



COTABATO CITY
CONTINGENCY PLAN for
FLOODING
and **STORM**
SURGE
2023-2026

MESSAGE FROM THE LOCAL CHIEF EXECUTIVE



Greetings and Masayang Cotabato!

Congratulations to the City Disaster Risk Reduction and Management Office for developing this extremely informative and timely Contingency Plan for Flooding, which, as its name implies, serves as Cotabato City's blueprint and guide for dealing with such calamity.

Recent incidents in our city have shown that we must understand that natural disasters are a normal and inevitable part of life. The City Government and the Cotabato people should not be discouraged by the difficulty of predicting and preventing such calamities from taking precautions to lessen the severity of their effects.

Natural catastrophes have cost our country much in terms of lives lost and property destroyed; as a result, it is crucial that all neighborhoods and municipalities have emergency plans ready for times of crisis, particularly when it comes to hazards like floods and earthquakes.

This "Contingency Plan for Flooding" is meant to assist many different parties in identifying the many natural disaster hazards we face and making plans considering the available and verifiable facts and risk analysis. We anticipate that other ideas and methods to catastrophe management will emerge from this "Plan" soon.

Detailed instructions on who should do rapid evaluations and then share the results are provided to facilitate a unified reaction. Similarly, the strategy maximizes the involvement of all collaborating partners and stakeholders by nudging them to zero in on the specific actions the implementation of which they can contribute.

I would like to applaud the efforts of the CDRRMO, led by Amil Esmael, as well as each member of the CDRRMO for taking this step. Without a doubt, this will make a significant contribution toward preventing loss of life and property. And even if your "Contingency Plan" is just successful in preventing the loss of one life in the future, it should be worth every work that you put into developing it.

Once more, my sincere kudos on a job well done!

MOHAMMAD ALI "BRUCE" DELA CRUZ MATABALAO
Mayor Para sa Lahat



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DEFINITION OF TERMS



Affected Population - a group of people who (1) lives in a disaster-affected area and has sustained direct disaster impacts (e.g., casualties and lost sources of livelihoods); (2) lives within the disaster-affected area and sustained indirect disaster impacts (e.g., disruption of basic services); or (3) lives outside the disaster-affected area and sustained secondary disaster impacts (e.g., increase in market costs).

Capacity - a combination of all strengths and resources available within a community, society or organization that can reduce the level of risk, or effects of a disaster. Capacity may include infrastructure and physical means, institutions, societal coping abilities, as well as human knowledge, skills, and collective attributes such as social relationships, leadership, and management. Capacity may also be described as capability.

Casualty - a person who is injured, killed, or gone missing because of an accident, mishap, or disaster.

Civil Society Organizations (CSOs) - organized group of individuals, to include non-government organizations, trade unions, faith-based organizations, indigenous people's movements, and foundations, working together for a common goal.

Coordination - system for gathering information, making decision, and recording action that must be clear and known to all.

Command and Control - exercise of authority and direction by the Incident Commander over resources checked-in to accomplish the objectives.

Cluster - a group of agencies that gather to work together towards common objectives within a particular sector or area of concern in emergency response. The NDRP enumerates the clusters at the national level, the lead and member agencies, as well as their duties and responsibilities during emergencies.

Cluster Approach - a coordination system of the NDRRMC that aims to ensure a more coherent and effective response by mobilizing groups of agencies, organizations, and non-government organizations to respond in a strategic manner across all key sectors or areas of activity, each sector having a clearly designated lead, in support of existing government coordination structure and emergency response mechanisms.

Contingency Plan - a scenario-based plan for a specific and projected natural and/or human-induced hazard. It aims to address the impacts of the hazard to people, properties, and environment; and/or to prevent the occurrence of the emerging threats through the arrangement of timely, effective, appropriate, and well-coordinated responses as well as the efficient management of resources.

Contingency Planning - a management process that analyzes specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective, and appropriate responses to such events and situations.

Crisis - also known as emergency; a threatening condition that requires urgent action or response

Crisis Management (CM) - involves plans and institutional arrangement to engage and guide the efforts of government, non-government, voluntary and private agencies in comprehensive and coordinated ways to respond to the entire spectrum of crisis needs.

Crisis Management Committee (CMC) - a governing body that undertakes CM activities and takes decisive actions to resolve crisis or emergency. Its powers and functions are defined in the NCMCM 2012.

Disaster - a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. Disasters are often described as a result of the combination of - the exposure to a hazard; the conditions of vulnerability that are present; and insufficient capacity or measures to reduce or cope with the potential negative consequences, Disaster impacts may include loss of life, injury, disease and other negative effects on human, physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, Social and economic disruption and environmental degradation.

Disaster Impacts - immediate consequences of a disaster requiring extraordinary response

Disaster Risk - the potential disaster losses in lives, health status, livelihood, assets, and services, which could occur to a particular community or a Society over some specified future time period.

Disaster Risk Reduction - the concept and practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through reduced exposures to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Disaster Risk Reduction and Management (DRRM) - the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies, and improved coping capacities to lessen the adverse impacts of hazards and the possibility of disaster. Prospective disaster risk reduction and management refers to risk reduction and management activities that address and seek to avoid the development of new or increased disaster risks, especially if risk reduction policies are not put in place.

Disaster Risk Reduction and Management Council (DRRMC) - organized and authorized body of government agencies, to include the civil society organizations and private sector, mandated to undertake DRRM activities from the national to local levels. The composition, powers, and functions of the DRRMC are defined in RA 10121.

Early Warning Signs - observable or science-based information that will indicate the unfolding of an event or incident.

Emergency Indicators - quantifiable thresholds that signal whether a situation is under control and whether there is a need for urgent remedial action.

Emergency Operations Center (EOC) - facility mandated by RA 10121 to be established in every DRRMC that shall be operated and staffed on a twenty-four (24) hour basis for coordination work on DRRM.

Exposure - the degree to which the elements at risk are likely to experience hazard events of different magnitudes.

Flood is a natural disaster characterized by the overflow or inundation of land that is typically dry. This phenomenon occurs when water accumulates rapidly, exceeding normal levels, and submerges areas such as riverbanks, coastal regions, or urban spaces.

Flash Flood - A sudden and intense flood, typically occurring within six hours of heavy rainfall or other events like dam breaks, causing rapid and dangerous inundation.

Riverine Flood - Overflow of rivers or streams due to prolonged heavy rainfall or melting snow, leading to the inundation of adjacent land areas.

Coastal Flood - Flooding caused by high tides, storm surges, or tsunamis along coastal areas, often exacerbated by severe weather conditions.

Urban Flood - Flooding that occurs in urban areas due to inadequate drainage systems, impervious surfaces, and high-intensity rainfall, leading to localized water accumulation.

Pluvial Flood - Flooding caused by heavy rainfall overwhelming drainage systems and saturating the ground, resulting in surface water accumulation.

Storm Surge - Coastal flooding caused by a combination of strong winds and low atmospheric pressure during tropical storms or hurricanes, pushing seawater onto the shore.

Goal - an observable and measurable result having one or more objectives to be achieved within a fixed timeframe.

Hazard - a dangerous phenomenon, substance, human activity, or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihood and services, social and economic disruption, or environmental damage

Human-Induced Hazard - a significant incident due to human interventions resulting in acts of terrorism, destabilization, criminal activities, industrial accidents, disruption of normal day-to-day activities, and other related emergencies that require prompt intervention to contain the incident, mitigate the effects, and normalize the situation.

Incident Command System (ICS) - a standard, on-scene, all-hazard incident management concept that can be used by all DRRMCs member agencies and response groups. It allows its users to adopt an integrated organizational structure to match the complexities and demands of single or multiple incidents without being hindered by agency or jurisdictional boundaries.

Incident Management Team (IMT) - a team composed of Command Staff and General Staff who will take the lead in ICS implementation.

Mitigation - the lessening or limitation of the adverse impacts of hazards and related disasters.

Natural Hazard - natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Need - a motivating force that compels action for its satisfaction, range from basic survival needs satisfied by necessities, to cultural, intellectual, and social needs.

New Normal - characterized by the increasing frequency, magnitude and scope of disasters, as well as the blurring of division between the disasters caused by natural and human-induced hazards.

Objective - implementation step to attain identified goals. It is specific, measurable, has a defined completion date, and outlines the “who, what, when, where, and how” of reaching the goals.

Pre-Disaster Risk Assessment-Actions, Programs and Protocols (PDRA-APP) - a process to evaluate a hazard's level of risk given the degree of exposure and vulnerability in a specific area. PDRA-APP presents the possible impacts to the populace and form as a basis to determine the appropriate level of response actions from the national level government agencies down to the local government units (LGUs). It is hazard-specific, area-focused, and time-bound method of assessment.

Post-Disaster Needs Assessment (PDNA) - a multi-sectoral and multidisciplinary structured approach for assessing disaster impacts and prioritizing recovery and reconstruction needs. It is undertaken by the government agencies also in collaboration with international development partners and the private sector.

Probability - frequency of occurrence or the return period of losses associated with hazardous events.

Rapid Damage Assessment and Needs Analysis (RDANA) - a disaster response tool that is used immediately in the early emergency phase to determine the extent of impacts and assess the priority needs of the communities.

Resources - machineries, manpower, methodology, materials, and monetary assets that can be drawn on by an organization in order to function effectively.

Risk - the combination of the probability of an event and its negative consequences.

Risk Assessment - a methodology to determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihood, and the environment on which they depend

Root Causes - the underlying natural or human-induced sources or origins of the hazard

Sector - distinct and large subdivision defined based on some common factor

State of Calamity - a condition involving mass casualty and/or major damages to property, disruption of means of livelihoods, roads, and normal way of life of people in the affected areas because of the occurrence of natural or human-induced hazard.

Storm Surge - is the abnormal rise in sea level that occurs during tropical cyclones. It is caused by strong winds and low atmospheric pressures produced by tropical cyclones. As the tropical cyclone approaches the coast, strong winds push the ocean water over the low-lying coastal areas, which can lead to flooding. This makes storm surges very dangerous.

Threat - an indication of something undesirable coming; a person or thing as a likely cause of harm; refers to people, phenomena, situations, and trends in the environment that can adversely affect the welfare and well-being of the people.

Triggering Factors - factors that could cause the unfolding of an event.

Tsunami - triggered by an earthquake, is a series of ocean waves with long wavelengths and high energy. It occurs when there is a sudden displacement of water, which frequently results from the vertical movement of the seafloor during an undersea earthquake.

Vulnerability - the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. Vulnerability may arise from various physical, social, economic, and environmental factors such as poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures, and disregard for wise environmental management.

RATIONALE



The Philippines, situated along the Pacific Ring of Fire and the Typhoon Belt, is prone to natural hazards such as typhoons, earthquakes, volcanic eruptions, and tsunamis. Furthermore, human-induced hazards such as crimes, terrorism and bombing also threaten the lives of the communities.

Given the disaster risk profile, Republic Act (RA) 10121, otherwise known as the “Philippine Disaster Risk Reduction and Management Act of 2010” was enacted on 27 May 2010. Prior to the enactment of RA 10121, government actions relative to disaster management had been largely concentrated on the response phase where most of the resources are devoted to the needs of the affected population in the aftermath of a disaster.

Now, the new law paved the way for the institutionalization of the proactive Disaster Risk Reduction and Management or “DRRM” approach, which is the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

As provided for in RA 10121, one of the known DRRM mechanisms that we can use is Contingency Planning (CP). It is used to establish preparedness measures and arrange response priorities ahead of time prior to a certain disaster. CP works well together with other DRRM tools to help ensure the achievement of safer, adaptive, and disaster-resilient communities towards sustainable development.

Contingency Plan is a scenario-based plan for a specific and projected natural and/or human-induced hazard. It aims to address the impacts of the hazard to people, properties, and environment; and/or to prevent the occurrence of the emerging threats through the arrangement of timely, effective, appropriate, and well-coordinated responses as well as the efficient management of resources.

The UNHCR Handbook of Emergencies defines contingency planning as “A forward planning process, in a state of uncertainty, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place in order to prevent or better respond to, an emergency or critical situation.”

The United Nations International Strategy for Disaster Reduction defines CP as a management process that analyses disaster risks and establishes arrangements in advance to enable timely, effective, and appropriate responses.

RA 10121 describes contingency planning as “a management process that analyzes specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.”

