanao Del Sur, communities are located in the highlands where flash floods and landslides have become common. During these severe typhoons and storms, residents recall that the floods often bring debris from the mountains and neighboring communities, causing major damage to their houses and agricultural land. The coastal communities of

<sup>12</sup> At USD 1 = PHP 55.25 exchange rate.

<sup>13</sup> NDRRMC Sit.Rep. 36, December 23, 2012.

<sup>14</sup> DSWD DROMIC Report #15 on Severe Tropical Storm "Vinta" (Tembin) as of 28 December 2017, 2 a.m..

<sup>15</sup> Fernandez, E. (2018, January 5). 'Vinta' destroys p152-m crops in Lanao sur - Philippine News Agency. Philippine News Agency. <https://www.pna.gov.ph/articles/1020636>.

<sup>16</sup> Sarmiento, B. S. (2021, December 22). 130,000 Individuals in Bangsamoro Region Affected by Floods Caused by 'Odette.' Retrieved from <https://www.mindanews.com/top-stories/2021/12/130000-individuals-in-bangsamoro-region-affected-by-floods-caused-by-odette/>.

<sup>17</sup> Fernandez, E. (2022, October 31). Paeng death toll in BARMM rises to 51, 14 others missing. Philippine News Agency. <https://www.pna.gov.ph/articles/1187462>.

<sup>18</sup> JICA (Ed.). (2016). (rep.). Comprehensive Capacity Development Project for the Bangsamoro Development Plan for the Bangsamoro Final Report . Japan International Cooperation Agency (JICA).

these provinces are also not spared. Aside from floods, strong winds trigger storm surges that destroy infrastructure, similar to the effect of a tsunami.

In discussions with residents of Marawi City in Lanao Del Sur, they identified the communities near the Matling, Taraka and Madalum rivers as most vulnerable to displacement from flooding. Participants reflected on their experiences evacuating to higher ground during severe rainfall as the river overflowed. There is a common understanding by community members that the flooding is attributed to quarrying and/or illegal logging activities in nearby forests and mountains.

*“...the overflow in Maitling river is due to quarrying and illegal logging in parts of (barangay) Marogong and upper Malabang.”*

*“...in Maguing it is illegal logging in Wao and in the boundary of Maguing and Amai Manabilang that causes the river in our area to overflow.”*

*“...during a severe rainfall, the river water flows in a different direction and not through Rakotan River which is the usual route, and inundates the areas along its path. That's because of illegal logging.”*

In Maguindanao, community members reflected on increased flooding in areas where, historically, it was less common. These include the communities of Koshiong, Talayan, Upi, Parang, and Malabang. Both Koshiong and Talayan are surrounded by mountains and the sea, exposing them to multiple hazards during severe storms and typhoons. They also observed that landslides have occurred more frequently, and like their counterparts in Lanao Del Sur, they attribute this phenomenon to illegal logging activities, in addition to the conversion of their forests into plantations. These observations coincided with the results of the study conducted by the Japan International Cooperation Agency (JICA)<sup>19</sup> where communities surrounding the Rio Grande de Mindanao or the Mindanao River are often the most affected by flooding and landslides. When water levels rise in Cagayan and Bukidnon, the Pulangi Dam near Bukidnon province is opened, leading to a rush of water that flows downstream to the Rio Grande de Mindanao, and causes extensive flooding in various areas of Maguindanao.

The research found that mining activities in Bukidnon was one of the causes identified by residents for more frequent flooding in Pagalungan, with recent flood levels surpassing previous records. Additionally, the Rio Grande has become shallower over time, exacerbating the flooding situation. The reduced depth of the

river means that formerly elevated areas are now flooded when the river overflows.

While residents mentioned that siltation is a potential cause for the shallow depth of the river, the research suggests that multiple factors contribute to this phenomenon. The indiscriminate dumping of garbage into the river and abnormally heavy rainfall are also identified as potential factors that contribute to the river's propensity to overflow. Overall, the results highlight the complex interplay of factors that have led to frequent flooding in Maguindanao. **The combination of upstream water releases, contamination from agricultural practices, mining activities, and alterations in the river's depth and course have collectively contributed to the significant challenges faced by the local communities in dealing with recurrent floods.**

These sentiments are also common in the communities in the Special Geographic Areas (SGA) of the BARMM. More frequent flooding was found to have severe consequences for the region. Fishing areas along the Rio Grande de Mindanao have disappeared due to floods, and the quality of water has significantly deteriorated. A participant in Maguindanao mentioned that,

*“...a lot of the fish also have a foul taste because of the chemicals that are mixed in the waters around here.”*

Additionally, the riverbed soil, once black, has turned red. One significant impact of the flooding is the alteration of the river's course. The previously known cut-off channel, Tungul bridge, used to have black and sandy soil, and served as a popular swimming spot in the 1990s. However, during floods, the surface of the cut-off channel turns red, carrying mud and adversely affecting the fish population. According to the Ministry of Agriculture, Fisheries, and Agrarian Reform (MAFAR), fishing marshes in Barangay Cudal in Pagalungan, were deemed unsafe to set Tilapia nets because of unhealthy water conditions.

A commander from the Bangsamoro Islamic Armed Forces (BIAF) reflected on the flooding in Pikit,

*“...back then, there were a lot of fishes that surfaced when there was a flood. We earn some income every time this happens. It was a blessing for us. The water also does not remain stagnant. The floods began to rise higher around 2017, reaching even up to the elevated ground. Now, we will be lucky if we catch any fish. The ones we manage to catch are very thin and they are usually contaminated with pesticides since the flood water that comes down here is from Cagayan de Oro and Bukidnon, north of Maguindanao, where there are many commercial plantations.”*

<sup>19</sup> Ibid.



The stagnation of flood water is becoming a common occurrence in the SGA communities. Discussion participants recalled that Barangays Inog-og, Kudal, and Bago Inged used to have higher grounds for planting rice during the rainy season and corn during the summer months in the 1990s. However, this changed when the Pulangi River started overflowing and flooded these barangays. Pulangi River is one of the major tributaries of the Rio Grande de Mindanao and Pulangi is the longest river in Mindanao.<sup>20</sup> These areas remain flooded, forcing its population to either relocate or adapt.

With prolonged flooding in their communities, participants across Lanao del Sur, Maguindanao and SGA have similarly observed that their regular sources of water, most likely a deep well or spring, have become contaminated and unsafe for consumption or use. Consequently, diseases such as skin allergies, diarrhea and rabies are becoming common among community members.

**Drought is another environmental risk that is gradually permeating the mainland provinces of the BARMM.** Participants observed that the summer months have become either hotter or longer than usual. Most farmers and fishermen in the BARMM still rely on traditional methods to time their production and harvests; however, they attest that these methods have increasingly become unreliable with less predictable weather patterns. A farmer from the SGA reflected on the environmental changes he observed during a warm day,

*“...when it is a hot day there are land fumes coming from the ground, even during the night. This is causing so much evaporation in the soil and then there are trees or plants that just burn. I think they dry from too much heat.”*

In Sulu, the department head of the Provincial Disaster Risk Reduction Management Office (PDRMO), Julkipli Ahijun Jr., recounted their experience with drought in November 2021, in the Municipality of Pata.

*“...the mayor announced a state of calamity because the deep wells and rivers dried for a long time. The residents of Pata had to go to neighboring municipalities to get water. Fortunately, agriculture was not severely affected.”*

**These combined risks, from flooding to drought, have also affected the ecosystem of trees in these areas.** According to the participants in Lanao Del Sur, both old and new fruit trees, such as the lansones trees which protect lowland crops against strong winds and rainfall, are either dying or producing very low yields. As a result, farmers and landlords cut and sell these trees to

recoup their income. However, with the loss of these trees, communities are left without protection from strong winds and rainfall. A similar story in Maguindanao also reflects this situation.

*“...around seven years ago, Talitay households can still plant bananas because these could withstand being half submerged in stagnant water. Bananas are the people’s main survival fare because they could harvest them after seven days. Even the residents in Pagalungan, especially those living beside the Pulangi River, planted bananas. But the bananas have become stunted and did not produce fruits. The same happened to coconut trees which can no longer bear nuts because of the stagnant water. The owners had to cut down the underdeveloped coconut trees and sell the wood as lumber.”*

**Another significant risk stemming from drought and flooding in the mainland provinces is the emergence of dry land.** Dry lands are emerging in areas where a river has changed course or marshlands have died, especially the Liguasan Marsh. The Liguasan Marsh is located between the borders of the provinces of Maguindanao, North Cotabato, and Sultan Kudarat in Central Mindanao and is the biggest wetland in the Philippines with a total land area of 220,000 hectares. The marsh is a haven for various species of fish and birds and a source of livelihood for over 278,000 families. According to Parliament Member Ali B. Sangki, the marsh has untapped potential as an economic source as it is reportedly rich in natural gas deposits. Recently, portions of Liguasan marsh have dried up, in turn, affecting fishing activities and crops. A key informant in Pagalungan recalled that, except for Barangay Sambulawan, the entire area of Datu Salibo used to be a marshland. Most of Datu Salibo has now been converted into rice fields.

*“...in Barangay Tee and neighboring barangays, large areas of solid land emerged due to accumulated siltation over the years. Previously, these lands would only become visible during extended periods of El Niño, but they have now become permanently exposed.”*

#### **Sea Level Rise and Biodiversity Changes in the Islands** **Stories from Basilan, Sulu and Tawi-Tawi**

The incidence of typhoons and storms is lower in the island provinces of the BARMM compared to the mainland provinces.<sup>21</sup> While communities scattered across these low-lying islands face a different set of environmental risks, the consequences for communities and their livelihoods are similar to those experienced on the mainland. Firstly, these communities are

<sup>20</sup> Kimutai, K. (2019). Retrieved from <https://www.worldatlas.com/articles/longest-rivers-in-the-philippines.html>.

<sup>21</sup> JICA (Ed.). (2016). (rep.). Comprehensive Capacity Development Project for the Bangsamoro Development Plan for the Bangsamoro Final Report. Japan International Cooperation Agency (JICA).



Corn fields submerged in stagnant flood waters. © Mindanao Peoples Caucus 2023

mostly situated in coastal areas and are directly exposed to the Sulu Sea. For centuries, the local population, particularly the indigenous people of Sama Badjaos and Tausugs, have lived in stilt houses built over seabeds or nipa huts along the coasts. Even the more modern and concrete homes are still located within a few kilometers of the coast.

Accordingly, the main sources of livelihoods in Basilan, Sulu, and Tawi-Tawi are dependent on the produce of the sea. In 2007, however, Sulu was ranked as the province most vulnerable to an increase in sea level based on land area, potentially displacing communities, damaging infrastructure, and affecting livelihoods.<sup>22</sup> Further, Tawi-Tawi is in a region with an average 8 mm/year rate of sea level rise, according to analyses of sea level changes in the Philippines between 1993 and 2009.<sup>23</sup> More recently, Dr. Laura

David of the University of the Philippines Marine Science Institute identified Sulu and Tawi-Tawi as among the provinces that will likely be exposed to extreme effects of rising sea levels. **The increase in sea level has been identified by island communities as the common denominator that has resulted in flooding, contamination of land resources, and disease infestation. This has left local populations at a high risk of displacement with no options for relocation.**

Despite being a majority Muslim population, participants in Tawi-Tawi reflected on one of the most devastating Christmas celebrations they experienced in 2022:

*“...last December 24 to 25, around 20 houses were washed out because of the sea level rise, including ours. We couldn’t*

<sup>22</sup> ‘Maps show RP on road to climate change catastrophe’, Greenpeace Philippines, 3 April 2007, [https://www.greenpeace.org/philippines/story/1327/maps-show-rp-on-road-to-climate-change-catastrophe/#:~:text=Sulu%20ranks%20first%20as%20the,inundate%207%2C972.83%20hectares%20of%20land,\(accessed 22 June 2023\).](https://www.greenpeace.org/philippines/story/1327/maps-show-rp-on-road-to-climate-change-catastrophe/#:~:text=Sulu%20ranks%20first%20as%20the,inundate%207%2C972.83%20hectares%20of%20land,(accessed 22 June 2023).)

<sup>23</sup> Burias, Dahlia P. et. al. (2021), “Climate change vulnerability assessment of islands in Tawi-Tawi, Southwestern Philippines” (unpublished) as cited in AFB.PPRC .29.23 Proposal-for-Philippines-1.pdf (adaptation-fund.org)

*bring anything because of fear. The waves were so strong and sudden. The sea level was really high during that time that it reached the trees. The trees died because the sea waters reached them. The sea level rise is really a puzzle to us.”*

*“...our house has never been reached by the water in the past. When the sea level started rising, it all went inside all the corners of our house and it damaged all our appliances because they were all wet from the salt water.”*

The same was experienced by the participants in Basilan during the same period:

*“...my neighbors helped me tie down our house or else it will get destroyed by the strong winds and waves. The sea level was very high and everyone in the community was really afraid.”*

*“...the rain was too strong, and the sea water reached our house. I remember clearly because we were sleeping, and the water reached our bed! All our things got wet. We can't do anything but evacuate. The women and children went to the Barangay Hall and the men stayed to look after the house.”*

In Sulu, participants have observed that the rise in sea level often comes with bigger waves and stronger winds which often destroy their seaweed farms and dryers. **In addition to the destruction of local homes and livelihoods, participants from the three provinces also highlighted the garbage piles and debris that are washed up in their communities.** Director of the Environment Management Services (EMS) Jalani M. Pamlian of the Ministry of Environment, Natural Resources, and Energy (MENRE) also noted concerns over the change in water bodies due to the improper waste disposal. A participant in Basilan recalled:

*“...our area is one of the lowest in the city. Whenever it rains it will surely flood because the water, garbage and debris wood from other communities are stuck here. After the floods, we are left to clean all of it.”*

The infiltration of sea water in the soil has also led to drastic changes in the ecosystem of communities. This includes the **loss of native trees and amalgamation of wildlife in human habitats**, common occurrences reported by participants from the three provinces. In Sulu, the native trees have died from too much heat and higher sea levels, while in Tawi-Tawi, vegetation has similarly been affected.

*“...we used to live beside the sea in 2020, but we transferred to the plains far from the sea. We consider the stunted growth of our cassava and vegetables to be an impact of climate change.”*

*“...the Talisay trees back then were teeming with life, and the leaves were beautiful and gives shade to the coastal homes. But the trees here don't have leaves anymore because the sea water reaches them.”*

In Tawi-Tawi, higher sea levels have prompted the local government to build a bridge in the community. This has resulted, however, in an unexpected consequence.

*“...there are now crocodiles near our residences because their former habitats were destroyed. We haven't seen crocodiles here before the bridge was constructed. But we see them roaming freely in our streets nowadays. We are concerned for the safety of our children.”*

In addition to sea level rise, emerging issues such as warming sea temperature need to be further examined alongside scientific data. The communities in Tawi-Tawi and Sulu have highly attributed the warm sea temperatures to the spread of diseases in their seaweed farms, the main industry of the island provinces. One of the most common problems is the “ice-ice” disease which forms in seaweed tissues resulting in bleached thallus, turning them white and ultimately killing them.<sup>24</sup> Community members in Sulu are now using commercial fertilizers to prevent disease spread, especially in Luuk, Panamaw and Omar municipalities. According to a local civil society advocate and professor in Tawi-Tawi:

*“...entire farms get destroyed whenever this happens. The destruction has spared no seedling to use for another farming cycle. They would have to get seeds from other farms to replant... They have to find new locations because their farms were washed out. That's another challenge. If their areas have shown signs of 'ice-ice' formation, they must move because they cannot replant in the same area -and it's hard to move out to another location with so many farmers struggling to secure their sites, just like fighting over land areas. Where can they go if they cannot use their seaweed farms? Hence, the challenges.”*

Eddie Alih, Parliament Member from Tawi-Tawi, added that production has gradually decreased due to climate change impacts, changes in farming practices, and competition with Indonesian seaweed production.

<sup>24</sup> Tahluddin, A., Terzi, E. (2021). Ice-ice disease in commercially cultivated seaweeds *Kappaphycus* spp. and *Eucheuma* spp.: A review on the causes, occurrence, and control measures. *Marine Science and Technology Bulletin*, 10(3), 234-243.





Left photo: Seaweed with Ice-Ice disease. Right photo: Healthy seaweed. © Mindanao Peoples Caucus 2023

*“...efforts are being made to enhance the value and competitiveness of seaweed products. The farmers also used fertilizers wrapped around plastic and tied to the seaweed. They soak it in fertilizers before planting it in the seas. And it changed the seaweed's quality. Though we still have the best seaweeds here in Tawi-Tawi compared to Indonesia. Indonesia started seaweed farming because it saw its potential. Although Indonesia contributes to the world's seaweed production, exporters stay in Tawi-Tawi because we have the best seaweed.”*

In Sulu, participants reflected on similar consequences of urbanization on the decreasing quality of seaweed.

*“...in 2019, there was a huge reclamation project to develop a port in our area. They destroyed the corals and it altered the direction of the water flow. We noticed that the water around the port became dirty, murkier, and filled with black oil. In these conditions, it is no longer suitable to cultivate seaweeds.”*

In summary, both the mainland and island provinces of the BARMM have experienced the gradually increasing impact of environmental degradation, climate change, and urbanization on their communities. While climate change is a key factor in environmental degradation, it is also important to note that human interaction with the environment is another factor which, when combined with climate change, leads to displacement in the BARMM. By identifying environmental risks, participants were able to understand and establish its link with conflict and mobility - both historically and currently emerging in the region. While the triggers vary - from violent storms in Maguindanao and Lanao Del Sur to rising sea levels in Basilan, Sulu and Tawi-Tawi - the consequences are strikingly similar, i.e., flooding, ecosystems changes, and loss of shelter and livelihoods. The next chapter will discuss the impacts on the socio-economic situation of these communities.



## SOCIOECONOMIC IMPLICATIONS OF THE ENVIRONMENTAL RISKS

The environmental risks discussed in the previous chapter are interconnected with the Bangsamoro region's developing economy. In this chapter the socioeconomic implications of the adverse effects of climate change, such as typhoons, storms, and sea level rise, will be further discussed to shed light on the livelihood strains experienced by communities - with a particular focus on agriculture and fisheries as the core facets of the BARMM economy. Furthermore, implications on informal work and shadow economies will be assessed. Finally, this section introduces the link between migration and socio-economic challenges faced by communities.

The Bangsamoro region remains a major contributor to the agriculture and aquaculture industries in the Philippines, with 57.8 per cent of the BARMM workforce engaged in the agricultural sector. This is the highest proportion of agricultural workers among all 16 regions in the country. The BARMM notably had the highest growth nationwide at 7.2 per cent in the value of production in 2021, according to the Philippines Statistics Authority (PSA), which is attributed to the increase in crops, livestock, and fishing production.

**The BARMM has a developing economy that relies heavily on natural resources through agriculture and fishing. Environmental stability in these communities is essential to continue the growth and production of critical crops in the region for food security, both for the local population and country-wide.** The main agricultural crops in BARMM are rice, corn, and coconut. Former Secretary of the Department of Agriculture Emmanuel F. Piñol recognized the strategic position of the BARMM to become the primary food producer in the Philippines, emphasizing the region's capacity for producing high-value crops i.e. Cavendish banana, pineapple, cacao, abaca, hybrid coconut, and rice from the Liguasan Marsh along the Mindanao River basin and Lake Lanao in Lanao del Sur.<sup>25</sup>

Within the BARMM provinces, the island provinces of BaSuLTa have seen a high growth in the agri-fisheries sector. A variety of quality crops are produced on these islands including durian, rubber, coffee, coconut, banana, cassava and seaweed for local consumption and international export once processed for commercial and industrial use. Sulu is a Special Area for Agricultural Development and produces coconut as the major crop (217,286 metric tons,) followed by cassava and banana. Meanwhile, fisheries production in the BARMM is concentrated

in Sulu and Tawi-Tawi. Seaweed produced in the Philippines is mostly exported and contributes to 69.17 per cent of the total value of aquaculture production in the country, to which the BARMM contributes 45 per cent.<sup>26</sup> Tawi-Tawi produces 32 per cent of the total seaweed production, the largest producer both in BARMM and the country.

**A sustainable source of income and economic prosperity remain the most important drivers for a peaceful transition and timely adaptation to climate change in BARMM communities.** This economic stability is increasingly threatened by environmental hazards experienced by communities. These risks are increasing the frequency and intensity of adverse weather events that result in the destruction of agricultural lands and decreased fisheries production.

**The typhoons and storms that bring immense flood waters to the region have affected agricultural lands and fishing grounds across the BARMM over the last decade.** In the combination of storms and heavy rainfall between March to August 2022, an average of 1,000 hectares of agricultural land have been destroyed by flooding across Maguindanao and Lanao Del Sur. Tropical Storm Paeng in October 2022 resulted in sustained agricultural loss of more than PHP 640 million, affecting 582,884 members of the local population, and 61 deaths and 17 missing. The 24 of these deaths were in the Teduray community, an indigenous Maguindanao group that was recently relocated from the coastal areas to the foothills of Mount Minandar where severe landslides occurred.<sup>27</sup> This disaster left communities with no income for months, and without productive planting and fishing grounds which further inhibited recovery. The participants in Lanao Del Sur remembered the havoc of Paeng and attribute the intensified flooding to the loss of trees in their communities.

*“...Paeng ruined our lives as farmers and fishermen here. Crops were destroyed and there was nothing to harvest, our fishermen have been confined indoors and could not fish. It was illegal logging that caused the loss of our forests which made the floods stronger and more frequent.”*

While **illegal logging, farming and mining activities contribute to environmental degradation, communities also acknowledge them as major sources of livelihoods in the BARMM.** Small-scale tree cutting is a source of extra income for coconut farmers whose trees are dying from being submerged in flood waters. However, the major actors in these industries include traditional landlords, clans, politicians and commercial companies from within and outside the BARMM. Participants recognize the major

<sup>25</sup> Galang, V. M. P. (2019). Retrieved from <https://www.bworldonline.com/editors-picks/2019/05/07/229745/bangsamoro-touted-as-major-source-of-agricultural-growth-da/>.

<sup>26</sup> Seaweed is a key raw ingredient in the increasing demand for pet food globally.

<sup>27</sup> Fernandez, D. (2022, November 10). Senate probe into relocation, Teduray landslide deaths sought | Inquirer News. INQUIRER.net. <https://newsinfo.inquirer.net/1691208/probe-on-deaths-of-24-teduray-tribe-members-due-to-alleged-forced-relocation-sought-in-senate>.



Few of the remaining wet areas of the Liguasan Marsh ©Mindanao Peoples Caucus 2023

role of these extraction activities in worsening environmental risks in their communities. This includes mining in Tawi-Tawi which leads to siltation and soil erosion, according to MP Alih.