With the growing significance of contingency planning, it has become applicable not only in DRRM but also in Crisis Management (CM), which “involves plans and institutional arrangement to engage and guide the efforts of government, non-government, voluntary and private agencies in comprehensive and coordinated ways to respond to the entire spectrum of crisis needs”. As such, CP has been considered as one of the operationalizing tools of the National Crisis Management Core Manual (NCMCM) of 2012, as provided for by the Executive Order (EO) No. 82 series of 2012.

By organizing potential response structure, mechanisms, resources, and disaster risk reduction measures that are focused into a certain emergency event prior to its occurrence, a contingency plan assists in:

- Generating commitment among parties involved to act in a coordinated manner before the emergency occurs.
- Mobilizing effective actions and resources for emergency purpose and designing a concrete and continuous plan until the emergency occurs.
- Continuously updating such plans if the hazard is no longer threatening.

Contingency planning is also a mechanism to pull together resources and inter-agency coordination at the advent of early warning signals of an impending emergency. It means hoisting a flag of alert, and seriously pulling all actors to focus their attention and energy to readily prepare and respond to a potential emergency.

In this context, an effort has been made to integrate the contingency planning process for managing natural and human-induced hazard

CHAPTER I: BACKGROUND



INTRODUCTION

Cotabato City has a total land area of 17,599 hectares or 176 square kilometers with a total population of 325,079 based on the 2020 census making it the most populated city under the independent component status. Cotabato City is generally highly susceptible to flooding. One of the major factors to this is the city's geographical location. The city is crisscrossed by two large rivers, the Rio Grande Mindanao River and Tamontaka River. There are also surrounding three big marshes, the Liguasan Marsh, Ebpanan Marsh, and Butilen Marsh which all drain to the city's tributaries. This makes the city a catch basin of rain and flood waters all over Central Mindanao.

The last recorded major flood that placed the city's entire downtown area and immediate areas underwater occurred in 1960. Water level in almost all the affected areas was waist-deep causing the shutdown of power supply. Use of public transport vehicles halted to a standstill and residents moved from one place to another with the use of wooden paddle-run bancas, bamboo rafts and makeshift boats made from steel drums cut in half vertically. Flooding lasted for almost a month but business went on as usual although on a very limited scale.

Despite being located outside the Pacific Typhoon Belt, Cotabato City was not spared from the impact of typhoon-induced flooding incidents. There were three typhoon-induced flooding incidents in a span of four years which reckoned from 2008 to 2013. The impact of Typhoon Frank in 2008 worsen when tons of water hyacinths coming from Liguasan Marsh amassed at the Delta Bridge and practically closed portions of the Rio Grande de Mindanao which resulted to run-offs spilled over to low-lying areas and inundated 32 barangays at varying levels.

A year after in 2009, another weather disturbance code named Typhoon Jolina wreaked havoc to the city residents in thirty-two (32) barangays. In the aftermath of this incident, it was recommended that the Disaster Relief Management Plan must be reviewed and called for the parallel activity at the barangay level. In 2011, the flood that struck the city was caused by similar phenomenon that happened in 2008 but on a grander scale. Prior to the incident, there was no typhoon expected to hit any part of Mindanao but torrential rains were already hitting some parts of the island particularly from the northeastern front (Agusan-Bukidnon areas) and south-western front (South Cotabato to Sultan Kudarat including Maguindanao). Heavy rains went on for about two weeks dumping huge amount of rainwater. By the natural course of the Mindanao River Basin (MRB), these waters would go streaming down Rio Grande de Mindanao and Tamontaka Rivers.

In 2013, the incessant rains over the past 3 days have caused a low-pressure area in Mindanao and inundated 31 of the 37 barangays. It has caused a displacement of 37,055 families or estimated 134,615 individuals. While 31,950 families stayed with their friends or relative during this time, 5,083 were either staying in school-based camps or community-based camps (e.g., roads and bridges). This Contingency Plan for flooding incidents was formulated to minimize if not totally control the damages and losses on the lives and properties of the city residents. This document is a collaborative effort by the Cotabato City DRRMO together with members of the different DDR Committees in response to the requirement set forth by the NDRRMC.

ELEMENTS AT RISK TO FLOODING

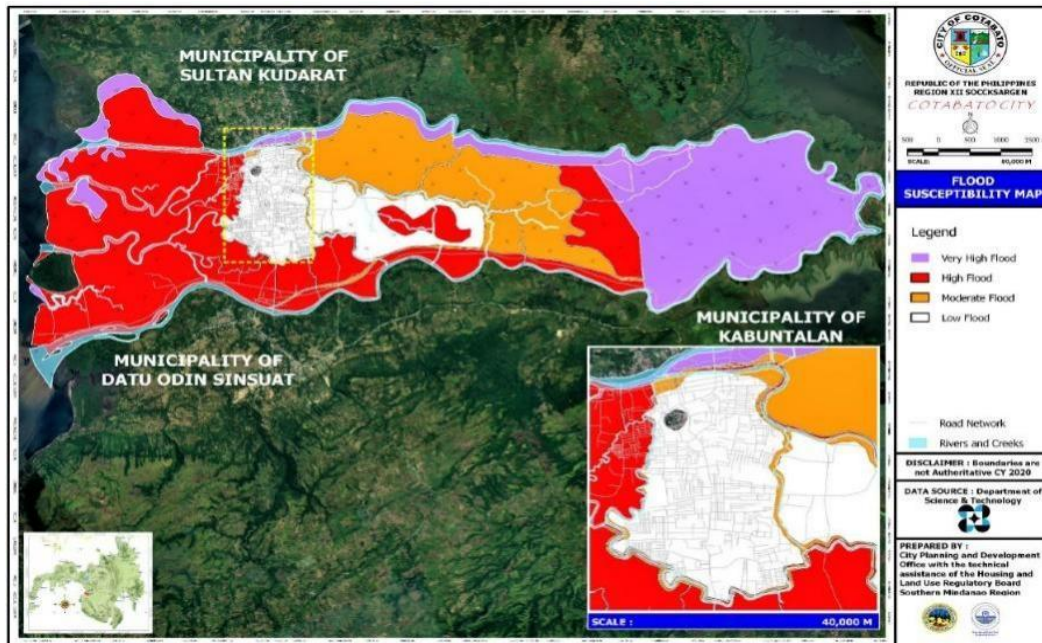
Elements at risk are exposure databases divided into five units. They are used to determine vulnerability, sensitivity, and adaptive capacity attributes of the exposed elements which are necessary information when conducting a climate change vulnerability and disaster risk assessment. A substantial part of the element was geo-referenced and accordingly reflected on the map. Other areas/element-based information were gathered to establish the sensitivity/ vulnerability and adaptive capacity of the exposed elements which will be the basis for estimating the levels of risk and vulnerability.

The different elements at risk to various hazards which include flooding are:

- Population – Spatial location of local inhabitants which would be used to indicate whether they will be potentially affected by hazards or impacts of climate change.
- Urban Use Areas – pertain to the built environment currently utilized for residential, commercial, industrial, tourism, sanitary waste management facilities, cemeteries, and other land use unique to the locality.
- Natural Resource-based Production Areas – pertains to areas utilized for crop, fisheries, and forest-related production.
- Critical Point Facilities – These facilities provide socio-economic support services such as schools, hospitals, local government buildings, roads/ bridges, air/sea ports, communication towers, and power-related facilities.
- Lifeline Utilities – Cover the transportation, water distribution, drainage, and power distribution networks. These are important local government assets that should be assessed to ensure the delivery of lifeline services.

The map shows the susceptibility of the city to flooding.

Figure 1
Flood Susceptibility in Cotabato City



SOURCE: OCPDC CDRA

HAZARD OVERLAY MAPS

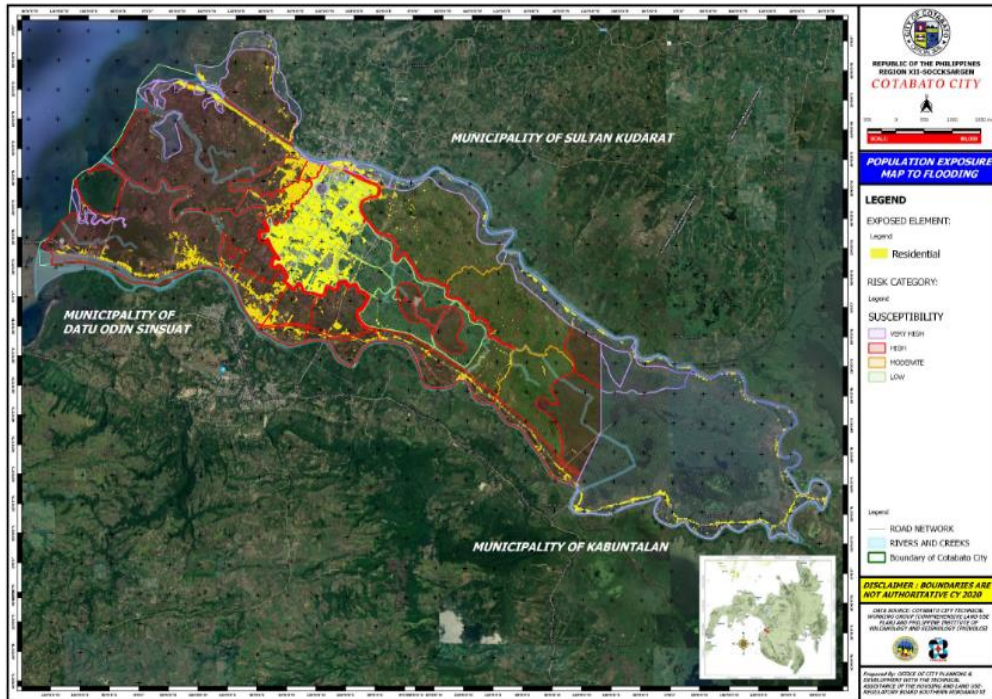
The population in the areas of Kalanganan and Tamontaka are exposed to flooding with Tamontaka 5 as the highest exposure. Bagua 1 and 2, Rosary Heights 10, 11, Rosary Heights Mother and Tamontaka Mother, 1, 2, and 3 have a high to moderate exposure. Poblacion 8 and 9 has a moderate exposure as well. It must be noted that there are a substantial number of populations in the affected zone. Most part of the urban center is safe from flooding.

Lifeline utilities in the areas of Kalanganan and Tamontaka are exposed to flooding with Tamontaka 5 as the highest exposure. Bagua 1 and 2, Rosary Heights 10, 11, Rosary Heights Mother and Tamontaka Mother, 1, 2 and 3 have a high to moderate exposure. Poblacion 8 and 9 has a moderate exposure as well. However, fewer lifelines are present in these areas. Lifeline utilities in the urban center are safe from flooding.

Most of the facilities that provide socioeconomic support are in the urban center of the city. There are a few facilities located in the flood prone area such as barangay halls, barangay day care centers, places of worship and a few primary schools. Most of these facilities are strewn in those said areas to provide an accessible service to the public.

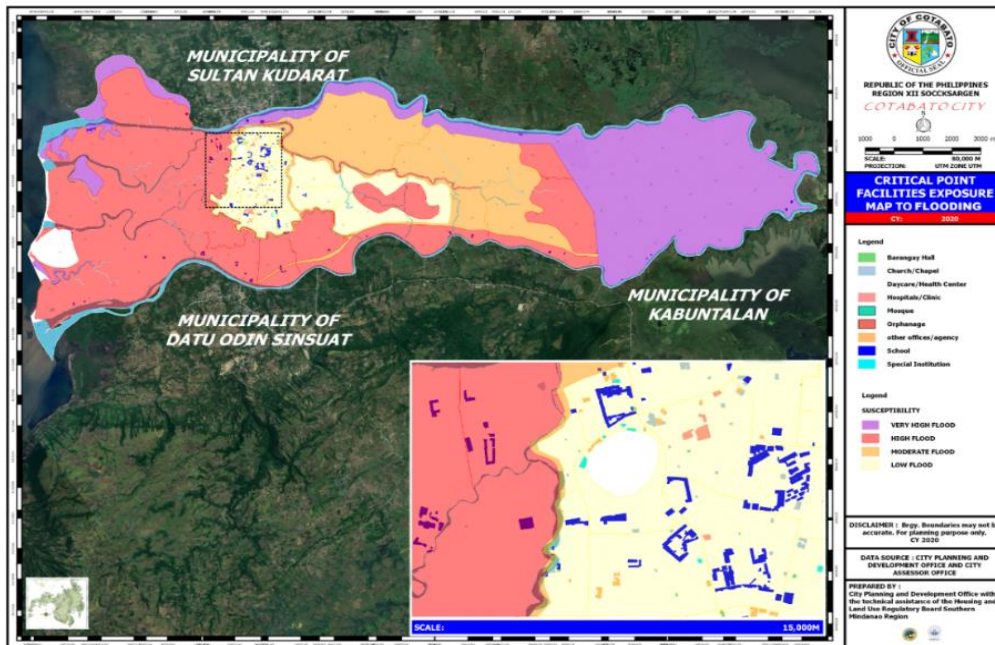
A substantial area devoted to crops and fishery are exposed to flood particularly those at the barangays of Kalanganan, barangays of Tamontaka as well as those in barangays Poblacion 8 and 9. DENR-classified Timberland is also exposed to flooding. Part of Timako Hill being high in elevation is partly affected.