*“...harvests were destroyed by the flooding. If this continues, then we will have nothing to eat. Floods passed by the cornfields in the mountains and this has caused landslides.”*

Participants lamented crop failures and poor harvests due to unpredictable climate conditions in the past years. Rice and corn farmers expect higher temperatures which dry their irrigation systems. The same is observed in the island provinces which rely on seaweed production. **Flood waters from upland communities and/or the sea are not healthy for soil of the crops and seaweed, which in turn slowly kills their produce. The farmers and fishermen are forced to adapt to modern farming practices, including the use of fertilizers, because of unpredictable weather patterns in their communities.**

*“...it gets too hot nowadays that the quality of our seaweeds has deteriorated. This unpredictable weather, this*

*heat and rain, prevent us from cleaning our seaweeds during daytime.”*

*“...they haven't used the traditional farming calendars anymore. Predicting rainy and dry seasons is too difficult these days. They cannot estimate. Look, it's January already, the supposed start of the dry season. They should be planting corn by now. But can you see them planting? Not at all.”*

New lands resulting from drying marshes and changes in the river course in Maguindanao have also presented new opportunities for expansion and loss of agricultural areas and settlements. The informant in Maguindanao reflects on this,

*“...Datu Salibo is fairly new, most of its communities were made from the former marshland. These areas are now used for rice and palm farming. This area was marshland covered by deep waters. This is in Barangay Tee. The water level was at least 10 feet in the place where we are standing. But now it's land surface. Although there are still marshes beyond this area.”*

*“...our lands are now deep in water, water from Buliok, Kudal, and Kabasan, parts of the Liguasan Marsh. All livelihood died when the Kulanguwan was opened.”*

The Kulanguwan is a cut-off channel or waterway constructed decades ago to divert water flow from the lower Pulangi River directly in the Liguasan Marsh in an effort to avoid flooding the nearby Municipality of Pikit. The Liguasan Marsh spans the provinces of Cotabato, Maguindanao, and Sultan Kudarat. Of its 220,000 hectares, about 300 square kilometers is a protected wetland and bird sanctuary. There are over 278,000 families living and reliant on the produce of the Liguasan Marsh. Reportedly, the Liguasan Marsh holds billions of cubic feet of natural gas and is reputedly rich in oil deposits.

In the coastal areas of Maguindanao in Barangay Seashore in Sultan Mastura, new land has emerged along the shoreline. Residents have built houses and small businesses to maximize economic gains, as the area is a local tourist destination.

Aside from agricultural issues, the fishing grounds are also heavily affected by environmental risks. “Fisherfolks” observed that the rise in the sea or water temperature has resulted in lower fish catch. The DRRM Officer of Sultan Mastura in Maguindanao, a former biologist, expanded on the phenomenon:

*“...the water quality has an implication in the number of fish caught. Irregularities in the weather affect the movement of the fish as they seek friendlier temperatures and better environments to breed. The fish will have less to feed on and will either die or migrate elsewhere if the water is too warm. This results in far less fish being caught.”*

Fisherfolks in mainland Maguindanao observed that “it was not that humid back in the old days, unlike today. The streams have become warmer.” However, fisherfolks also acknowledge the role of human activities that may have contributed to the declining fish, such as the use of illegal fishing methods. Locals complained about large vessels that use fishnets with small holes, which catch the small fish and harm or destroy coral reefs where fish breed.

*“...large-scale fishing by external vessels disrupts the catch of local fisherfolks. Massive fishing vessels from Zamboanga, and even those as far as Navotas, come to the small islands to do large-scale fishing in the municipal waters. Large-scale fishing also affected the catch of the community fisherfolks as they now had to compete over resources.”*

The local seaweed farmers in Sulu also note the declining quality and quantity of seaweed:

*“...seaweeds were still healthy from 2012 to 2017 and we could gather as much as 100,000 kilograms during harvest*

*time. These days, we could manage only about a hundred kilograms, and these are not good quality seaweeds.”*

In Talitay, Maguindanao, a barangay employee recalled fishing activities around the marsh:

*“...Barangay Talitay and Barangay Kudal are just neighbors. The roughly 20-hectare marsh area connecting the two once teemed with all sorts of fish —popoyo, aluan (catfish), balik, tilapia, lidep. We had no other source of income except fishing. But this has gradually vanished. Before, when farmers in Talitay would harvest, the people in Kudal would join them for extra income. They were welcome. But all that is gone now.”*

As environmental risks affect the agricultural and fishery sectors in the BARMM, locals especially the family members of farmers and fishermen, turn to alternative livelihood sources for daily sustenance. The most common alternative livelihoods identified include driving three-wheel motorcycle taxis or tricycles, construction work, shopkeeping, and working overseas. Participants in Jolo, Sulu reflect on their loss of income when it floods in their communities:

*“...as a motorcycle driver, I cannot drive when it floods. During Paeng, I had to swim through flooded waters to get home. We had it rough. I just rent a motorcycle, so I have no sustainable source of income. It's hard to provide for the family.”*

*“...it is difficult for me when it floods because I have to throw away my products when they get wet. I'm a single mother, and selling is my primary source of income. I don't go out when it rains because I know it will flood.”*

Participants in Maguindanao reflect on the situation of women and children who are forced to take dangerous occupations, including potential exposure to human trafficking.

*“...most of the men here have become tricycle drivers while young girls, those who are 15 to 17 years old are being trafficked. The most unfortunate thing is it is their mothers who introduce them to sex traffickers. Meanwhile, the women are compelled to work abroad. Women, especially young girls, are more ‘in demand’ and they do not need pay the placement fees. Those mothers who have opted to stay to look after their children engage in small businesses like selling local rice cakes or hawking large root crops like taro, since these thrive in the marsh and in low-lying areas. Some of the women also take to fishing with fish cages and nets, which are traditional roles for women in this area. But the catch is now leaner than before.”*



*“...there are children who had to stop going to school because the parents, whose primary source of income came from fishing, could no longer afford the child’s education. This is the primary reason for early marriages of 12 to 18 years old girls here. The children could no longer go outside and experience things because the places they go to and their activities are now limited by the political wars.”*

According to MP Alih, both internal and external migration is a response to the decrease in environmental resources and livelihood opportunities in Tawi-Tawi. People migrate to mining communities or to Sabah in search of better livelihoods, believing they can earn higher incomes particularly in palm oil plantations. A female seaweed farmer in Tawi-Tawi expressed her sadness in losing her coworkers to foreign employers:

*“...many of her co-workers have left to seek work elsewhere. Others allegedly have gotten into the illegal drugs business. We used to be over a thousand people here. Now we are down to 15 families. This loss of a sense of community and solidarity has left a heavy burden on the other seaweed farmers who have stayed on.”*

All participants cited poverty as a reason for family members to seek employment overseas, especially women. A professor from Mindanao State University shared that Meranaos, the people from Lanao Del Sur, leave their communities because of the decline in profitability of the agriculture and fishing industries, relocating to the urban centers of Cebu and Manila.

Socio-economic struggles stemming from the effects of environmental risks in the Bangsamoro region are widely present. The key industries in the region, agriculture and fisheries, are heavily impacted by floods from storms and rising sea levels. This results in lost livelihoods, with women and children being forced to take jobs that increase their exposure to trafficking. Most community members relocate if there is an opportunity, while some stay despite the socio-economic hardships that they face. With increasing economic instability across the BARMM, tensions and long-standing conflicts are also increasing and intensifying across the region. These manifestations of conflict and security risks will be further discussed in the following chapter.



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## CONFLICT AND SECURITY RISKS IDENTIFIED

There are multiple facets to the conflict in the BARMM. Both horizontal and vertical conflict persist including small-scale tensions in communities, clan feuds, and politically-motivated violence. The transition period remains a critical time to deliver the promises of the peace agreement and thwart the potential rise in violent conflict. With increasing socio-economic instability brought by environmental risks experienced by community members, there are notable conflict and security risks that also emerged from discussions with participants.

### Tensions within Communities and Shadow Economies

There are two factors identified by which community members are causing or engaging in violent conflicts within their communities - improper waste disposal and the emergence of shadow economies.

**Improper garbage disposal and the poor management by the local government units have caused some tensions and frustrations between community members, particularly those affected by floods.** Participants in Basilan recalled:

*“...people normally throw their garbage by the bridge or in the water, so when it rains and floods the rubbish flow out to the communities. People do not care and just throw their garbage everywhere. They don’t have ethics! At the end of the day, we have to clean up their waste.”*

*“...the garbage truck rarely goes to our community to pickup the waste, and when it rains the smell of these garbage lingers.”*

*“...we already reported this incident to the mayor. We are hoping that they can reprimand the people from the other barangays and not allow the dumping of garbage wherever they like. We also hope the garbage truck comes everyday.”*

Aside from consumer garbage, the main concern for one community leader interviewed in Basilan is natural debris such as bamboos and trees from illegal logging activities that pile up near the local bridge in his community.



Tons of bamboo debris stuck on a bridge after heavy rainfall.

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*“...Our barangay is the boundary of Isabela City, Lantawan and Tipu-Tipu. The lower-ground barangays are mainly affected by the waste issue because of the water coming from high areas. Our footbridge is already giving up from all the debris and strong current. Barangay Matibay is sloping towards the sea, so the waves are strong here. The bamboo waste here can easily fill a hundred trucks. I personally pay for the removal of this debris. I hire local divers as well for PHP 300 per day to clean the bridge.”*

In Jolo, Sulu, community members also share similar concerns about improper waste disposal and tensions arising from it.

*“...I was in an argument with a neighbor because my son happened to clean parts of his backyard. My son was nice and started cleaning our lawn, but he saw more garbage on my neighbor's lawn and started cleaning his side. My neighbor chased him down, he was so scared and ran to me. I confronted the man and told him my son was simply being nice because he didn't want the garbage to rot. But the man insisted that he wanted his privacy and won't let anyone lurking on his lawn. I haven't talked with the man since then, and even his wife wasn't friendly with me. We didn't report this matter to the Barangay because I didn't want it to escalate.”*

*“...I was cooking banana chips when a neighbor threw garbage at my kitchen. It was raining hard, and it annoyed me. I just threw it out myself because I didn't want to be in an argument with the neighbor.”*

*“...I reported the person who was throwing the garbage in my area to the barangay captain. I was so mad I almost attacked the person. The barangay captain reprimanded him.”*

Meanwhile, lack of socio-economic opportunities in the BARMM has resulted in dangerous shadow economies, including guns-for-hire. This increasing industry is made easier by the prevalence of illegal drugs, firearms, and improvised bombs in many households.

*“...the people resort to crimes because there is no food to feed their families. Men seek work as hired killers, putting their lives at risk in the employ of politicians and families involved in clan feuds. One head normally costs PHP 5,000. It used to be PHP 20,000 but these days, a gun-for-hire would be fine with PHP 5,000 for a single kill. Guns for hire do not need capital, unlike farming. They can easily borrow guns from relatives.”*

The proliferation of small and light weapons (SALV) across BARMM communities has been a constant struggle for institutions that regulate peace and order in the region.

Ownership of these weapons has been embedded traditionally, as a form of personal protection and safety measure, for decades.<sup>28</sup> It is also alarming that there is no latest information reporting the amount of SALWs in BARMM. Estimates from the Philippine National Police and the monitoring of International Alert in 2014<sup>29</sup> suggest that BARMM holds 32 per cent of the almost 500,000 civilian licensed and unlicensed firearms in Mindanao. Additionally, 33 per cent of the approximately 15,640 firearms in the region are possessed by threat groups and 28 per cent of the 4,980 firearms are held by criminal groups. The MILF alone is estimated to have between 11,000 and 15,000 firearms, not including those owned by relatives and allies at the community level that are often used during conflicts.

There are still concerns that need to be further studied in relation to the shadow economies and increasing tensions in the communities of the region. The relationship of powerful clans, who act as local powerbrokers, is particularly critical to study as they may view the peace process as a threat to their political legitimacy and authority. These clans, who oftentimes have control over the political office, private armies, and shadow economies, may become peace spoilers if the peace process disrupts their sources of economic and political resources.

#### Clan Feuds: Families Out for Blood and Honor

Clan feuding, or locally known as “rido”, is a type of conflict characterized by sporadic outbursts of retaliatory violence between families and kinship groups, which can expand into conflicts between communities. Rido may interplay with other forms of conflicts that are ongoing in communities and can escalate to more complex violence. *Rido has been identified by participants as a key driver of displacement and destruction of natural resources in their communities, since many of these clans are also engaged in resource extraction activities. Common sources of rido incidents involve disputes over land claims, illegal logging, mining, and elections. While rido is not a common occurrence in the islands, participants from Maguindanao and Lanao Del Sur have similar concerns and experiences in relation to rido.*

In Maguindanao, one participant suggested that displacement from floods is closely linked to the dynamics of conflicting families in their communities. This is especially evident when villagers displaced by unabated flooding fail to get assistance from political opponents, resulting in deepened resentment and further clan divisions which have turned violent on multiple occasions. In mainland Maguindanao, a total of 269 clan feuds

were recorded from 2011 to 2019 according to the MILF. One of these rido is a land conflict in the municipality of Pagalungan:

*“...Rido has really cleaved the relationships of people in the communities here. It began with families or clans supporting rival political groups at the barangay and mayoral/municipal levels, particularly when elections are just around the corner. That’s when tension runs high around here and remains high even after the elections. Apart from verbal confrontations, shooting incidents are common.”*

*During emergency evacuations in a typhoon or storm, security risks have multiplied because of the lack of climate change mitigation practices.* Community members of Maguindanao particularly emphasized the dangers of having warring clan members in the same space.

*“We instead focus on conflicts alone. But we need to see that the shrinking of lands and flooding trigger conflict. There are times when the flooding forced people to evacuate to a place where they encountered their enemies. The evacuation sites do not separate those involved in rido and those who are not.”*

According to Mindanao State University (MSU) professor Abdullah, Meranaos not only leave their communities for greater economic opportunities, but also because they are involved in a rido. For those involved in rido in Lanao Del Sur, people migrate to Marawi City or occupy lands owned by the MSU-Marawi City Campus. Participants from Lanao Del Sur mention the story of Madalum and Malabang:

*“...the rido in the municipality forced its residents to leave and relocate to Marawi City which is almost 30 kilometers away. There was even a barangay that was nearly totally deserted because of the fighting.”*

*“...the families here fought over the extraction of black sand for commercial use. Because of the series of killings from the rido, the whole of Malabang is almost like a ghost town before nightfall.”*

#### Blurred Lines: Armed Conflict over Territories

Conflict over resources is a main trigger for all forms of armed conflict and clan feuds in the BARMM. These resources are often tied to land issues and socio-economic stability that determine the dominant power dynamics in communities. A participant

<sup>28</sup> Maitem, J., & Riñoza, J. (2022). Peace monitor: Weapons proliferate in Mindanao despite decommissioning process. Benar News. <https://www.benarnews.org/english/news/philippine/weapons-proliferate-07292022151306.html>.

<sup>29</sup> Policy Brief: Getting Rid of Illegal Guns Engineering a Peaceful Transition in the Bangsamoro. (2014, April). International Alert. <https://www.international-alert.org/wp-content/uploads/2021/08/Philippines-Illegal-Guns-EN-2014.pdf>.

from Marawi City explains the dynamics of land ownership in the region prior to the current laws:

*“...the issues on ancestral domains or locally called kawali are the main factor for rido here. The elders of the clan traditionally divide the lands among his children. In the old days, there were no land titles or official documents, and this is where the confusion on ownership in today’s time begins. During the division of inheritance some family members will use force. In Madalum, there is a council of traditional leaders which help settle the issues.”*

In Special Geographic Area of BARMM, there are still several communities exposed to armed conflict over land issues. For instance, community members attest that land claims have grown into a complex web of political, economic, and personal issues over time. Furthermore, environmental risks, - particularly flooding - act as catalysts for both armed conflict and forced displacement. Rising floodwaters necessitate community relocations, compelling them to traverse through areas controlled by conflicting factions which further aggravates their displacement and socio-economic situation. The intricate interplay between environmental risks, conflict, and the movement of villagers to avoid conflict is best illustrated by a community caught in a dispute between two commanders.

#### Commander Juan vs Commander Pedro vs Barangay Captain

In 2015, Commander Juan’s<sup>30</sup> forces established encampments near the Rio Grande Mindanao, while Commander Pedro’s territory is located across the river. As the swelling Rio Grande necessitated the relocation of Juan’s army to higher ground, they had to cross the river and pass Commander Pedro’s camp. To notify Pedro’s army about their crossing, Juan’s men resorted to throwing grenades. However, complications arose as the barangay captain was also an enemy of Juan. Upon learning about the crossing, the barangay captain prepared his group for a shootout, resulting in armed conflict. This tension among the three still persists until today.

To prevent further accidental encounters with civilians, a government task force led by the Coordinating Committee on the Cessation of Hostilities-Ad Hoc Joint Action Group (CCCH-AHJAG) helped establish a camp called New Talitay at the boundary of Barangay Rajah Muda and Talitay. For the residents of Talitay and Rajah Muda, the occurrence of flooding served as a dual signal: the imminent armed conflict involving the forces of Commander Pedro, Commander Juan, and Captain Teng, and the urgent need to evacuate. Most residents of these barangays

had to evacuate, except in cases where the floodwaters were too deep or when the provincial highway became impassable.



Combatants crossing the shallow areas of the Liguasan Marsh  
© Mindanao Peoples Caucus 2023

For community members, many viewed the evacuations in an area with ongoing conflict as unorganized and worse than the impact of the actual flooding. In addition, many of the designated evacuation areas were also flooded i.e. Barangay Inug-ug. This issue, where evacuation centers are situated in low-lying areas, is acknowledged in municipal disaster risk reduction management plans (MDRRMPs) and local climate change action plans (LCCAPs).

There is other "safe areas," located several kilometers away from Talitay and Rajah Muda where residents are compelled to go during flooding and ongoing gunfights. There have been tragic incidents of drowning recorded, including two minors.<sup>31</sup> In Gli-Gli, the evacuation site for approximately 400 families from Talitay and Rajah Muda, community members also continue to be displaced especially when Commander Juan’s troops approach Gli-Gli, and the fighting shifts to that location.

**The combined impact of environmental risks and conflict not only prompts families to abandon their homes but it can also disrupt livelihoods and social structures. Displaced individuals face additional challenges when seeking refuge in designated**

<sup>30</sup> True names in this story have been replaced by a generic identifier.

<sup>31</sup> Unson, J. (2021, November 19). 2 kids drown in Maguindanao, Northern Cotabato flashfloods. Philstar.com. <https://philstar.com/nation/2021/11/20/2142525/2-kids-drown-maguindanao-northern-cotabato-flashfloods>.



evacuation areas that are susceptible to flooding or become new battlegrounds for an existing conflict.

Displaced families typically spend a minimum of two days in evacuation sites before the Ad Hoc Joint Action Group (AHJAG) and the Coordinating Committee on the Cessation of Hostilities (CCCH) intervenes. These groups facilitate a temporary ceasefire between conflicting parties, mobilize the task force, and encourage residents to return to their respective barangays. Although many evacuees comply, those near the areas of the task force organized by AHJAG and CCCH are hesitating to return, fearing renewed conflict between Commander Juan and his adversaries. It can take up to 20 days for them to finally feel secure enough to return to their barangays.

The combination of frequent flooding and ensuing fighting has compelled some families to permanently abandon their homes, with some individuals opting to seek employment abroad. However, men are unable to apply for work abroad as they are pursued and prevented from leaving by members of the armed groups. Notably, Commander Juan himself relocated to another place in Dunguan, a coastal town, triggering a new conflict due to rising water levels.

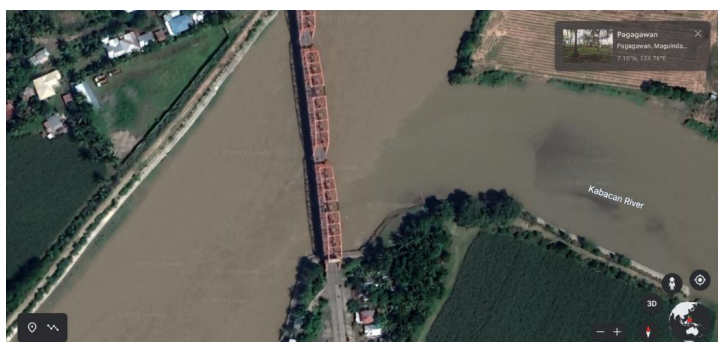
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### Rivers and Marshlands

The sprawling of new land areas in Maguindanao due to changes in the river courses and drying of the marshlands have similar impacts on the communities of Special Geographic Area of BARMM. The director of the Peace Security, Reconciliation Office (PSRO), Anwar Alamada, confirmed that the **existing armed conflict around riverside communities is interlinked with the changes of the river's course.**

*“...the communities of Montawal and Pagalungan are divided by the Pulangi river. These are the conflicts we constantly reconcile in that area, especially land conflict issues because of the changes in the river. There used to be water near Kulawan bridge so now new lands are available. People living around this area can no longer recognize their land or property boundaries around the river. Some resorted to invariably claiming land boundaries. Officially, they cannot apply for land titles because it is a swamp. Several claimants fight over the properties. Obviously, the claimants choose the side that can be useful for them especially the arable lands.”*



Left photo: Original Kabacan Bridge to connect communities on both sides of the river in 1996.



Right photo: New Kabacan Bridge was built when the river started to expand.

In contrast, there are communities that have been flooded and became the new waterway of the Pulangi River. As discussed under the chapter on environmental risks, permanent flooding has caused displacement and loss of land for agriculture. This has

subsequently triggered tensions between communities that have been displaced and the host communities.

*“...people don't respect each other, and they scramble to appropriate for themselves with the remaining elevated*



areas. The native residents of Pagalungan had to transfer and set up shelters beside the provincial road which was slightly higher than the surrounding land. But parcels of these lands beside the road have already been occupied and displaced residents had to look for settlements elsewhere while those who could not find any of such land had to move in with their relatives from other communities. In most cases, the locals are forced to resettle in areas where they have conflict with. It's a lose-lose situation because there is practically no higher ground left."

The same sentiment is shared by community members in nearby town of Pikit, who emphasize that evacuation sites do not separate displaced people involved in a rido and from those who are not. This is an important factor to consider in disaster response, particularly areas where new territories are formed and others are diminished, such as around the Liguasan Marsh. Under Philippine law, marshlands cannot be titled. Community members highlighted a situation in Datu Salibo in Maguindanao that illustrates the interlinkage between the environmental risks, conflict, and human mobility.



The green areas are marshes or wetlands and the thick brown line is an artificial river that formed as a result of the floods.

The evacuation in 2008, resulting from conflicts during the abolition of Memorandum of Agreement-Ancestral Domain (MOA-AD), led to the abandonment of Barangay Tee. Approximately one hundred families resettled in Pagatin. The Armed Forces of the Philippines (AFP) established a detachment in Barangay Tee to prevent any claims by extremist groups. Although some residents returned briefly in 2014, clashes between the anti-government Bangsamoro Islamic Freedom Fighters (BIFF) and the AFP in 2017 further hindered their permanent return.

The residents of Barangay Tee do not possess land titles but rely on copies of surveys or sketch plans to support their claims. One major challenge they face is determining the exact boundaries of their properties or the location of land markers. This issue is relatively new and often leads to conflicts among residents who have different recollections or disagreements about their land boundaries. A recent incident nearly escalated

into a gunfight involving two parties from members of the Moro Islamic Liberation Front (MILF), and the civilian residents. Both are claiming different parts of the contested area within Barangay Tee. Due to the power imbalance and firearms possession of the MILF member, the other claimant felt threatened and invited the interviewee as a witness during the mediation.