Figure 2
Population Exposure Map to Flooding



SOURCE: OCPDC CDRA

Figure 3
Critical point facilities exposed to flooding



SOURCE: OCPDC CDRA

CITY PROFILE

COTABATO CITY is situated in the northwest portion of Maguindanao. It lies at 7°13' North Latitude and 124°14' East Longitude. It is approximately 689.9 nautical miles southeast of Manila and 220 kilometers away from Davao City. The city is bounded on the north by the municipality of Sultan Kudarat with the Rio Grande de Mindanao as its boundary; on the east by the municipality of Kabuntalan; on the south by the municipality of Dinaig, now Datu Odin Sinsuat (DOS), Maguindanao; and Illana Bay on the west.

The total land area of the city is 17, 599 hectares with a total population of 325, 079 as of 2020 PSA Census. The population growth rate is growth rate of 1.64%

HAZARD, VULNERABILITY & RISK ASSESSMENT

C.1. NATURAL DISASTER: FLOOD

The city is situated in the lowest portion of Maguindanao province. The City of Cotabato, with its 37 barangays, spans an area with marked landscapes of flat, level to nearly level, very gently sloping to gently undulation, and moderately sloping or rolling. It is basically a delta formed by two big rivers, the Tamontaka River and the Rio Grande de Mindanao. Basically, 70% of its total land area is below sea level. There are only two existing elevated areas in the city: PC Hill and Timako Hill, with altitudes of 90 and 150 feet, respectively.

The city, through its two (2) major rivers, the Rio Gande de Mindanao, and the Rio Gande de Tamontaka, is the egress of all the waters flowing from upstream through the more than 200,000 hectares of Liguasan Marsh, Ebpanan Marsh, and Butilen Marsh. During continuous precipitation, excessive waters flowing through the rivers of the Ala River, Pulangi River, and Banga River drain into these marshes, consequently exceeding their carrying capacity. So much water then streams down to Cotabato City, bringing with it water hyacinth that clogs bridges and impedes the free flow of water, resulting in the inundation of the low-lying barangays of the city.

During the 2013 flood, around 31,950 families were displaced, or an estimated 127,937 individuals. The affected barangays were predominantly residential and agricultural, damaging crops and properties. The affected barangays are as follows:

Table 1: Barangay affected by flood

	NAME OF BARANGAY	Extent of Flood	Dominant Land Use
1	Poblacion MB	Largely flooded	Residential
2	Poblacion 1	Largely flooded	Residential
3	Poblacion 2	Partly flooded	Residential
4	Poblacion 3	Partly flooded	Residential
5	Poblacion 4	Partly flooded	Residential
6	Poblacion 6	Partly flooded	Residential
7	Poblacion 7	Largely flooded	Residential
8	Poblacion 8	Entirely flooded	Agricultural
9	Poblacion 9	Entirely flooded	Agricultural
10	Bagua MB	Partly Flooded	Residential
11	Bagua 1	Partly Flooded	Residential
12	Bagua 2	Partly flooded	Residential
13	Bagua 3	Partly flooded	Residential
14	Rosary Heights 2	Partly Flooded	Residential
15	Rosary Heights 3	Partly flooded	Residential
16	Rosary Heights 5	Largely flooded	Residential
17	Rosary Heights 6	Largely flooded	Residential
18	Rosary Heights 7	Largely flooded	Residential
19	Rosary Heights 8	Largely flooded	Residential
20	Rosary Heights 9	Partly flooded	Residential
21	Rosary Heights 10	Partly flooded	Residential
22	Rosary Heights 12	Partly flooded	Residential
23	Tamontaka MB	Largely flooded	Residential
24	Tamontaka 1	Entirely flooded	Agricultural
25	Tamontaka 2	Entirely flooded	Agricultural
26	Tamontaka 3	Entirely flooded	Agricultural
27	Tamontaka 4	Entirely flooded	Agricultural
28	Tamontaka 5	Entirely flooded	Agricultural
29	Kalanganan Mother	Partly flooded	Agricultural
30	Kalanganan 1	Partly flooded	Agricultural
31	Kalanganan 2	Partly flooded	Agricultural

C.2. NATURAL DISASTER: EARTHQUAKE

On August 17, 1976, a strong earthquake generated by the Cotabato trench situated in the Moro Gulf shook the island of Mindanao. The 7.8-magnitude earthquake spawned a tsunami that destroyed the 700-km coastline of the Moro Gulf in the North Celebes Sea. It was an earthquake that destroyed immensely the lives and properties of the people in Central Mindanao. According to the Phivolcs report, the tsunami that accompanied the earthquake was responsible for 85% of deaths, 65% of injuries, and 95% of those missing.

After the sea spent its fury and rolled back to its natural flow, thousands of people were dead, others were homeless or missing, and millions of pesos were lost from the damage to properties. Properties lost not only include establishments for residential and commercial use but also bancas that represent the livelihood of families (PHIVOLCS-DOST/Compilation of Damaging Earthquakes in the Philippines).

In Cotabato City, the following buildings were fully or partially damaged:

1. Cotabato Chinese School Gymnasium
2. Administration Building of CCI
3. Harvardian College
4. Administration building of Notre Dame University
5. The Auditorium and Science building
6. The New Residence Hall
7. The Technical School
8. Dawn's Hotel
9. D'Max Restaurant
10. Imperial Hotel
11. Melbourne Hotel
12. New Society Hotel
13. Saguitarius Hotel
14. Sultan Hotel
15. Cotabato Cinema
16. Francel Theater
17. Rita Theater
18. Immaculate Concepcion Church
19. Tamontaka Catholic Church
20. Amicus Building
21. Boston Bakery
22. Cotabato Auto Supply
23. Cotabato Fire and Police Station
24. First Gift and Bookstore
25. LCT Hardware and Auto Supply
26. Melineen Building
27. South Seas Trading
28. Tan Bo Building
29. Tison Building
30. Waterfront warehouses
31. Quirino Bridge
32. Tamontaka Bridge

According to PHIVOLCS, a large tectonic plate traverses Cotabato City from the south of Mindanao towards the Zamboanga Peninsula. A possible re-occurrence therefore remains.

C.3. NATURAL DISASTER: TSUNAMI

The 1976 Moro Gulf earthquake left a haunting legacy, with its tremors shaking the region and unleashing a devastating tsunami that surged to an estimated height of 9.0 meters. Without warning, the colossal waves crashed upon the communities engulfing the Moro Gulf, catching them off guard and inundating their homes and livelihoods.

Stretching as far as 7.0 kilometers inland from the coastline, the tsunami's impact was felt extremely strong in various cities. Places like Pagadian City, Cotabato City, Zamboanga City, and Lebak in Sultan Kudarat take on the force of its wrath, experiencing the highest waves and catastrophic destruction.

Tragically, the toll was steep—approximately 8,000 people perished, including those who vanished without a trace, their fates forever unknown. This catastrophe stands as the most disastrous tsunami to ever strike the Philippines at that time, etching a profound mark on the nation's history.

In Cotabato City, while there is no precise record of the number of families or individuals affected, the impacts of the disaster were undeniable. The City Disaster Risk Reduction and Management Plan of 2012 cited that hundreds of lives were severely impacted by the merciless onslaught of the tsunami.

This catastrophic event not only claimed lives but also laid bare the vulnerabilities of coastal communities and emphasized the critical need for comprehensive disaster preparedness and mitigation strategies. The 1976 Moro Gulf earthquake and its ensuing tsunami serve as a serious reminder of the importance of proactive measures to safeguard lives and mitigate the devastation caused by natural disasters.

[\(<http://www.rappler.com/move-ph/issues/disasters/102827-1976-moro-gulf-earthquake-tsunami>\)](http://www.rappler.com/move-ph/issues/disasters/102827-1976-moro-gulf-earthquake-tsunami)

C.4. NATURAL DISASTER: STORM SURGE

DOST-PAGASA defined storm surge as the abnormal rise in sea level that occurs during tropical cyclones caused by strong winds and low atmospheric pressures produced by tropical cyclones. As the tropical cyclone approaches the coast, strong winds push the ocean water over the low-lying coastal areas, which can lead to flooding. This makes storm surges very dangerous. A storm surge becomes more dangerous when it arrives on top of a high tide. When this happens, it may flood areas that otherwise might have been dry or safe.

On top of the storm surge, big and strong waves generated by powerful winds also come with it.

Among the factors PAGASA considers when identifying the potential impacts of a storm surge are the strength of the tropical cyclone, the height of the surge, and the community located in low-lying areas. A storm surge brings widespread floods, which can extend kilometers from the seashore, depending on the shape and height of the wave. Along with strong waves and forceful winds, a storm surge can destroy and wash away anything in its path.

Though there were no recorded cases of storm surge in Cotabato City, it is still an impending disaster that may hit the city, with the coastal barangays highly exposed.

C.5. HUMAN-INDUCED DISASTER: BOMBING

Cotabato City is not spared from terrorist acts to achieve a political goal. Bombing public places is one way to achieve their ends. However, one of the deadliest bombings in the history of the city was not politically inspired but caused by some immature and irresponsible individuals. In May 2002, a group of teenagers ages 14–17 threw a grenade at a group of concert goers at the compound of St. Joseph Parish Church at Notre Dame Village, Cotabato City, and killed at least 7 people and injured at least 125 people. The explosive was wrapped in iron shavings, which led to many victims. The responders rushed the victims to different hospitals in the city, but there were not enough available hospital beds to accommodate them. The reason for the carnage was that the teenagers got mad after the band refused to play their requested song. Others claimed that the performing band refused the teenagers' request to perform their own act onstage.

On July 5, 2009 (Sunday), an Improvised Explosive Device (IED) went off at a lechon stand fronting the Immaculate Concepcion Cathedral. It was timed to explode just as the church goers were leaving the church after the mass. The incident took the lives of 5 people and injured 29 others.

On August 5, 2013, a car bomb exploded along Sinsuat Avenue, killing at least 8 people, and injuring 40 others. The bomb attack targeted a city official who has been receiving death threats. She was not harmed, though. Some bombs were found a week later and were believed to be connected. Due to the vigilance of the authorities, the bombs were detonated before they could cause injuries.

On Maundy Thursday of 2015, the police found a bomb near a hospital and a mall. The police believe that it was meant for another bomb attack. The

civilians who were in the area alerted the authorities about the suspected bomb. Not far from the site was also another bomb, probably meant as a secondary explosion. The police authorities also discovered this due to the high level of alert.

Also, in the same year, 2015, an improvised bomb exploded on Sinsuat Avenue. The believed targets in this bomb attack were elements of the Special Forces who were on their routine patrol. Two incidents of grenade throwing also occurred in the same year. One was thrown at a passing dump truck, and the latter one was thrown in front of a restaurant. Both incidents happen in almost the same place.

C.6. HUMAN INDUCED DISASTER: ARMED CONFLICT

Cotabato City has long been a symbol of diversity and perseverance, but its history is deeply marked with the scars of armed conflict, which has reshaped the lives of its residents.

Beyond the scars of conflict, there are the heartbreaking stories of Internally Displaced People (IDPs) seeking refuge within Cotabato City's borders. Waves of IDPs have sought safety in the city, coming from adjacent municipalities in Maguindanao and North Cotabato provinces, forced to flee from their homes by the terrible consequences of war.

Cotabato City has become a sanctuary, a haven, for countless families during the darkest hours of conflict. The sudden influx of migrants underscores the city's role as a refuge amidst the turmoil of both natural disasters and man-made conflicts.

In the year 2000, more than 40,000 internally displaced persons (IDPs) took refuge in Cotabato City because of the Moro Islamic Liberation Front (MILF) conflict, where former President Joseph Estrada proclaimed an all-out war. Many of these displaced people chose to make the city their permanent home, sparking a surge in population that changed the city's character.

The arrival of these displaced populations has significantly altered the city's demographics. They brought with them unique stories and cultures. However, this influx has also strained resources and infrastructure, challenging the city's ability to provide essential services.