Both parties hired surveyors to identify the land boundaries, and concrete posts were placed as demarcation markers. However, the markers were later discovered destroyed. During the mediation process, the land surveyor was summoned, and both camps were asked to present their documents or records to prove land ownership or property boundaries. Although the MILF claimant initially rejected the survey results, the mediation ended with an agreement from the MILF camp to accept the survey and install new concrete markers as boundary indicators.



Norodin Guimaludin measures the extent of land boundaries of the two competing parties. © Mindanao Peoples Caucus 2023

Apart from farming and weaving, some residents of Barangay Tee engage in other livelihoods since many now live outside the barangay. Opportunities for resettlement arise when residents of neighboring barangays sell their properties per lot, attracting people from Tee to seize these chances. However, conflicts arise when lots are purchased by some settlers while others are forced to vacate due to financial constraints.



Ongoing marsh reclamation project of LGU Datu Salibo. Marshes were covered with landfills to create roads. Beside are residential lots sold to the settlers from Brgy. Tee. © Mindanao Peoples Caucus 2023

Moreover, the major livelihood in the marsh is fishing and locals have started to adopt new rules to avoid major conflicts in the area. Growing competition for resources, food and economic security can trigger tension and conflict in fishery-dependent communities. **Recognized drivers of conflict include competition for coastlines and marsh areas still teeming with fish, stagnating and declining catch, illegal and unreported**

**fishing and related attempts at enforcement especially by huge fishing vessel owners, and contested maritime boundaries.**

It was reportedly in 2003 when the residents of Barangay Tee observed a significant transformation in their marshland barangay, when large portions of the marsh began to dry up. This created extensive areas of dry land from silt accumulation. Previously, dry land would only emerge during prolonged periods of drought. The occurrence of frequent rains led to significant surface runoff and soil erosion, depositing mud, sand, silt, and other debris into the marshes of Datu Salibo. Over time, the build-up of sediment caused the once deep wetlands to become shallow. Consequently, various fish species that thrived in the marshes gradually declined and eventually disappeared. As a result, many fishermen relocated to Kabuntalan, located approximately 45.2 kilometers northwest of Datu Salibo.

In recent times, there has been a noticeable change in the relationship between migrants from Barangay Tee and the supposed "owners" of the marshlands in Kabuntalan. The fishermen from Tee and other barangays along the highway now face limitations on their fishing activities. It is reported that Kabuntalan residents have implemented new rules for fishing in the marshes. They have marked their properties in the marshes, requiring non-Kabuntalan fishermen to seek permission before fishing in those areas. Additionally, there are restrictions on the fishing methods allowed.

One of the previously common fishing methods, known as "tarik" or use of round nets, is now prohibited in certain marsh areas. Fishermen would use coconut meat as bait and leave their tarik in specific spots in the marshes for extended periods of time usually around a year. Fishermen are only allowed in designated fishing areas and are required to ask for permission, otherwise they are restricted to fishing with hooks or less-efficient nets. The fishermen visit their tarik every few days to harvest, and their nets can last for 1-3 years, depending on the fisherman's skill.



Traditional such as putting up of Tarik are no longer allowed in the marsh. Fishermen would have to settle with using hooks and nets.

© Mindanao Peoples Caucus 2023



The influx of residents from Tee and neighboring barangays has caused pressure on the marsh "controllers" in Kabuntalan, who view the newcomers as competitors for resources as well as violators of cultural protocols. The increased population and diminishing availability of productive land and resources have led to open grievances and a need for new rules. The informant highlights to the interviewee that poverty is a main factor for the increased tension, particularly when Kabuntalan residents witness outsiders benefiting from their properties and improving their lives.

The informant emphasizes to the interviewee that the outsiders failed to request permission and further fueling the tension. When caught by the Kabuntalan residents, the fish cages are being forcibly removed from the migrant fishermen. The informant further cautions interviewee about the prevalence of firearms in each household, which they claim are for security purposes. While protocols exist to regulate access to the marsh areas, some fishermen disregard these and enter without permission. This behavior hurts the pride of the marshland "owners," who view themselves as custodians of these wetlands and take pride in their responsibility.

The concept of datu-ism, where power over resources is wielded by the marsh "stewards," plays a significant role in these dynamics. This concept stems from ancestral traditions and continues to prevail among the Bangsamoro people. When outsiders breach or disrespect their established protocols, it is seen as belittling and hurts their sense of pride. Hurtful words exchanged between the fishermen and the marsh "owners" further exacerbate tensions. Errors in communication weaken the communities' relationships. The observance of protocols is crucial for maintaining harmony, as it ensures respect for the established rules and practices within the community.

The displaced communities of Sulu and Tawi-Tawi are also familiar with these dynamics. Professor Tikmasan from Tawi-Tawi reflects on the experiences of seaweed farmers who are forced to move from one site to the next, because they cannot replant in the same areas infested by ice-ice. It is particularly difficult to secure another location when so many other seaweed farmers have the same problem.

*"...more seaweed farmers are now looking for areas which are more suitable for seaweed farming. There is a pondohan, a makeshift structure where around 15 seaweed farmers stay while watching over their seaweed farm in Tawi-Tawi. The pondohans are named after the places of origin of the seaweed farmer groups, there is Talipao pondohan from Sulu another one called Basilan. This illustrates the movement of people in search of more productive sites for their livelihood. Farmers can establish a pondohan in areas where there is no official claimant, or areas that are not yet affected by 'ice-ice'. The main*

*question is, are there still available free spaces in the sea for everyone? There are reports that some businessmen have begun financing their own 'push-and-pull dynamics between conflict' manned by their paid farmers."*

The practice of investors establishing large-scale "pondohan" is harmful to small-scale seaweed farmers. The fungus infestation forces them to plant seedlings elsewhere, even reaching the further seas because huge private seaweed farm owners already control access to municipal waters. This makes access to essential social services more difficult, and often results in farmers borrowing money from traders in order to meet basic survival needs while waiting for harvest time.

Consequently, their displacement in Sulu exposed them to the conflict of the leaders in their host barangays leaving them with little to no assistance to ease their suffering.

*"...we are in the boundary of Barangay Tulay and Barangay Kajatian. We could not receive any help or donations because no one can say for certain to which barangay we belong. Barangay Kajatian tells us we are under the jurisdiction of Barangay Tulay. But Barangay Tulay says we are constituents of Barangay Kajatian. We have tried to report our predicament to municipal authorities and they told us to wait for the next barangay elections."*

In Sulu, the presence of the Philippine National Police Special Action Force (PNP-SAF) outpost at the port and mandatory curfew has limited the movement and productivity of seaweed farmers. Seaweed farmers clean their macroalgae at night when it is cooler. The SAF curfew and dismantling of seaweed dryers have compromised the quality of seaweed and hindered livelihood activities.

*"...we cannot clean our seaweeds during the day because it is too hot. The Philippine National Police Special Action Force (PNP-SAF) blocked the gate at the port and imposed a night curfew. The SAF has even ordered the seaweed farmers to dismantle their seaweed dryers because these obstructed the front of the SAF outpost. We reported this to the land owner but he advised us to stay calm because the SAF was there to protect us he said. This was the same response of the SAF when we asked them about their presence at the port. They also said that if we disagreed with what they were doing, we should leave."*

*"...someone cut off the hose that supplied water to the families, to force us to leave. The families who stayed on have had to walk about a kilometer to fetch clean water for their daily needs."*

The loss of livelihood of seaweed farmers has contributed to radicalization and violent extremism among the locals. In Sulu,



families of ex-MNLF combatants from the Municipalities of Luuk and Maimbung migrated to Indanan to engage in seaweed farming in 1994. This was part of the livelihood programmes initiated by previous ARMM government to help re-integrate ex-MNLF combatants back into society. A former Abu Sayyaf Group (ASG) member tells his story:

*“...I was only 19 years old when I joined the Abu Sayyaf. My father was a MNLF combatant who died in an encounter. I took care of my mother and siblings after he died. Seaweed farming helped feed our entire family and we earned PHP 3,000 to PHP 5,000 per harvest. When the ‘ice-ice’ infestation killed our seaweeds that made things more difficult. I can no longer rely on seaweed farming alone, so I decided to join the ASG to feed our family.*

*There were active recruiters here. I was convinced to join the ASG because I thought that it was the only way to help my family. Many young people were recruited. They used money to recruit. They gave me PHP 50,000 and a handgun on my first day. I just worked for a day and up to three days at most in a week. If there are hostages, people in the community will get PHP 10,000 per night as lookouts. People who are desperate can be easily enticed, especially if they have nothing more to eat. Other groups like the Jemaah Islamiyah, use Jihad Sabibillah to recruit members.”*

The previous owner of the properties along the Indanan coast was an MNLF sympathizer. He was the one who encouraged the former MNLF combatants from the Municipalities of Luuk and Maimbung to farm in his property. Consequently, many former MNLF combatants decided to settle in the Municipality of Indanan during the 1990s. One respondent, an ex-MNLF commander, brought all his troops (est 40 families) to Indanan for farming. They were the first to migrate, followed by the former combatants from Luuk who also engaged in farming in the 1990s to early 2000s. They occupied at least 10 hectares of the seaweed farm owned by the previous owner. Their seaweed farms were about 40 meters from the coastline, and float on the water's surface by plastic jugs.

In 2020, residents of Indanan were displaced by Typhoon Butchoy which affected the Zamboanga peninsula and Sulu. The storm surges pushed the sea waves into their houses, forcing residents to evacuate to a nearby unfinished building previously owned by former ARMM Governor and MNLF leader, Nur Misuari.



Old hotel in Sulu where IDPs evacuated.  
© Mindanao Peoples Caucus 2023

After three days, the new owner ordered them to leave and not to return. The IDPs sought help from the owner's sister, and 12 families (mostly ex-MNLF members in Maimbung) were permitted to stay for three additional days. According to the interviewee, also a former MNLF commander, they carried arms since most residents have guns. The owner has huge respect for the commander, which is why he was not evicted. The commander, however, is still resentful toward the owner because of the eviction of the other residents. Meanwhile, the other families returned to their places of origin. The native Badjaos are still in Indanan, but were relocated to another area which was also the old owner's property. However, the Badjaos known for being sea gypsies and living close to the sea, had difficulty adapting to their new location away from the coast.

*“...about 15 Badjao families settled in the area just 5 years ago. Their main livelihood was fishing and few engaged in seaweed farming. Aside from the strong waves that made fishing difficult for them in Tajil, Badjaos had to pay the rent for a portion of the sea privately owned, and where they used to farm. They used to farm freely on that side of the coast, but it was sold, and the new owner forced them to pay rent for farming inside the property. These were the primary reasons for their migration to Indanan. The traders-financiers own most of the coasts in Panglima Tabil islands. The sea in Tabil is suitable for farming.”*

The evacuation area, whose owners are related to major political clans, was eventually gated and soldiers from the AFP-SAF installed. The former commander reflects on their double hardship whenever there is a flood and their options are limited,

*“...we do not receive any government support. The increased presence of SAF here is making it more difficult for us. If I were still healthier, I could fight them, but I think about the future of my four sons. Because of the hardships here, I have considered going back as a combatant. There are several MNLF camps in Indanan and Tandiong that I can join.”*

With weapons still widely available in the BARMM, delays in decommissioning former combatants, and socio-economic instability at the community level, many community members fear that these emerging conflicts and security risks pose an imminent threat to the full implementation of the peace agreement in the BARMM.

## GOVERNMENT INITIATIVES AND GAPS

### Governance Perspective of the Regional and Local Governments

There are several efforts, plans and policies undertaken by the regional and local governments that support the adaptation of the population to disasters and conflicts. As of May 2023, the Ministry of the Interior and Local Government (MILG) reported that 70 out of the 125 Local Government Units (LGUs) submitted their approved Disaster Risk Reduction and Management (DRRM) plans and 119 LGUs have permanent DRRM officers in place. Additionally, 20 of the 125 LGUs have approved Comprehensive Land Use Plans (CLUP) and 94 LGUs have Peace and Order and Public Safety Plans (POPSP). In 2019, the Bangsamoro Disaster Risk Reduction and Management Council (BDRRMC) was established through Executive Order 12 signed by the Chief Minister who also serves as its chairperson. This order paved the way for the establishment of the BARMM Regional Emergency Assistance and Disaster Incident Management (READi) office, focusing on disaster preparedness and response, under the supervision of the MILG.

In a conversation with Director Pamlian of the Ministry of Environment, Natural Resources, and Energy (MENRE), several key points and important facts were discussed about MENRE's efforts to address environmental concerns and potential conflicts in the region. The summary emphasizes the interconnectedness of MENRE's efforts to address environmental concerns, mitigate climate change impacts, and prevent conflicts. It highlights the significance of proactive measures, multi-sectoral coordination, and local-level initiatives in achieving sustainable and resilient development in the region.

**Addressing community complaints and monitoring industrial companies.** MENRE successfully addressed community complaints related to industrial businesses and environmental violations by strictly enforcing the Clean Water Act and promptly addressing emissions issues. These interventions not only resolved specific concerns but also reduced tensions between companies and communities. This highlights the importance of proactive monitoring and enforcement to maintain a harmonious relationship between industries and residents.

**Dealing with mining operations and greening programmes.** MENRE actively monitors mining operations to ensure proper rehabilitation measures are implemented. Simultaneously, the ministry conducts greening programmes to combat the adverse effects of climate change, such as the drying up of water bodies. This integrated approach reflects MENRE's commitment to addressing environmental concerns caused by various industries and climate change impacts through both regulatory measures and proactive initiatives.

**Coordination with other ministries and local governments.** MENRE collaborates with other ministries and closely coordinates with BLGUs and LGUs to address conflicts, disasters, and develop disaster risk reduction and management plans. This multi-sectoral coordination emphasizes the recognition that addressing environmental challenges and potential conflicts requires a comprehensive and collaborative approach involving various stakeholders. MENRE coordinates with LGUs to strengthen forest protection mechanisms and requires the submission of Forest Land Use Plans (FLUP) and Local Climate Change Action Plans (LCCAP). While some LGUs have complied, others are still in the process of developing their plans, and MENRE is actively working to encourage them to address climate change issues. Climate change practices in Barangay Tuka and energy conservation: In Barangay Tuka, solid waste management mechanisms are implemented to prevent pollution of Lake Lanao. Additionally, due to electricity debt, residents adopt energy conservation practices, such as minimizing electricity usage. They also often resort to hitch-hiking or carpooling to save fuel on transportation. This showcases the importance of local-level initiatives in mitigating environmental impacts and adapting to climate change, as well as the influence of socio-economic factors on individual behaviors.

**MENRE programmes and integration of climate change measures.** MENRE has implemented various programmes, including integrating climate change mitigating measures into proposed projects, conducting emissions checking, and initiating greening programmes. These efforts demonstrate the ministry's commitment to promoting sustainable development and ensuring that climate change considerations are integrated into decision-making processes. This proactive approach aligns with

global efforts to mitigate climate change impacts and enhance resilience.

**Strengthening protected areas and providing livelihood opportunities.** MENRE focuses on strengthening protected areas, such as Lake Lanao and Turtle Islands, to prevent encroachment and protect valuable ecosystems. Moreover, the ministry provides livelihood opportunities for settlers through community-based forest projects and supports tree-planting initiatives. This approach highlights the importance of balancing environmental conservation with socio-economic development, fostering local engagement, and promoting sustainable livelihoods.

Overall, these efforts highlight that MENRE is actively working to address environmental concerns, mitigate climate change impacts, and prevent conflicts through various initiatives, coordination efforts, and programmes in the region.

Despite these efforts, there are still gaps that were identified by respondents. For instance, the regional mechanism, represented by the BDRRMC, appears to have limited functionality as it primarily emphasizes disaster response activities and does not adequately cover other important aspects such as prevention. During a regional dialogue, LGUs and the BARMM ministries acknowledged that the plans, especially the Local Climate Change Adaptation Plans (LCCAP) and POPSP developed by the LGUs did not sufficiently consider the complex nature of disaster risks faced by local communities. These plans were often created merely for compliance, and at times, to allocate the Internal Revenue Allotment (IRA) which itself is often insufficient to fund activities outlined in the plans. Consequently, these plans have not effectively served their purpose of enhancing community capacity and resilience in the face of all types of disasters.

The data validation revealed a fragmented and redundant approach to addressing conflicts, environmental hazards, and displacement, which was confirmed by representatives from LGUs and ministries. It became evident that many LGUs had similar LCCAPs, a practice that was also acknowledged by the Climate Change Commission. These plans often lack localization and are simply distributed from the national government for implementation at the regional level. This approach fails to consider important nuances, such as the history of conflict in specific communities and geographic locations that are vulnerable to environmental degradation. Consequently, the planning process overlooks important factors when creating Municipal DRRMs, POPSPs, and LCCAPs. This planning gap has implications for financial assistance required by LGUs and the budgetary needs for developing conflict- and climate change-sensitive establishments and mechanisms within communities.

## Governance from the perspective of communities

### Maguindanao

Conflicts arise within the community when rival factions in proximity engage in disputes over land ownership. The unequal distribution of resources by politicians who display favoritism, particularly in the distribution of relief goods during a disaster, further exacerbates tensions among residents. Unfortunately, insufficient support is provided to internally displaced persons (IDPs) forcing them to return to their homes without the requisite assistance. This lack of targeted programmes for IDPs affected by armed conflicts or climate-induced displacements only serves to deepen their vulnerability and perpetuate cycles of marginalization.

The intertwined challenges of environmental risks, conflict and human mobility underscore the complexity faced by communities grappling with these issues. A barangay local government unit representative expressed dissatisfaction with the government, specifically blaming leaders of the BARMM government for their lack of foresight in implementing a development project. He added that this failure to consider longer-term consequences has resulted in environmental degradation and loss of livelihood opportunities. Participants in discussions echoed concerns about the government's inadequate response to climate change-related disasters, its failure to address illegal activities such as logging, and the absence of measures to provide alternative employment and livelihood options after a disaster.

This prevailing perception reveals a significant gap between people's expectations of government action and the actual response that they receive. Marginalized communities often feel neglected, relegated to a secondary priority in the political realm. The government's perceived favoritism and insufficient efforts to address environmental challenges and meet the needs of affected communities may contribute to a growing sense of discontent.

### Lanao Del Sur

In Lanao del Sur, several villagers attest to the active involvement of local government units (LGUs) through the Municipal Disaster Risk Reduction Management Office (MDRRMO) and disaster response teams in monitoring and addressing the impacts of heavy rainfall and disasters. They mention the LGUs' constant monitoring of riverbanks and water levels, as well as their efforts to relay information through radio programmes to keep residents informed. The LGUs also play a crucial role in providing assistance to affected residents and directing them to designated evacuation centers. These actions highlight the government's commitment to disaster risk reduction and response in the region.



*“...our local government unit in Tamparan is very active. Assistance to affected residents is automatic and monitoring of the situation (flooding or typhoon) is constant. Villagers also keep tuned in to a “radiogram” (short for “radio programme”) for advisories on impending heavy rain or a typhoon.”*

*“...when it rains, the MDRRMO people in Madalum rush to the riverbanks to monitor the water level and relay information on to a preset radio frequency that can be accessed by the residents.”*

*“...Likewise in our place in Bubong, the MDRRMO is active in monitoring the water level and feeding this information on the radio.”*

*“...the MDRRMO in Malabang along with members of the Philippine National Police (PNP) maintain patrols. They exhort villagers to be ready for evacuation and direct them to the designated evacuation centers. At the same time the patrols keep an eye for looters.”*

*“...our LGU and Disaster Group in Taraka are very active when there is heavy rainfall. They are by the river, monitoring. They also urge barangay people in low-lying areas downriver to transfer to higher ground. And if I may add, all the cases of rido in Taraka have all been resolved by the husband-and-wife Mayor and vice Mayor, respectively.”*

However, concerns and recommendations are raised by community members. Some expressed the desire for LGUs to take concerted steps to avoid favoritism and work closely with the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) for more efficient delivery of public services, including livelihood support. Others emphasize the need for increased security measures, such as monitoring and apprehending illegal loggers to prevent further flooding and addressing areas suspected of harboring ISIS members. Additionally, the participants call for further government action,

*“...the government should sponsor a municipality-wide tree planting programme and pay those who enlist in this activity. It should also construct or otherwise widen irrigation, road, and drainage canals to facilitate the flow of water especially during a heavy rainfall.”*

These voices reflect the importance of a holistic approach to governance, which encompasses addressing climate change, conflict, and environmental protection. They underscore the need for faithful implementation of existing environmental laws, proper waste management, and the protection of natural resources like Lake Lanao. Combating corruption and impunity are also seen as essential, as they are intertwined with climate change and environmental issues. Furthermore, education

emerges as a key component, with the suggestion to increase constituents' knowledge on climate realities and involve religious leaders and educational institutions in raising awareness.

While there are ongoing efforts by LGUs and disaster response teams, there is a gap in hazard mapping in the BARMM region. A rapid assessment of climate realities, including hazard mapping, is recommended to establish a benchmark for effective mitigation and response strategies. Regular updates to hazard maps would ensure accurate and up-to-date information for decision-making and community preparedness.

Overall, these narratives highlight the active role of LGUs and the need for collaboration between government agencies, communities, and the BARMM. Effective and well-thought-out programmes addressing climate change and conflicts should involve all sectors of the community and consult community leaders. It emphasizes the importance of comprehensive approaches that address the interconnected challenges of climate change, conflict, and sustainable development to ensure the well-being and resilience of Lanao del Sur's communities.

#### **Basilan**

The local government has made efforts to address certain challenges in the community. Security concerns have been addressed through the presence of the Barangay Peacekeeping Action Team (BPAT), ensuring safety and protection. In response to recent flooding, prompt action was taken to assist injured individuals by swiftly transporting them to the local hospital.

However, there are gaps in relief assistance. While the Municipal Social Services Department (MSSD) and the Municipal Local Government Unit (MLGU) provided some relief support, it was infrequent. External organizations, such as a radio club, also stepped in to provide assistance. The limited nature of relief efforts suggests a need for more consistent and comprehensive support from the government.

Recommendations put forth by community participants highlight important areas for government action. They suggest providing life vests and rubber boats to each family to enhance flood preparedness and ensure their safety during such events. The construction of evacuation centers is also recommended to offer a dedicated space for affected individuals to seek shelter during disasters. Furthermore, reinforcing the footbridge with concrete and embankments is suggested to make it more resilient and capable of withstanding flooding.

#### **Sulu**

After the signing of the first peace agreement with the MNLF and the initiation of projects in the province, the Tausugs in Sulu, specifically in Jolo, began engaging in seaweed farming. They received training and formed cooperatives to support this new livelihood opportunity. Previously, most of the seaweed came

from Tawi-Tawi, but with the arrival of foreign investors after the peace agreement, the inhabitants of Jolo were involved in seaweed farming to provide livelihood for the MNLF. However, despite seaweed farming taking place in municipal waters, supposedly a public domain, these waters have now been privatized.