The aftermath of armed conflict reaches beyond immediate shelter needs, affecting access to education, healthcare, and employment opportunities for both the displaced and the city's original residents. Integration and unity amidst this diversity have become essential challenges for Cotabato City.

As Cotabato City deals with the long-term effects of armed conflict and continues to house individuals displaced by disasters and man-made conflict, urgent, long-term solutions are required.

C.7. HUMAN INDUCED DISASTER: FIRE

Among the most devastating incidents Cotabato City experienced in relation to fire happened in Barangay Bagua Mother (Campo Muslim) back in November 2012. It tore through 21 houses, displacing 43 families and leaving a trail of destruction that lingered long after the flames were extinguished.

Following this, on September 13, 2013, around 50 stalls at the barter trade area on Governor Gutierrez Avenue were razed to the ground. Despite laws forbidding such activities, reports suggested that the fire may have been the result of nearby cooking activities. Although no injuries were reported, the loss of livelihood was immense for the occupants of these stalls.

The year 2015 brought another devastating blow when the Cotabato City Alliance Evangelical Church succumbed to flames in the early hours of April. The fire consumed the church, a school, and the pastor's living quarters, resulting in an estimated loss of 10 million pesos and shattering the heart of the community.

The impact of these fires has been deeply felt, not just in terms of property damage but in the disruption of lives and livelihoods. Families were left homeless, businesses were reduced to ashes, and educational institutions were devastated.

However, these fires have also highlighted critical concerns regarding fire safety, building regulations, and the need for enhanced preventive measures. The necessity for stricter adherence to safety protocols and comprehensive disaster preparedness plans has been underscored by these recurrent tragedies.

Table 2: Major Flooding Incident in Cotabato City

Hazard Event and Description	Date	Affected Barangays	Number of Affected			Source of Information
			Persons	HH	Families	
Flooding caused by Water Hyacinths	2011	37 barangays	345,080			CDRRMO
Flooding	2017	26 barangays	102,433		23,176	OCSWDSS
Flooding caused by Typhoon Quinta	Oct 2020	17 barangays			5526	CDRRMO
Flooding caused by LPA	2021	37 barangays		7562		CDRRMO, OCSWDSS
Flooding caused by Typhoon Agaton	April 2022	9 barangays		7086		CDRRMO
Flooding caused by Easterlies	July 2022	13 barangays		9853		CDRRMO
Flooding caused by Typhoon Paeng	Oct-Nov 2022	37 barangays	337,980			SitRep OCM, OCSWDSS

Source: LDRRMP 2017 -2022

HAZARD IDENTIFICATION

Cotabato City is exposed to both natural and human-induced hazards such as Flood, earthquake, tsunami, fire, storm surges, bombing incidents and other incidents attributed to special events or high-density population gatherings.

Table 3: Hazard Identification Matrix

Hazard	Probability		Impact		Average Probability + Impact /2	Rank
	Rate	Remarks	Rate	Remarks		
Flood	5	The probability is ALMOST CERTAIN . The city is crisscrossed by two huge rivers—Rio Grande and Tamontaka—and three big marshes—Liguasan, Ebpanan, and Butilen—that drain their excess waters into the city's rivers and tributaries, making the city a catch basin for rain and flood waters all over Central Mindanao. In 2022, there were three (3) major flood incidents that occurred.	3	There are twenty-one (21) flood-prone barangays in the city that have experienced perennial flooding with increasing frequency, usually 2-3 times a year. And this has caused apparent damage to properties, both agricultural and structural. Despite this, 37 of the city's barangays are adaptive or resilient, and several mitigation activities (clearing or declogging of canals, flood control drainage projects) were initiated. Therefore, the impact is MODERATE .	4	2
Earthquake	4	The presence of earthquake generators, specifically the Cotabato Trench and Mindanao Fault, is what predisposes Cotabato City to experience several ground tremors and earthquakes. Therefore, the probability of an earthquake is VERY LIKELY . Based on http://faultfinder.phivolcs , Cotabato City is 20.9 km near the South Barira Fault.	5	In 1976, the Cotabato Trench generated a 7.9-magnitude earthquake, leaving a trail of DEVASTATING IMPACT in its wake. There were several damages to properties (establishments, households, and structures) and losses of lives. Also in the downtown area, there is a secondary hazard, which is liquefaction.	4.5	1

Tsunami	3	Earthquake-induced tectonic displacements under the sea are the main cause of tsunamis. It goes without saying that when there is a high-magnitude earthquake, the probability of a tsunami affecting Cotabato City is LIKELY .	4	The 1976 earthquake generated a tsunami that had a SEVERE IMPACT , affecting more than 700 km of coastline, according to PHIVOLCS. According to the available data, 100 individuals in Kalanganan were affected.	3.5	3
Fire	3	Given the different conditions and factors that may contribute to or result in fire, such as houses made of light materials and illegal settling, the probability of this hazard, especially in highly susceptible barangays, is LIKELY .	4	The recent conflagration incident happened in PC Hill RH 1, affecting a total of 17 households. As of November 2022, the damage to properties due to 11 fire incidents cost ₱11.4 million.	3.5	3
Bombing	3	Recent bombings: Pilot (2022) and Tantawan (2015)—mass casualties.	4	Damage to property and loss of lives.	3.5	3
Storm surge	2	Kalanganan Mother, 1, and 2, are located at the shoreline, above sea level.	2	<ul style="list-style-type: none"> Mitigation activities (mangrove planting) Resilient coastal barangays uphill 	2	5
High Density Gathering	2	Based on reports, incidents attributed to these high-density population gatherings are UNLIKELY . Therefore, since these are planned events, the likelihood of them causing major affliction can be deterred because	2	Based on the record, the impact of incidents attributed to various special events is MINOR . This can range from minor injuries,	2	5

		there is coordination and proactive and preventive measures are undertaken.		fainting due to hypoglycemia or suffocation, and possible crowd crushes and human stampedes.		
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RISK RATING: PROBABILITY AND IMPACT

Table 4a: Probability Rating Scale

Probability Rating Scale				
1 Most Unlikely	2 Unlikely	3 Likely	4 Very Likely	5 Almost Certain
The event may occur only in exceptional cases	The event could occur at some time, but probably will not	The event might occur at some time, and probably will	The event will probably occur in most or many cases	The event is expected to occur in many or most cases

Table 4b: Impact Rating Scale

Impact Rating Scale				
1 Negligible	2 Minor	3 Moderate	4 Severe	5 Devastating
No casualty (dead, injured, missing)	Injured: 1-5 Dead: 0 Missing: 0	Injured: 1-10 Dead: 1-2 Missing: 1-2	Injured: 1 - 50 Dead: 1 - 20 Missing: 1 - 20	Injured: 50 & above Dead: 21 & above Missing: 21 & above
No damage to property	Minor loss and/or damage to property (up to P 200,000 worth of damage)	Significant loss and/or damage to property (P 200,001- 1 M)	Major loss to property (P 1 – 5 M)	Catastrophic loss to property (P 5 M above)
No delay in normal functioning	Up to one day delay in operations	Up to 1 week delay in operations	Between 1 month delay in operations	More than 1 month delay in operations

Among all the hazards, flooding received the highest probability of occurrence with a rating of 5 which translates to ALMOST CERTAIN possibility of occurring. One major contributory factor is the city's geographic location wherein about 70% of its total land area is below sea level making it a catch

basin of upstream municipalities. Aside from its low elevation, it is also surrounded by two large rivers, the Rio Grande de Mindanao River and the Tamontaka River and crisscrossed by numerous small rivers and creeks.

This explains the frequency of flooding incidents in the city. For the impact of the hazard, flooding received an impact rating of 4 which translates to MODERATE IMPACT. The slightly lower rating for the impact of flooding can be an implication of the increased resiliency in the community and priority programs of the government to address this issue. With these, flooding ranked first in the hazard identification matrix.

For the earthquake hazard, the probability of occurrence rating was 4 which translates to VERY LIKELY and was the second highest after flooding. This was attributed to the proximity of the Mindanao Fault, Cotabato Trench, and other fault lines to Cotabato City. The 1976 Moro Gulf earthquake was also a factor to this high probability rating since it poses a threat of happening again. As for its impact, earthquake received the highest rating among all the hazards. This impact rating of 5 translates to DEVASTATING IMPACT which was also attributed to the devastating effect caused by the Moro Gulf earthquake. Aside from the direct impact of a very high magnitude earthquake, the said hazard can also result to secondary effects including tsunami and liquefaction. These results call for the need to prioritize the formulation of Contingency Plan for Flooding and Contingency Plan for Earthquake. These contingency plans shall minimize if not totally control the damages and losses at the onset of the worst-case scenario and help establish effective and efficient mechanism for preparedness and response.

HAZARD TO PLAN FOR: FLOODING AND STORM SURGE

Based on the assessment of the hazards, Cotabato City requires having a contingency plan for flood that should help establish effective and efficient mechanism for preparedness and response.

The anatomy of Flood and Storm Surge is shown below:

Table 5: Anatomy of Flood and Storm Surge

Root Causes	Early Warning Signs	Triggering Factors	Existing Mitigating Measures
<ul style="list-style-type: none"> • Geographical location and serving as catch basin of rain and flood waters all over Central Mindanao • Sea Level Rising due to Climate Change • Lack of egress of drainage • Agricultural activities/Deforestation in the upstream • Overflowing of Rio Grande de Mindanao and Tamontaka River 	<ul style="list-style-type: none"> • Monitoring of Water level Markings between Red-Yellow level (approx. 50meters) • Rain Gauge “Orange Level” • Weather Forecasting from PAGASA • SitRep of adjacent municipalities • Social media posts 	<ul style="list-style-type: none"> • Heavy siltation of rivers and creeks • Improper waste disposal • Informal settlers • Increase water level upstream (catch basin) • Presence/Accumulation of Water Hyacinths • Heavy Rains in the upstream 	<ul style="list-style-type: none"> • Regular monitoring of water level to low lying barangays • Info drive • Cleaning and clearing/de-clogging of canals, drainages, and rivers • Clearing of water hyacinths • FCD Projects • IECs on RA 9003 • Tree/Mangrove planting activities • Clean up drive • Strict implementation of City Ordinance 4203 • Advocacy on container gardening (urban OCAGRI) • Waste bunking system

The table shows the anatomy of the hazard which depicts the root causes, early warning signs and triggering factors that lead to an actual disaster. At the same time, it shows the existing mitigating measures undertaken by the LGU of Cotabato to lessen or limit the adverse impacts of flood in the locality.

Primarily, the occurrence of flood in the city is attributed to its geographical location, being situated in the lowest portion of Maguindanao province and crisscrossed by two huge rivers – Rio Grande and Tamontaka and three big marshes- Liguasan, Inampadan and Butilen that drains its excess waters in the City's rivers and tributaries.

Also, the rapidly changing climate due to increasing global temperature is what predisposes the city to a sea level rise. The rise of mean sea-level for the Philippines has been noted in several studies to be above the global average rate, ranging from 5.7 to 7.0 mm per year. This is expected to over 60% of the country's areas along the coast. <https://www.omlopezcenter.org/our-work/sea-level-rise>.

The excessive waters flowing through the rivers of Ala, Pulangi and Banga drain to these marshes consequently exceeding its carrying capacity. So much water then streams down to Cotabato City bringing with it water hyacinth clogged on bridges and impedes the free flow of water resulting to inundation of the low-lying barangays of the city.

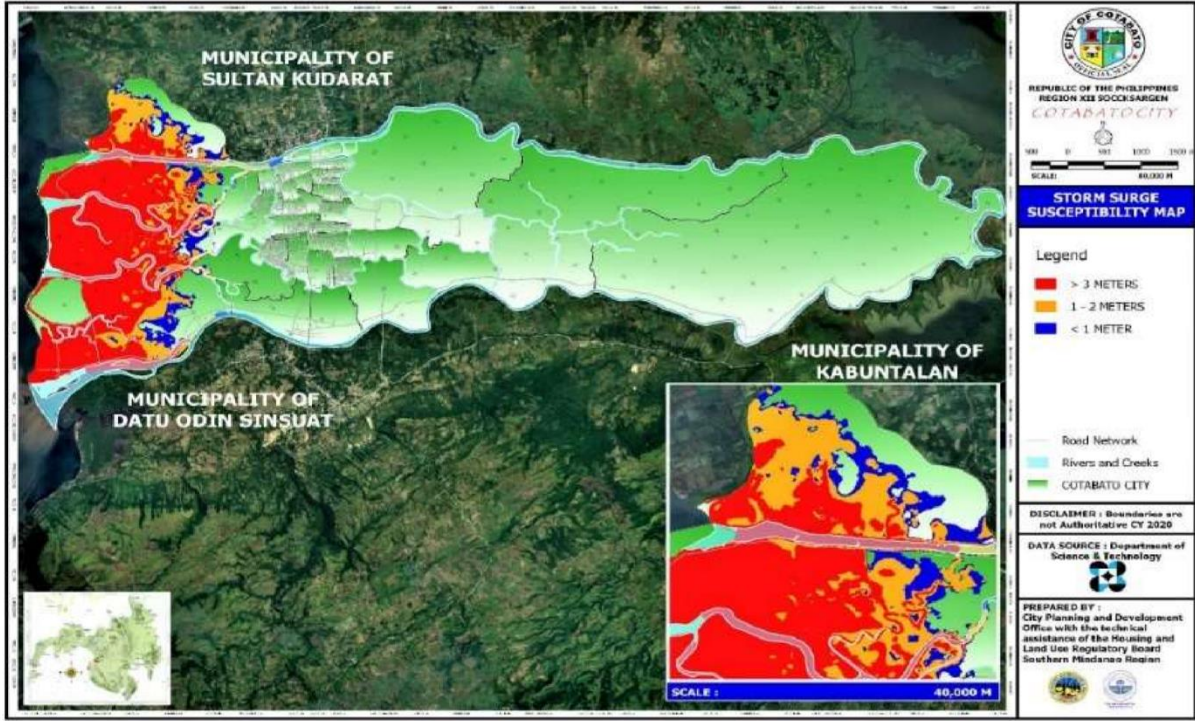
The most apparent and definitive early warning sign for flood is when there is a threat of a weather disturbance based on the forecast or weather outlook of PAGASA. This usually signals the LGU to do preparedness and pre-emptive measures such as information dissemination for public's safety. There are also early warning devices set up by the LGU that when it reaches a certain level signifies an impending threat of flooding. The flood water markers situated in Tamontaka Bridge, Tamontaka 2 Diversion Bridge, Tamontaka 4 River Dike, Biniruan Bridge, Matampay Bridge, Bubong River Dike, and Delta Bridge reaching a critical level of 50 meters (between red and yellow markers) indicates heightened alert. Furthermore, the spillover of flood waters from the upstream is to look out for especially that it can have a knock-on effect where the water will inundate the rivers and tributaries, cascading down to the low-lying areas of the city.

The factors that can trigger the unfolding of floods are attributed to natural conditions and human activities such as heavy and intense rains, shallowing of river beds due to siltation by eroded sediments, informal settlers along rivers, improper waste disposal and presence of water hyacinths impeding river flow. As part of the initiatives of the LGU, we are implementing both structural and non-structural measures to address the perennial problem of the city to flood.

STORM SURGE AND COASTAL FLOODING

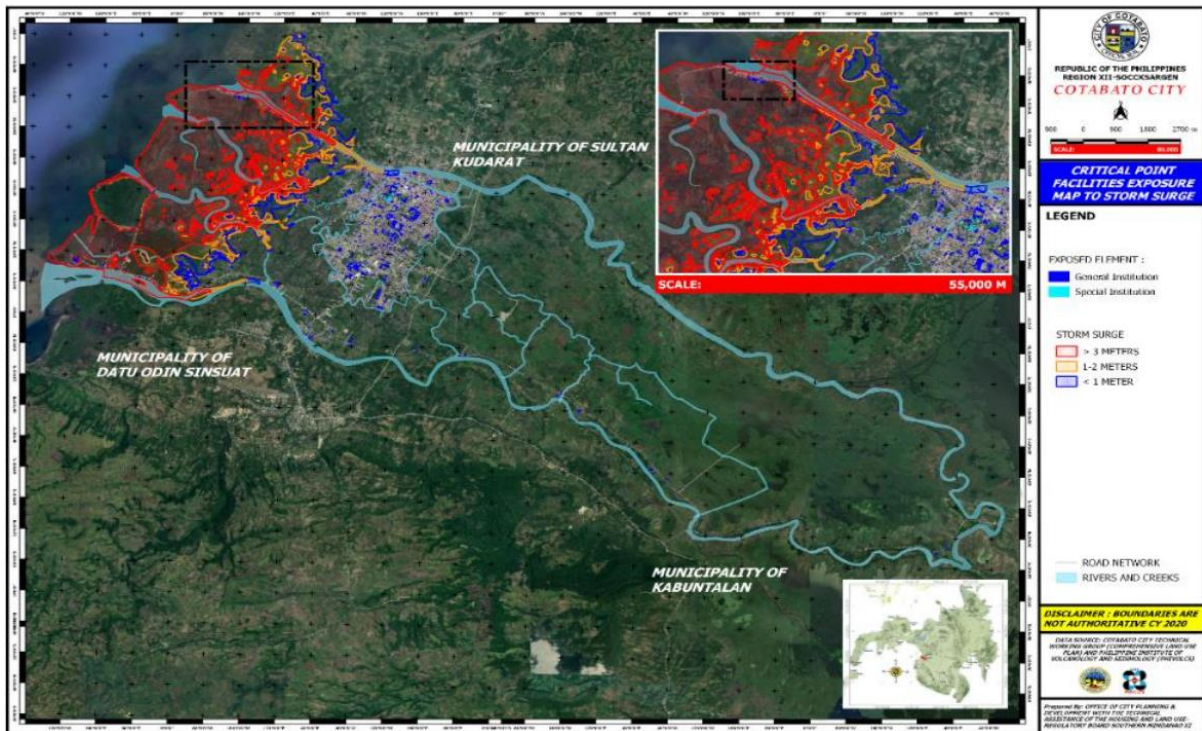
Flooding can result from various factors including heavy rainfall, river overflow, storm surges, or a combination of these. Storm surge refers to the temporary and abnormal rise in sea level accompanying a hurricane, tropical cyclone, or other intense storm. It is caused by catastrophic winds and low atmospheric pressure associated with the storm. The wind pushes water towards the shore, creating a surge that can lead to coastal flooding. Flooding induced by storm surge can have severe consequences causing damage to infrastructure, homes, and agriculture, as well as posing risks to human life especially to the vulnerable population. Storm surge is one of the primary causes of coastal flooding during severe weather events, especially tropical storms, or hurricanes. The intense winds associated with these storms push water toward the shore, causing a rapid and substantial rise in sea level. The extent of flooding resulting from a storm surge depends on various factors including storm Intensity, geography, and tidal conditions.

Figure 4
Storm Surge Susceptibility Map



SOURCE: CDRA

Figure 5. Critical Point Facilities Exposure to Storm Surge



SOURCE: CDRA

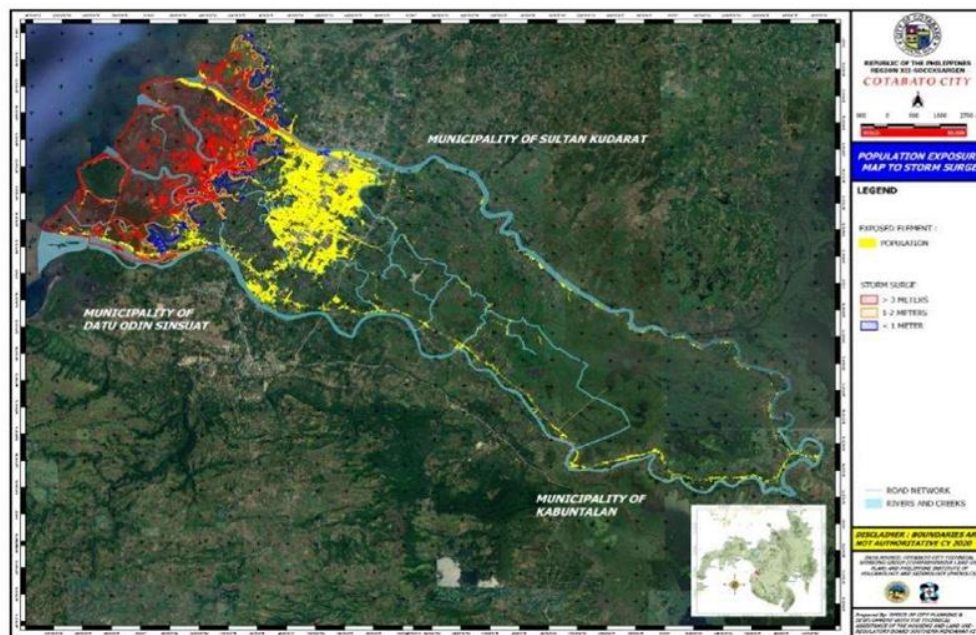
The combined effect of storm surge and flooding can be devastating. Coastal communities of Cotabato City namely barangays Kalanganan 1, Kalanganan 2, and Kalanganan Mother were among the highly exposed communities to the destructive power of storm surges. Its impact can lead to widespread property damage, displacement of populations, and even casualties. Understanding the factors influencing storm surge and implementing measures to mitigate its impacts are crucial for coastal communities to reduce the risks associated with these natural events.

Luckily, Cotabato City is not often visited by this natural phenomenon. This may be due to the location of Cotabato City wherein the city is located outside the Pacific Typhoon Belt. However, with the worsening global climate condition, extreme weather events are slowly becoming unpredictable and increasing disaster resiliency should be a priority among the communities living in the coastal areas.

STORM SURGE OVERLAY

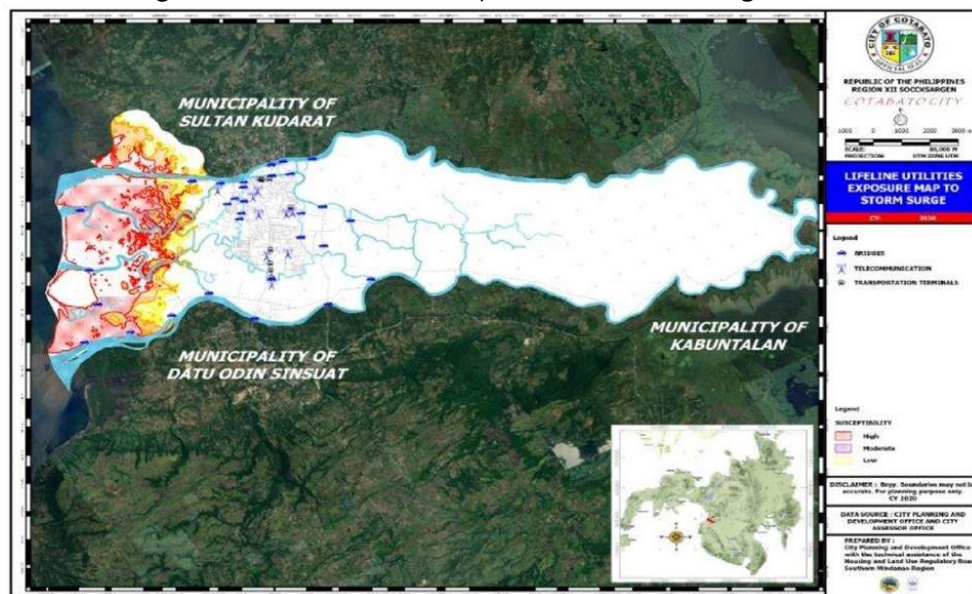
The following maps show the exposure to storm surge of various elements at risk including population, lifeline utilities, critical point facilities, and natural resources-based production areas along the coastal barangays.