In the new administration of BARMM, participants acknowledged the support that they received from ministries such as the one by MAFAR in 2018. MAFAR provided equipment such as solar dryers, seedlings, nylon, and ropes. Additionally, MAFAR allocated funds for the farmers to purchase seedlings, providing a minimum of PHP 3,000 per household.

Meanwhile, gaps in communication and effective action by the LGU are straining its relationship with community members. Participants expressed the community's self-reliance due to the absence of effective leadership. They have grown tired of reporting their problems as no actions have been taken, leading to a sense of discouragement. They mentioned that it is through the community's efforts to help each other that made waste management better, including proper segregation of garbage. Some municipalities initiate cleanup drives in the drainage and trash near the bridge or a garbage truck occasionally collects the trash.

Meanwhile, the interviewed former member of the Abu Sayyaf Group (ASG), left the group after five years. He became involved in seminars against violent extremism organized by the Municipal Inter-Agency Task Force on Peace and Order, an initiative of the Ministry of the Interior and Local Government (MILG). His active participation in these seminars, conducted by the provincial council, led him to become a community leader. Currently, he assists in organizing seminars against violent extremism and contributes to maintaining peace and security in his community.

The Provincial Disaster Risk Reduction and Management Office (PDRRMO) in Sulu is implementing preemptive evacuations as a proactive measure to mitigate the impacts of climate change. Instead of waiting for houses to be damaged during events like tropical storms, storm surge and sea level rise, they evacuate residents immediately. This approach was influenced by past incidents in Tulay, Bus-Bus, and other places. The PDRRMO is actively responding to evacuation needs and reports, ensuring timely evacuations based on preliminary information. However, there are instances where some individuals, including Badjaos, take advantage of relief operations by falsely lining up for assistance even if they were unaffected by the calamity. This situation results in limited relief goods reaching the actual survivors.

Conflict arises during the enlisting of evacuees and the distribution of assistance. Barangay captains often include the names of their constituents, even if they were not affected by

the calamity, leading to a minor conflict. The establishment of the PDRRMO has brought more systematic processes. Reports now come from the LGUs, making the information flow more organized. Efforts have been made to capacitate agencies under the BARMM government, improving coordination during disasters. However, during the transition period, there were challenges as the PDRRMO had to start anew, and the lack of trained personnel from the previous administration affected their response capabilities. To address this, the PDRRMO requested focal representatives from concerned ministries to facilitate better communication during calamities.

*“...during typhoon Paeng all agencies contacted us for reports. They were unaware of the internal problem we were going through at that time as an organization. They are the ones who should be sending us information about the typhoon damages in the provinces. MAFAR, for example, should be the one who assisted with the damages in terms of agriculture and fisheries. They must be the ones to assess the damage and submit the report to the provincial officers. But to our surprise, MAFAR asked for information. After that incident, we sent a memo to the governor to assign focal representatives in all concerned ministries so that communication will be more accessible whenever there are calamities. We are now working closely with ministries including MAFAR.”*

The PDRRMO emphasized the importance of community cooperation and aims to enhance their capacity by providing regional training sessions. They encourage communities to support their efforts in disaster management and response. There are scheduled training sessions where representatives can be sent to acquire further skills and knowledge. Establishing effective communication channels with the communities and involving them in disaster preparedness and response activities is a key objective for the PDRRMO.

#### Tawi-Tawi

Several government initiatives in Tawi-Tawi have been implemented to address the challenges faced by affected communities. During hazardous events, such as fires and storms, the first responders were often the siblings of the barangay chairman and the neighbors, demonstrating a sense of community support and resilience.

In terms of immediate relief and temporary shelter, the government provided waterproof canvasses to the affected residents. This assistance helped alleviate their immediate need for shelter and protection during such calamities. However, it was mentioned that the promised relocation of the community to safer areas, as planned by the barangay captain, has been significantly delayed, leaving the community eagerly awaiting the implementation of this plan.

*“...their promised relocation to safer spaces has conditions. The barangay leader of the original community wanted the relocated community members to continue being registered voters in his barangay. The other barangay leader who will potentially host the Badjaos did not agree to such condition because it is unfair that they will provide the services to this new population and not vote in their new residence. In the end, no one wants to move their residents to safer areas because they can potentially lose voters.”*

Seaweed farming serves as the primary livelihood for the people of Tawi-Tawi, with a majority of families engaged in this industry. Recognizing its importance, efforts have been made to enhance the value of seaweed farming. Proposed bills have been filed in the BARMM to create the Bangsamoro Seaweed Authority, aiming to provide support not only in farming but also in adding value to seaweed products. Furthermore, European Union-funded projects, initiated by the Mindanao Development Authority (MINDA), have facilitated the introduction of solar energy systems in areas like Sitangkay and Sibutu. This solar energy has proven beneficial for farming and seaweed drying and has encouraged the establishment of cooperatives.

Addressing the climate-conflict nexus requires more than a militaristic approach. MP Alih emphasized the importance of involving religious leaders, both Muslims and Christians, in the peace and order council. By including them, along with local leaders and sultans, the goal is to strengthen the local peace and order council and promote a holistic approach to resolving conflicts and maintaining peace. The involvement of religious leaders, like Fr. Bert Laison, who provide support and guidance to the communities, regardless of religious affiliation, is seen as crucial in addressing community issues and settling disputes collectively. This collaborative approach involves open conversations and a deep understanding of each other's problems, leading to peace agreements and sustainable resolutions.

## Analysis of the Government Efforts and Gaps

### Common Government Efforts:

1. *Disaster Risk Reduction and Response.* The local government units (LGUs) in all places have shown efforts in disaster risk reduction and response. They engage in activities such as monitoring water levels, providing timely advisories through radio programmes, and organizing pre-emptive evacuations. This indicates a commitment to protecting the communities from the impacts of natural disasters.
2. *Livelihood Support.* Efforts have been made to support livelihood opportunities in these regions. For instance, in Sulu, the government-initiated seaweed farming projects, providing training, equipment, and financial support to the

communities. This demonstrates a recognition of the importance of sustainable livelihoods and economic development.

3. *Collaboration and Coordination.* There are instances where different government agencies, security sector, ministries, and local leaders collaborate to address various challenges. Efforts have been made to involve religious leaders, community leaders, and sultans in decision-making processes related to peace and order. This indicates an understanding of the need for a holistic and collaborative approach to governance.

### Gaps and Challenges:

1. *Inadequate Support for Internally Displaced Persons (IDPs).* Across BARMM, there is a lack of targeted programmes and support for IDPs affected by armed conflict and climate-induced displacement. This leaves IDPs vulnerable and perpetuates a cycle of marginalization. The lack of adequate assistance to IDPs and affected communities exacerbates tensions and discontent.
2. *Insufficient Environmental Protection.* Participants in discussions across all places express concerns about the government's inadequate response to climate change-related disasters and environmental degradation. Illegal activities like logging, dumping, and mining continue to pose threats to the environment. There is a need for stricter enforcement of environmental laws and measures to promote sustainable practices.
3. *Lack of Community Engagement and Consultation.* In some instances, community members express the desire for better engagement and consultation with the government. They highlight the need for LGUs to work closely with the BARMM government for more efficient delivery of public services and livelihood support. Lack of effective leadership and communication between the government and the community contributes to a sense of discouragement and neglect.
4. *Weak Hazard Mapping and Preparedness.* While efforts have been made in disaster risk reduction, there is a gap in hazard mapping across the BARMM region. The absence of up-to-date and accurate hazard maps hinders effective mitigation and response strategies. Regular updates and comprehensive mapping are essential to improve community preparedness and decision-making during disasters.
5. *Capacity and Transition Challenges.* The transition to the BARMM government has posed challenges in terms of response capabilities and trained personnel. The need for focal representatives from concerned ministries, better communication during calamities, and addressing financial



shortfalls to adaptation highlight the need for improved coordination and capacity-building.

Addressing these gaps and challenges requires a comprehensive and inclusive approach. The government should prioritize the needs of internally displaced persons, strengthen environmental protection measures, enhance community engagement and consultation, invest in hazard mapping and preparedness, and provide support for capacity building and seamless transitions in governance. Collaborative efforts involving all stakeholders, including government agencies, communities, and religious leaders, are crucial to addressing the climate-conflict nexus and promoting sustainable development in the BARMM region.

Following the engagements of this study with BARMM ministries and Members of Parliament, and a presentation of the initial findings, the duty bearers realized the urgency to address the climate-conflict nexus in the region and its manifestations in their communities. The Sub-Committee on Climate Change under the Committee on Environment, Natural Resources and Energy of the Bangsamoro Parliament was formed in March 2023 to prioritize resiliency and adaptation to climate change and further explore the climate-conflict nexus in the region. This sub-committee will be the springboard for the establishment of a regional climate office as a counterpart to the Philippine Climate Change Commission and contribute to the passage of the BARMM Environmental Code. The sub-committee is composed

of 12 Members of Parliament, including the Chairperson, Vice-Chairperson, eight members and two ex-officio members. The key advocate of this progress, MP Mary Ann Arnado highlighted the necessary collaboration and urgency in her message to the stakeholders in BARMM during the validation of this research.

*“...it is very important for all of us to acknowledge and wake up to the reality that we are in a Climate Change emergency. If we do not see this particular aspect, we will all be in a vicious cycle, and all our interventions will not be cost-effective. There is a new reality in our environment that we need to confront, or else we will just go back to the usual ways of doing things which eventually end up failing. We need to retool. We need to study, we need to read more and look at the other experience in other areas so that we will be more equipped in dealing with this.”*

By strengthening preventive measures, ensuring localized planning, and considering the specific vulnerabilities and histories of individual communities, disaster management in the region can be improved. Enhanced coordination between LGUs and BARMM ministries is vital for a more effective and comprehensive approach to disaster risk reduction and management. Through these concerted efforts, the BARMM region can move closer towards building resilience and safeguarding its communities against future hazards and challenges.



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## KNOWLEDGE GAPS

In recent studies, the Bangsamoro region exhibited the lowest scores on awareness and knowledge of climate change in the Philippines. A 2017 study on public perception of climate change and disaster preparedness in the Philippines<sup>32</sup> suggests that awareness of the public in the BARMM on climate change is only 3 per cent while their level of knowledge on climate change concepts and issues is relatively low at 71 per cent. Furthermore, 43 per cent of the respondents disagreed that climate change is linked to disasters.

The study remains relevant to this research despite the different perception of the FGD and KII respondents. It does seem that local contexts and definitions of the term climate change are the main factors for their level of knowledge and awareness. In all the discussions, it was the participants who identified the risks that they attributed to climate change. This knowledge, while only based on lived experiences, is often about weather unpredictability and the typhoons that cause flooding and landslides. They also repeatedly highlighted how human activities, including deforestation, irresponsible garbage disposal, and government projects that are deterrents to the health of their local ecosystems, contribute to climate-induced disasters.

A notable finding from these discussions is that communities prioritize securing themselves rather than considering responses to environmental hazards or climate change adaptations in times of conflict. The immediacy of responding to conflict and ensuring personal security during forced displacement takes precedence over other concerns. As emphasized by Professor Tikmasan, education and increasing the level of knowledge among constituents on climate realities is crucial.

In contrast, the knowledge of this study's respondents about conflict is very high since it is a more common narrative in the region. A clear observation is their ability to identify the linkages of these conflicts to competition over resources and assets, as well as their everyday livelihoods.