Figure 6. Population Exposure to Storm Surge



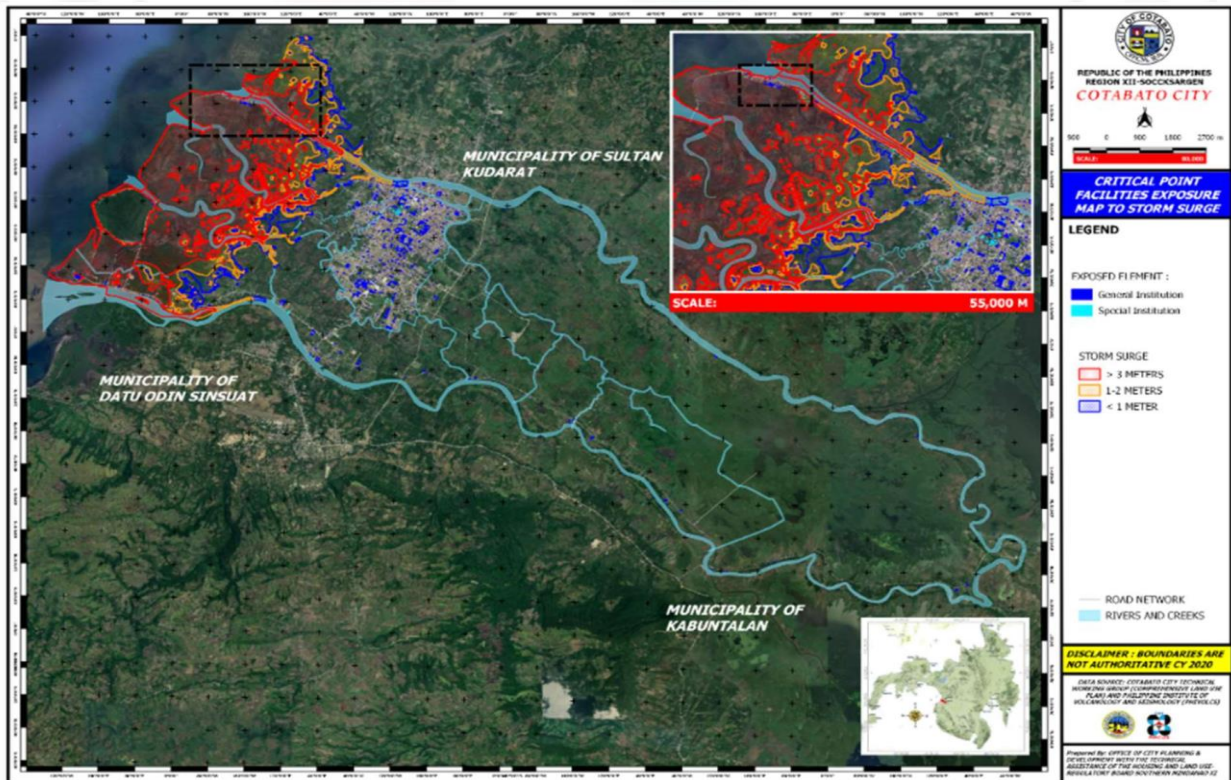
SOURCE: CDRA

Figure 7. Lifeline Utilities Exposure to Storm Surge



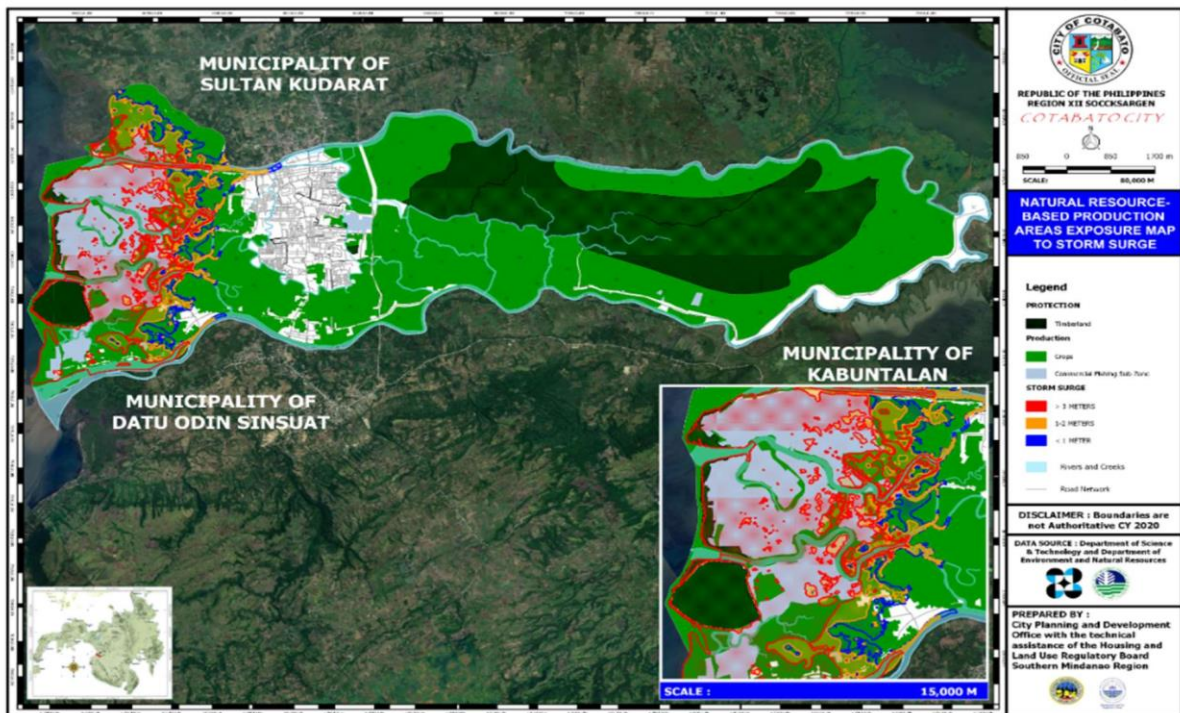
SOURCE: CDRA

Figure 8. Critical Point Facilities Exposed to Storm Surge



SOURCE: CDRA

Figure 9. Natural Resource - Based Production Areas Exposed to Storm Surge



SOURCE: CDRA

SCENARIO GENERATION FOR NATURAL HAZARD: FLOODING AND STORM SURGE

The following table describes the three different

Table 6: Scenario Generation for Natural Hazard

Particulars	Bad	Worse	Worst
Description of the Event	2 consecutive days' moderate to heavy rain with water level reaching 50 meters on water level marker causing flood in 14 low-lying and flood-prone areas 2 days prior to land fall of tropical depression	3 consecutive days' moderate to heavy rain with water level reaching 50 meters on water level marker flooding 22 barangays 2 days prior to land fall of tropical storm	More than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. 2 days prior to land fall of severe tropical storm
Number of Affected Individuals	10% total Population or equivalent to 31,126.40 individuals	15% total Population or equivalent to 46,689.60 individuals	30% total Population or equivalent to 93,381 individuals
Casualty:			
No. of Dead	0	1	3
No. of Injured	10	11	16
No. of Missing	0	2	5
Effects on:			
Housing	10 % of dwelling units made of makeshift to light materials are damaged	15 % of dwelling units made of makeshift to light materials are damaged	30 % of dwelling units made of makeshift to light materials are damaged

Properties	10 % of government and private properties are submerged in floodwater	15 % of government and private properties are submerged in floodwater	30 % of government and private properties are submerged in floodwater
Agriculture and Fisheries	Submerged Agricultural crops but could be harvested. Overflowing of fish fences	Submerged Agricultural crops but only 50% could be harvested. Damaged fish fences/dikes	Submerged Agricultural crops but could not be harvested. Damaged fish ponds.
Tourism, Livelihood and Business	Minimal disruption to tourism activities.	Inaccessible tourist spots. 15% of livelihood, businesses are affected	All tourism activities are suspended. Major disruption. 30% of livelihood and businesses are affected
Roads and Bridges	Partially damaged secondary barangay roads and bridges.	Partially damaged primary barangay roads and bridges.	Inaccessible/damaged roads and bridges.
Social Services	None	20% of basic social and health services may be disrupted for 1 day	50% of basic social and health services may be disrupted for 2 days to 1 week
Communication	Communication transmission lines remain intact	Communication system incurred damage but is restorable within 24 hours Internet connectivity is remotely interrupted	Communication system incurred damage and restoration will require more than 24 hours Internet connectivity is interrupted in several areas
Transportation	Reduction of public transports by 10%	Reduction of public transports by 15%	Reduction of public transports by 30%
Power/Electricity	None	Electrical or Power Supply	Services are disrupted and may take more than

		can be immediately restored within 24 hours	24 hours to a week to be restored
Water	None	Stained Water Source	Possible contamination of water sources and supply due to broken water service lines
Response Capabilities	The LGU has available funds and adequate capacities to address the response requirement	Damage to critical and lifeline utilities imposed a major challenge that hampers the delivery of basic emergency services	Emergency Response is overwhelmed and the basic services of the LGU is inaccessible
Government Trust	Government trust is observed. People are cooperative to the government.	Government trust is observed. People are cooperative to the government.	People lose confidence on the government. Higher government authorities require intervention

The City Disaster Risk Reduction and Management Council (CDRRMC) of Cotabato will have to prepare for the worst-case scenario as shown in the above table. In this case, more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city.

This event led to the occurrence of floods and flashfloods in identified areas. It is projected to affect at least thirty percent (30%) of the population with some casualties. Thirty percent (30%) of the dwelling units made of makeshift to light materials are damaged. Thirty Percent (30%) of the livelihood sources, businesses and agriculture was affected. The major access roads are also flooded and rendered impassable thereby affecting the transportation of goods and services.

Major lifeline utilities such as power/electricity, water systems, communication systems, access to basic health and social services was disrupted and the restoration requirement will take more than 24 hours to 1 week. This disruption or interruption disables the continuous operation of critical services of the government.

Furthermore, the Anticipatory Action Protocol component is integrated in the scenario building by determining the triggers/thresholds that can potentially lead to the onset of the crisis or disaster. Moreover, determining the casualties, the number of people to be affected, and effects on different elements at risk will scope and characterize the extent or magnitude the disaster can have an impact on people, properties, health, social, economy and environment.



AFFECTED POPULATION

Table 7: Affected Population

Area / Location	No. of Affected Individuals (30% of the total pop)	Displaced Population		
		No. of Individuals Inside Evacuation Centers	No. of Individuals Outside Evacuation Centers	Reasons for Displacement
Bagua MB	5656	566	5090	Submerged in flood waters
Bagua 1	2871	287	2584	Submerged in flood waters
Bagua 2	6150	615	5535	Submerged in flood waters
Bagua 3	2135	213	1922	Submerged in flood waters
Kalanganan MB	4684	468	4216	Submerged in flood waters
Kalanganan 1	1811	181	1630	Submerged in flood waters
Kalanganan 2	1871	187	1684	Submerged in flood waters
Poblacion MB	6466	645	5821	Submerged in flood waters
Poblacion 1	1770	177	1593	Submerged in flood waters
Poblacion 2	1965	196	1769	Submerged in flood waters
Poblacion 3	931	93	838	Submerged in flood waters
Poblacion 4	2013	201	1812	Submerged in flood waters
Poblacion 5	957	96	861	Submerged in flood waters
Poblacion 6	1606	161	1445	Submerged in flood waters
Poblacion 7	4900	490	4410	Submerged in flood waters
Poblacion 8	2740	274	2466	Submerged in flood waters
Poblacion 9	1871	187	1684	Submerged in flood waters
Rosary Heights MB	4348	434	3914	Submerged in flood waters
Rosary Heights 1	1226	123	1103	Submerged in flood waters

Rosary Heights 2	1561	156	1405	Submerged in flood waters
Rosary Heights 3	3364	336	3028	Submerged in flood waters
Rosary Heights 4	1365	136	1229	Submerged in flood waters
Rosary Heights 5	1831	183	1648	Submerged in flood waters
Rosary Heights 6	2135	213	1922	Submerged in flood waters
Rosary Heights 7	2887	289	2598	Submerged in flood waters
Rosary Heights 8	2658	266	2392	Submerged in flood waters
Rosary Heights 9	2433	243	2190	Submerged in flood waters
Rosary Heights 10	4906	491	4415	Submerged in flood waters
Rosary Heights 11	2453	245	2208	Submerged in flood waters
Rosary Heights 12	1454	145	1309	Submerged in flood waters
Rosary Heights 13	1543	154	1389	Submerged in flood waters
Tamontaka MB	3751	375	3376	Submerged in flood waters
Tamontaka 1	1379	138	1241	Submerged in flood waters
Tamontaka 2	1305	130	1175	Submerged in flood waters
Tamontaka 3	851	85	766	Submerged in flood waters
Tamontaka 4	1167	117	1050	Submerged in flood waters
Tamontaka 5	367	37	330	Submerged in flood waters
TOTAL	93,381	9,333	84,048	Submerged in flood waters

The above table reflects the estimated number of individuals that will be affected by flood, directly and/or indirectly, including those who have sustained secondary impacts. Furthermore, it also shows the number of possible displaced population and the reason of displacement. It is projected that 93,381 individuals will be affected with 9333 individuals displaced and sheltered “Inside Evacuation Centers”. The primary reason of the displacement is that their houses are submerged in flood waters.