As demonstrated in the governance gaps, proper and inclusive planning are critical in the long-term adaptation of the BARMM to the climate-conflict nexus. However, without the right and up-to-date information and better knowledge of the nexus, both community members and policymakers are in a vicious cycle of relying on unverified accounts and observations from the communities. These planning processes are then affected and budget appropriations for adaptation and mitigation measures are not fully inclusive and informed.

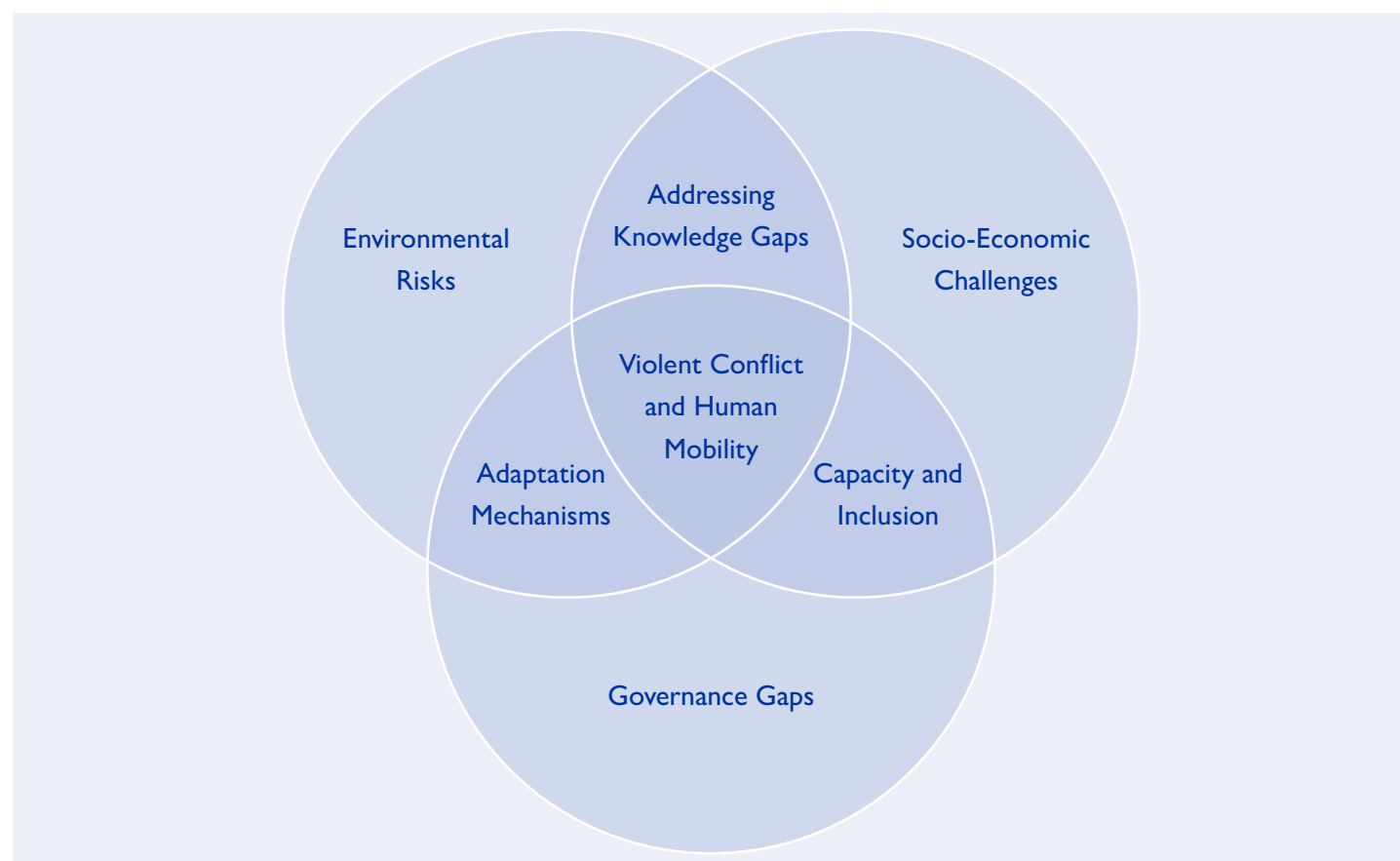
Thus far, a parliament resolution in 2022 has been passed by members to urge the MENRE to strengthen its awareness drives on climate change and its implications on constituent local government units of BARMM. MP Alih fully agrees with the initiative and shares his personal experience on the impact of education in his life,

*"...I belong to a poor family. I was a fisherman and a seaweed farmer. But I tried my best to get an education to improve myself. When you do this, you develop yourself, and you have a greater opportunity to help others. Instead of looking at ourselves as burdens to this government, we start to think of how we can help the government. However, we can also accomplish that when we, as the government, help people improve themselves."*



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<sup>32</sup> Bollettino, V., et al (2020). Public perception of climate change and disaster preparedness: Evidence from the Philippines. *Climate Risk Management*, 30. doi:10.1016/j.crm.2020.100250.



The results of this study demonstrate that there is a nexus on the climate change, conflict, and human mobility in the BARMM. While this does not establish causality of each theme, they all overlap in terms of impacts on communities and the way it affects existing and emerging conflicts. As illustrated in this diagram, violent conflict and human mobility manifests in the region based on the intersection of major factors including environmental risks, socio-economic challenges and governance gaps. Human mobility, in this case, both captures forced displacement and voluntary movements within and outside the region. Violent conflict is particularly highlighted to recognize that it needs the combination of all these three major factors for conflicts to escalate. There are definitely more minor tensions that have been recorded by the study but they either lack or will need one or two more factors, either environmental risks, socioeconomic challenges or governance gaps, to be triggered into a violent conflict.

The innermost factors such as knowledge gaps, adaptation mechanisms and capacity and inclusion, refer to potential mitigation measures that can be useful to de-escalate conflict and reduce forced migration. First, adaptation mechanisms can include existing policies and programmes that help communities adapt to both the daily changes in the environment of the communities (sea level rise, extraction of resources) and during the times when these risks unexpectedly manifest (typhoons,

landslides, floods). Meanwhile, knowledge gaps have been observed in the study and BARMM clearly needs a strategic plan to mainstream the nexus by strengthening its literacy on environmental hazards and the socio-economic challenges it brings. Lastly, the limited capacity of the duty-bearers and rights-holders, and the lack of inclusion of rights-holders from different sectors and genders, in the planning and execution of programmes and policies, have increased frustration on all sides. Hence, there is a need to further address this gap with an inclusive and gender-sensitive approach to prevent violent conflict.

To summarize, this study demonstrates that there is a connection between climate change, conflict, and human mobility in the BARMM. Although the study does not prove causation, the intersection of these factors has a profound effect on both communities and conflicts. The occurrence of violent conflict, displacement and people's movement is influenced by a combination of environmental risks, socio-economic challenges, and governance gaps. By addressing knowledge gaps, implementing effective adaptation mechanisms, and promoting capacity building and inclusion, it is possible to mitigate conflict and reduce forced migration. It is crucial for the BARMM to develop a strategic plan to tackle these issues and prevent the escalation of violent conflict.



## RECOMMENDATIONS

Considering the findings of this research, these are the key recommendations needed to address the impact of the nexus.

1. **Enacting legislation to establish a regional mechanism** focusing on the climate-conflict nexus in BARMM is crucial to harmonize initiatives and develop long-term plans. This legislation should provide a framework for a holistic approach, ensuring the protection of vulnerable sectors from conflict and climate change impacts. It should enable the establishment of a dedicated body to implement policies, coordinate programmes, and monitor their effectiveness. The proposed regional mechanism should support integration of climate change and conflict-sensitive programming, provide technical guidance to LGUs, elevate knowledge on the nexus, organize conferences to discuss solutions, support hazard mapping, and assess population perceptions and adaptation strategies. This mechanism also needs the support of the BARMM Parliament to allocate appropriate funds to ensure the timely delivery of its mandate.
2. **Strengthening the enforcement of existing laws** related to natural resource use and control is essential. Climate change and human activities have altered the topography, leading to conflicts over land resources. Addressing ancestral domain claims, managing upland communities, and strengthening the mandates of relevant agencies will help ensure proper land tenure and management. Additionally, enforcing fishing regulations and supporting small fisherfolk can prevent encroachment and abusive practices.
3. **The BARMM government should advocate for the enactment of the Internally Displaced Persons Bill.** Many IDPs face challenges accessing government support and are sometimes disowned by their barangay LGUs. The IDP bill has been in congress for at least 13 years, and it will need the support of the BARMM which has the highest number of IDPs resulting from both conflict and disasters in the country. The IDP Bill will ensure the protection of the rights and welfare of the IDPs. It needs to be reviewed with consideration to the context of the BARMM; hence responding to the emergency needs of displaced communities should not only focus on the provision of their daily survival but must have a strategic impact on their lives. It will have to include the development and enforcement of durable solutions to internal displacement.
4. **Mainstreaming gender-sensitive planning in climate change and conflict adaptation mechanisms is crucial.** Gender integration across policies and the development of indicators to monitor gender mainstreaming should be prioritized. Addressing women's vulnerability during calamities, installing an office for safe migration, and supporting women in income generation without resorting to illegal means or leaving their families should be key considerations.
5. **Conducting extensive education and training for farmers and natural resource users is necessary.** Promoting sustainable agriculture, biodiversity, and conservation through initiatives like reforestation and tree-planting, in partnership with relevant ministries, can help protect natural resources and create viable local economies in the fisheries and agricultural sectors.
6. **Embedding climate change prevention and mitigation in peacebuilding and post-conflict rebuilding programmes is crucial.** The interlinkages between peacebuilding, climate change, and displacement should be clearly defined. International organizations with expertise in the nexus should incorporate climate change adaptation and mitigation mechanisms into their programmes, with comprehensive and well-defined goals and indicators.



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## CONCLUSION

The communities and the BARMM government continue its efforts for its aim of long-term peace and development. However, recurring challenges such as conflict and displacement and now, the worsening of the impacts of environmental risks due to climate change, remain as major roadblocks for this goal.

The findings of this study have attempted to answer the research questions by identifying the existing dynamics and distinct effects of the climate, conflict and human mobility in the BARMM, and the ways by which the government addresses these issues. With the support of the narratives from the community, expert informants and existing data, the study demonstrates a certain nexus in the BARMM. While causality is not established, the overlap of these themes has significant impacts on communities and conflicts. The nexus highlights violent conflict and human mobility as the core impact with major influences from environmental risks, socio-economic challenges, and governance gaps. Meanwhile, mitigation measures such as addressing knowledge gaps, implementing adaptation mechanisms, and increasing capacity and inclusion can help de-escalate conflict and reduce forced migration.

While the findings generated in this study can already support the policy makers and development organizations to make informed decisions, there are still gaps and further research needed to better quantify these results. A specific highlight on

the manifestations of the nexus among the non-Moro indigenous peoples in BARMM can be the focus of the following inquiry.

It is a critical period for BARMM to have a strategic plan and implement policies faithfully to address these issues and prevent violent conflict from further escalation before the exit agreement of the peace process. The discussion presents the implications of the nexus that is unique to the region: 1) exacerbation and/or escalation of existing vertical and horizontal conflicts; 2) impediments to the progression of the normalization process of former combatants; 3) deterrents to the adaptation of internally displaced persons; and 4) opportunities for collaboration among community members.

These issues call for a thorough review of the Bangsamoro Development Plan and to find the opportunities within the plan to consider the intersections of climate governance and peacebuilding. This plan will be needed to strengthen the BARMM government's partnership with key stakeholders from the local governments, academic experts, and civil society organizations. More importantly, the voices of the community members that experience these realities every day should be at the forefront of this movement. After all, solving these complex issues requires a collective, well-coordinated, and systematic approach to promote sustainability, and the future of the BARMM.



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