BREAKDOWN OF AFFECTED POPULATION

Table 8: Breakdown of Affected Population

BARANGAY	POPULATION %	MALE	FEMALE	Infant (0-11 Months)		Children (17 years old and below)		Adult (18-59 years old)		Elderly (60 years old and above) 20%		Persons with Disability 5%		With ILLNESS 5%		Pregnant Woman 10%
				MALE (15%)	FEMALE (12%)	MALE (25%)	FEMALE (23%)	MALE 27%	FEMALE 25%	MALE	FEMALE	MALE (5%)	FEMALE (5%)	MALE (8%)	FEMALE (5%)	
Bagua MB	5656	3394	2262	509	271	848	520	916	566	679	452	170	113	271	113	226
Bagua 1	2871	1723	1148	258	138	431	264	465	287	345	230	86	57	138	57	115
Bagua 2	6150	3690	2460	553	295	922	566	996	615	738	492	184	123	295	123	246
Bagua 3	2135	1281	854	192	102	320	196	346	214	256	171	64	43	102	43	85
Kalanganan MB	4684	2810	1873	422	225	703	431	759	468	562	375	141	94	225	94	187
Kalanganan 1	1811	1087	724	163	87	272	167	293	181	217	145	54	36	87	36	72
Kalanganan 2	1871	1122	748	168	90	281	172	303	187	224	150	56	37	90	37	75
Poblacion MB	6466	3880	2586	582	310	970	595	1047	647	776	517	194	129	310	129	259
Poblacion 1	1770	1062	708	159	85	266	163	287	177	212	142	53	35	85	35	71
Poblacion 2	1965	1179	786	177	94	295	181	318	197	236	157	59	39	94	39	79
Poblacion 3	931	559	372	84	45	140	86	151	93	112	74	28	19	45	19	37
Poblacion 4	2013	1208	805	181	97	302	185	326	201	242	161	60	40	97	40	81
Poblacion 5	957	574	383	86	46	144	88	155	96	115	77	29	19	46	19	38
Poblacion 6	1606	964	642	145	77	241	148	260	161	193	128	48	32	77	32	64
Poblacion 7	4900	2940	1960	441	235	735	451	794	490	588	392	147	98	235	98	196
Poblacion 8	2740	1644	1096	247	132	411	252	444	274	329	219	82	55	132	55	110
Poblacion 9	1871	1122	748	168	90	281	172	303	187	224	150	56	37	90	37	75
Rosary Heights MB	4348	2609	1739	391	209	652	400	704	435	522	348	130	87	209	87	174
Rosary Heights 1	1226	735	490	110	59	184	113	199	123	147	98	37	25	59	25	49
Rosary Heights 2	1561	937	624	141	75	234	144	253	156	187	125	47	31	75	31	62
Rosary Heights 3	3364	2018	1345	303	161	505	309	545	336	404	269	101	67	161	67	135
Rosary Heights 4	1365	819	546	123	66	205	126	221	137	164	109	41	27	66	27	55
Rosary Heights 5	1831	1098	732	165	88	275	168	297	183	220	146	55	37	88	37	73
Rosary Heights 6	2135	1281	854	192	102	320	196	346	213	256	171	64	43	102	43	85
Rosary Heights 7	2887	1732	1155	260	139	433	266	468	289	346	231	87	58	139	58	115
Rosary Heights 8	2658	1595	1063	239	128	399	245	431	266	319	213	80	53	128	53	106
Rosary Heights 9	2433	1460	973	219	117	365	224	394	243	292	195	73	49	117	49	97
Rosary Heights 10	4906	2944	1962	442	235	736	451	795	491	589	392	147	98	235	98	196
Rosary Heights 11	2453	1472	981	221	118	368	226	397	245	294	196	74	49	118	49	98
Rosary Heights 12	1454	873	582	131	70	218	134	236	145	175	116	44	29	70	29	58
Rosary Heights 13	1543	926	617	139	74	231	142	250	154	185	123	46	31	74	31	62
Tamontaka MB	3751	2250	1500	338	180	563	345	608	375	450	300	113	75	180	75	150
Tamontaka 1	1379	828	552	124	66	207	127	223	138	166	110	41	28	66	28	55
Tamontaka 2	1305	783	522	117	63	196	120	211	130	157	104	39	26	63	26	52
Tamontaka 3	851	511	340	71	37	112	68	138	85	102	68	26	17	37	17	34
Tamontaka 4	1167	700	467	105	56	175	107	189	117	140	93	35	23	56	23	47
Tamontaka 5	367	220	147	33	18	58	34	59	37	44	29	11	7	18	7	15

The table reflects the breakdown of the affected population due to the impact of earthquake. The adult age group (18-59 years old) are predominantly the most affected, followed by the children age group of 17 years old and below. The data also shows the number of vulnerable populations that can be affected such as the elderly, persons with disability (PWD), persons with comorbidities, and pregnant mothers.

CHAPTER II: GENERAL POLICIES, GOALS & OBJECTIVES



LEGAL BASIS

1. DILG MC 2010-143 dated December 9, 2010; Local Disaster Risk Reduction and Management Council composition.
2. DILG MC 2012-08 dated January 12, 2011: Community Preparedness on Response to Calamity in every flood and landslide prone barangays.
3. DILG MC No. 2008-55 dated April 1, 2008 – Guidelines on the Acceptance and Processing of Foreign and Local Donations during Emergencies and Disaster Situations
4. DILG MC No. 2008-69 dated April 28, 2008 – Encouraging all Local Chief Executives and Sanggunians to Implement Climate Change Adaptation and Disaster Risk Reduction measures.
5. DILG Memorandum Circular No. 2012-35 dated Feb 21, 2012: Guidelines in Ensuring Public Safety during Man-made and Natural Resources - In line with the objective of the government to have a zero casualties and thus mitigate the effects of man-made and natural disasters, the Department, as the national agency mandated to supervise local government units (LGUs) and their officials, take the initiative in drafting guidelines for the adoption and implementation of necessary emergency measures such as pre-emptive or forced evacuation in areas declared to be imminent danger.
6. RA 10121 - An Act Strengthening the Philippine Disaster Risk Reduction and Management System, providing for the National Disaster Risk Reduction and Management Framework and Institutionalizing the National Disaster Risk Reduction and Management Plan, Appropriating Funds Therefore and for Other Purposes.
7. RA 7160 also known as Local Government Code of 1991 states that all Local Chief Executives are mandated to carry emergency measures as may be necessary during and the after-math of man-made and natural resources and calamities.
8. RA 9003 – Ecological Solid Waste Management
9. RA 970 – Magna Carta of Women 2009- Section 13, Women affected by Disasters, Calamities, and other Crisis Situation.
10. RA 9729 - Climate Change Act of 2009 – An act mainstreaming climate change into government policy formulations, establishing the framework strategy and program on climate change, creating for this purpose the climate change commission, and for other purposes.
11. DSWD Administrative Order No.17 s. 2010 – Omnibus Guidelines for Shelter Assistance – to address the emergency and rehabilitation shelter needs of families with damaged houses, restore their lives to

- normalcy which has been damaged by natural and man-made disaster.
12. DSWD Administrative Department Order No. 26 s. 1998 – Quick Action Response Team (QUART) – A composite team of trained DSWD personnel deployed in area affected by natural, man-made or technological disaster, which after 30% of the given population, and/or when the local capability is inadequate to deliver needed services to victims of disaster.
 13. DSWD AO No. 12 s. 2004 – Guidelines on the provision of psycho-social and basic services to displaced children in disaster situation.
 14. DSWD AO No. 171 s. 2001 – Minimum Standard Rates of Assistance to Victims of Disasters, Distressed and Displaced individuals and families in crisis.
 15. DSWD AO No. 68 s. 2000 – Implementing Guidelines on the setting up of Donors Desk.
 16. DSWD DO No. 3 s. 2000 – Guidelines on DSWD Contribution Towards Comprehensive Plan for Victims of Disasters.

OTHER REFERENCES

1. United Nations Guiding Principles on Internal Displacement, 1998 - Address the specific needs of internally displaced persons worldwide. Identify the rights and guarantees relevant to the protection of IDPs in all phases of displacement, in line with international human rights and humanitarian law.
2. Sphere Standards, 2004 – Provides an insight in common standards of humanitarian relief, and further provides minimum standards in the following sectors: water, sanitation and hygiene, food security, nutrition, food aid, shelter and settlement, non-food items and health services.
3. Inter-Agency Network for Education in Emergencies (INEE) Minimum Standards for Education in Emergencies Chronic Crisis and Early Reconstruction serves both as a handbook containing standards indicators and guidance notes as well as an expression of commitment that all individuals, children, youth, and adults – have a right to quality and relevant education during emergencies and post crisis recovery.
4. Collective Center Guidelines, 2010
5. IASC Guidelines on Mental Health and Psychosocial support in emergency settings, 2007/1951 Convention Relating to the Status of Refugees and the 1967 Protocol
6. The Universal Declaration of Human Rights, 1948

7. The Geneva Convention of 1949 and the two protocols of 1977
8. Sendai Framework
9. NDCC MC No. 5 Series of 2007 – Institutionalization of the Cluster Approach in the Philippine Disaster Management System, Designation of Cluster Leads and Their Terms of Reference at the National, Regional and Provincial Level.
10. NDCC Directives No. 24 s. 2003 on “zero casualty” during calamities – the directives give guidance on the activities and precautions local government officials should undertake to ensure the safety of all affected population.
11. NDCC MC No. 12 s. 2008 – Amendment to the NDCC MC No. 5 s. 2007 and No.4 s. 2008 re: Institutionalization of the Cluster Approach in the Philippine Disaster Management System, Designation of Cluster Leads and their Term of Reference at the National, Regional and Provincial Levels.
12. JMC No. 17 s. 2008- Guidelines in the coordination of the Delivery of Humanitarian Services to Disaster Victims and Internally Displaced Persons.
13. NDRRMC MC 23 s. 2014 – NDRRMC, National Disaster Response Plan (NDRP) for Hydro-Meteorological Hazards.

LOCAL ORDINANCE/RESOLUTIONS

1. Ordinance No. 4301, s. 2015 – An ordinance prescribing the guidelines on the implementation of pre-emptive or forced evacuation in Cotabato City prior to and during disaster or emergency and danger of loss of lives becomes imminent.
2. EO – 140, s. 2015 –Creating and Organizing the Technical Working Group (TWG) to assist the city disaster risk reduction and management office (CDRRMO) in building disaster resilient communities in Cotabato City
3. Creating the Technical Working Group (TRWG) on Water and Climate Change Resiliency Programs for Cotabato City to work with USAID-BE Secure Project

GENERAL POLICIES

The Philippine Disaster Risk Reduction and Management Act of 2010 (Republic Act 10121) shifted the policy environment and the way the country deals with disasters from mere response to preparedness. RA 10121 provides a comprehensive, all-hazard, multi-sectoral, inter-agency, and community-based approach to disaster risk management through the formulation of the National Disaster Risk Management Framework.

A National Disaster Risk Management Plan (NDRMP) is being formulated, developed, and implemented as the master plan that will provide the strategies, organization, tasks of concerned agencies and local government units, and other guidelines in dealing with disasters or emergencies. Through this plan, a coherent, integrated, efficient, and responsive disaster risk management at all levels will hopefully be achieved.

At the international level, the conduct of CP is our commitment to the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030. Specifically, in Paragraph 33, Priority 4 of the Framework, it states that "...national and local governments shall prepare or review and periodically update disaster preparedness and contingency policies, plans and program"

The conduct of CP in the Philippines is also required by RA 10121. Specifically, in Rule 6, Section 4 (3) of the Implementing Rules and Regulations (IRR) of the law, it states that "The Provincial, City and Municipal DRRMOs or BDRRMCs, in coordination with concerned national agencies and instrumentalities, shall facilitate and support risk assessments and contingency planning activities at the local level."

Recognizing the need to develop contingency plans for both natural and human induced hazards, it is indicated in item 6.1.1 of the NDRRMC-NSC JMC No. 1, 2016 that "All DRRMCs at all levels, CMCs at the local level, and individual government departments, bureaus, agencies, offices, units, and instrumentalities shall formulate contingency plans for natural and/or human-induced hazards appropriate to their areas.

The City of Cotabato adheres to the principle of life and property preservation as embodied in the Philippine Disaster Risk Reduction and Management Act of 2010. This contingency plan aims to reduce the risks caused by human error, deliberate destruction, and building or equipment failures. It envisions communities better coping with, anticipating, preparing

for, and recovering from natural and human-induced hazards and ensures their ability to continue operating after a disaster. The CP shall provide a clear order of the chain of command and commitment to emergency response actions in times of disaster.

GOAL

The goal of the contingency plan is to provide effective, efficient, timely and well-coordinated response mechanisms in the event of flooding and storm surge in the City of Cotabato. Such mechanisms shall help to protect the lives, properties, the environment, and proper coordination of other line agencies to help mitigate the effects of fire and proper allocation of resources, and restore the immediate and essential needs of the affected communities.

GENERAL OBJECTIVES

The general objectives of the contingency plan are as follows:

1. To execute an inter-agency and cluster approach coordination in response to emergency, for maximum and judicious utilization of resources;
2. To maximize the use of available local human, material, machineries, and financial resources and to address the gaps;
3. To undertake proactive approach to the conflagration hazard through continuous monitoring and assessment of the environment and community; To ensure the safety of the responders and the community.
4. To ensure the effective, fast, and fair delivery of basic services to survivors needing immediate assistance; and
5. To establish proper coordination through efficient communication and linkage among Response Clusters.

CHAPTER III: RESPONSE ARRANGEMENTS



These are the response clusters under contingency plan for flooding:

Food and Non-Food items cluster which is in charged for strategically prepositioned food and non-food items, provide the most immediate and adequate relief assistance, and lastly to account the special food requirements for children, infants, sick persons.

Health cluster which in charge of emergency health assistance, medicines, and supplies, WASH, and psychosocial support.

Internally Displaced Persons and Camp Coordination and Camp Management cluster will oversee the protection and well-being of the internally displaced persons (IDPs) and to augment all requirements for the management and evacuation of individuals and families.

Logistics cluster oversees the efficient and effective logistics support to other sectors and cluster operations and to build up inter-agency interaction and collaboration to enhance predictability, timeliness, and efficiency of the logistics response.

Emergency Telecommunication cluster is responsible for dissemination of immediate public information regarding the incident and ensure that all forms of communication systems are adequate, reliable, and available.

Education cluster is responsible to provide immediate and continued access to quality education to all school- aged children in the affected area and to ensure safe teaching-learning environment.

Search, Rescue, and Retrieval cluster ensures to conduct effective, timely, organized, and systematic search, rescue, and retrieval operations and provide logistical support to other SRR groups operating on the ground.

Management of the Dead and Missing Cluster is responsible for aiding in the proper identification and disposition of human remains and proper identification of the dead and missing, and to provide the proper information of their whereabouts.

Law and order cluster is responsible to ensure appropriate Law and Order operations, to provide security in the affected area, affected population, properties, cluster personnel and logistics, to ensure vulnerable population specially women, children, person with disabilities and senior citizens receive proper assistance and protected from threats.

Shelter cluster oversees the emergency shelter needs of the affected families including their livestock and coordinate shelter and shelter related items during response for IDPs.

Early recovery cluster is responsible for assessing the early recovery needs, priorities, and restoration of lifeline of the affected families and establish mechanism for the provision of livelihood and other economic opportunities to enable restoration to normal living conditions.

Furthermore, the LDRRMC adopted the cluster approach as strategic action for the over-all implementation of Disaster Response Services. To further operationalize this, the response clusters have been established to undertake coordination functions at the strategic level and to provide resource support for tactical response.

RESPONSE CLUSTERS

Table 9: Response Clusters

Response Clusters	Agencies/Offices Involved														Lead Agency
<i>Food and Non-Food Items</i>	OCSWDS	OHS	LNB	OCAGRI	OCVET	MILG									OCSWDS
<i>Health</i>	OHS	CDRRMO	OCSWDS	CRMC	BFP	LNB	MILG								OHS
<i>IDP Protection</i>	OCSWDS	CDRRMO	OHS	PNP	AFP	LNB	OCPSO	OCE	OCGSO						OCSWDS
<i>Camp Coordination and Management</i>	OCSWDS	CDRRMO	OHS	OCENRO	PNP	AFP	BFP	LNB	OCAGRI	OCVET	OCPSO	OCE			OCSWDS
<i>Logistics</i>	OCGSO	CDRRMO	OHS	OCSWDS	OCE	PNP	AFP	BFP	PCG	LNB	OCAGRI	OCVET			OCGSO
<i>Emergency Telecommunications</i>	OCPIO	CDRRMO	OHS	OCSWDS	OCPDC	LNB	WHITE HOUSE								OCPIO
<i>Education</i>	MBHTE	OCSWDS													MBHTE
<i>Search, Rescue and Retrieval</i>	CDRRMO	OHS	PNP	AFP	BFP	PCG	LNB	MILG	CRMC	OCPSO					CDRRMO
<i>Management of the Dead and Missing</i>	MILG	CDRRMO	OHS	OCSWDS	AFP	PNP	BFP	PCG	LNB	CRMC					MILG
<i>Law and Order</i>	PNP	AFP	LNB	CPSO											PNP
<i>Shelter</i>	CDRRMO	OCGSO	OCENRO	MILG	LNB	OCPSO	OCPDC								OCE
<i>Early Recovery</i>	OCPDC	OCE	OCGSO	OCENRO	AFP	LNB	OCAGRI	MILG	OCPSO	MBHTE	COTABATO LIGHT	MCWD	PESO	OCM CIPD	OCPDC

SUMMARY OF RESPONSE CLUSTER

Table 10: Summary of Response Clusters

Response Clusters	Lead Agency/Office	Member Agencies and Offices
Food and Non-Food Items	OCSWDS	OHS, LNB, OCAgri, OCVET, OCGSO, MILG
Health (Medical, WASH, Nutrition, Mental Health, and Psychosocial Support)	OHS	CDRRMO, OCSWDS, BFP, LNB, CRMC, MILG
IDP Protection	OCSWDS	OHS, PNP, OCGSO, OCPSCO, AFP, LNB, CDRRMO, OCE
Camp Coordination and Management	OCSWDS	OHS, PNP, OCGSO, OCPSCO, AFP, LNB, CDRRMO, OCE, OCENRO, OCAGRI, OCVET
Logistics	OCGSO	CDRRMO, OHS, OCSWDS, OCE, PNP, AFP, BFP, PCG, LnB, OCAGRI, OCVET,
Emergency Telecommunication	OCPIO	CDRRMO, OCSWDS, OCPDC, LNB, WHITEHOUSE, OHS
Education	MBHTE	OCSWDS
Search, Rescue and Retrieval	CDRRMO	OHS, PNP, AFP, BFP, PCG, LNB, MILG, CRMC, OCPSCO
Management of the Dead and Missing	MILG	CDRRMO, OHS, OCSWDS, AFP, PNP, BFP, PCG, LNB, CSO, NGO, INGO, CRMC
Law and Order	PNP	AFP, BPAT, OCPSCO, PCG
Shelter	OCE	CDRRMO, OCPDC, OCGSO, OCENRO, MILG, LNB, OCPSCO, OCSWDS
Early Recovery	OCPDC	OCE, OCGSO, OCENRO, AFP, LNB, OCAGRI, MILG, OCPSCO, MBHTE, Cotabato Light, MCWD, OCSWDS, OCM -CIPD, PESO

DETAILED IMPLEMENTATION PLAN

FOOD AND NON-FOOD ITEMS (NFI)

Response Cluster Lead: Office of the City Social Welfare and Development Officer (OCSWDS)

Members: OHS, LNB, OCAGRI, OCVET, OCGSO

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

Before the typhoon made its landfall to Cotabato City, there were already advisories made by the PAGASA, city LGU, and other authorities to warn the public. Forced evacuation was also enforced by the city LGU especially on coastal barangays and barangays near the two major rivers. Together with other social service agencies and volunteers have been tasked to provide relief assistance and provide anticipatory actions (both food and non-food items) to the affected population both at the evacuation centers and outside. However, the increasing number of evacuees requires augmentation from other agencies.

Specific Objectives

1. To ensure the availability of strategically prepositioned food and non-food items;
2. To provide the most immediate and adequate relief assistance (food and nonfood) to the displaced population in coordination with other agencies; and
3. To account the special food requirements for children, infants, sick persons.

Roles and Responsibilities

The Food and Non –Food cluster have the following roles and responsibilities:

1. Conduct regular inventory and monitoring of prepositioned food and non-food items.
2. Ensure the readiness of the relief supply chain from the master listing, sourcing, storage and production at the warehouse and delivery to distribution at designated evacuation centers, as well as at household level;

3. Come up with a relief distribution plan including the identification of distribution points
4. Maintain and activate a pool of volunteers who shall take charge of packing and distribution of food and non-food items; and
5. Submit Daily Cluster report to the Emergency Operation Center (EOC).

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of different agencies in the Food and Non-Food Item Cluster will convene at the Emergency Operation Center to undertake coordination and mobilization efforts.
2. The cluster, among others shall come up with a profile of the affected community through the available Primary and Secondary data as a basis of projecting the necessary response requirement.
3. Mobilize the Volunteer Repacking Team members and Relief Distribution Teams to ensure in the efficiency of goods packing and distribution.
4. The Cluster shall coordinate with other clusters on the different logistical requirements needed especially during repacking and distribution.
5. The Cluster, in coordination with the Incident Management Team shall come up with a relief distribution plan including the identification of distribution points on cases where distribution shall not take place within the evacuation centers.
6. The Cluster shall come up with a daily Cluster Report which shall be submitted to the Emergency Operation Center

RESPONSE ACTIVITIES

Table 11: Response Activities for FI and NFI

Response Clusters	Food and Non-Food Items (FI and NFI)	
Time Frame	Needs / Activities	Responsible Agencies and Offices
Day - 2 Day	<ul style="list-style-type: none"> • Inventory of food and nonfood commodities available • Assessment of possible evacuation sites 	OCSWDS, OHS, LNB, OCAGRI, OCVET, MILG
Day -1 Day	<ul style="list-style-type: none"> • Prepositioning of available resources and personnel 	OCSWDS, OHS, LNB, OCAGRI, OCVET, MILG
Day 0	<ul style="list-style-type: none"> • Distribution of basic commodities to OCSWDS-ICU team and barangays • Activation of community kitchen 	OCSWDS, OHS, LNB, OCAGRI, OCVET, MILG
Day + 12 HOURS	<ul style="list-style-type: none"> • Activation community kitchen • Deployment of RRM team 	OCSWDS, OHS, LNB, OCAGRI, OCVET, MILG
Day 1 Day	<ul style="list-style-type: none"> • Provide adequate basic commodities and food supply to evacuation sites • Provide counselling to post traumatic events victims in the evacuation areas 	OCSWDS, OHS, LNB, OCAGRI, OCVET, MILG
DAY + 2 Day	<ul style="list-style-type: none"> • Provide medical team on staging area and evacuation areas • Continuous monitoring and replenishment of basic commodities needed, 	OCSWDS, OHS, LNB, OCAGRI, OCVET, MILG

RESOURCE INVENTORY

Table 12: Resource Inventory for FI and NFI

Response Clusters	Food and Non-Food Items (FI and NFI)		
Agency/Office	Resource	Quantity	Remarks
OCSWDS	STOCK FILING RICE	8M	READY TO DISTRIBUTE
	STOCK FILING CAN GOODS	2M	READY TO DISTRIBUTE
	RRM TEAM	1 TEAM	STANDBY
	EVALUATORS	4 TEAM	STANDBY
	REPACKING MANPOWERS	4 TEAM	STANDBY
	UTILITY VEHICLE	1 UNIT	AVAILABLE

RESOURCE PROJECTION

Table 13: Resource Projection for FI and NFI

Response Clusters	Food and Non-Food Items (FI and NFI)					
Resource	Need	Have	Gaps (Need - Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
Manpower (Relief Packing Volunteers)	50	20	30	Coordinate with other offices to assist in the relief packing	Php 100,000.00 Food Allowance for volunteers	LDRRMF
Manpower (Relief Distribution Personnel)	20	0	20	Coordinate with other offices to assist in the relief distribution	Php 100,000.00 Food Allowance for volunteers	LDRRMF
Family Food Pack	67,596	20,000	47,596	Request for augmentation from Regional MSSD	Php 10,000,000.00	LDRRMF
Bottled Water (1 Galloon)	67,596	20,000	47,596	Request for augmentation from Regional MSSD	Php 2,000,000.00	LDRRMF
Hygiene Kit	67,596	20,000	47,596	Request for augmentation from Regional MSSD	Php 1,000,000.00	LDRRMF
Kitchen Kit	67,596	20,000	47,596	Request for augmentation from Regional MSSD	Php 1,000,000.00	LDRRMF
Clothing Kit	67,596	20,000	47,596	Request for augmentation from Regional MSSD	Php 1,000,000.00	LDRRMF
Shelter Kit	67,596	20,000	47,596	Request for augmentation from Regional MSSD	Php 1,000,000.00	LDRRMF
TOTAL					Php 16,200,000.00	LDRRMF

DETAILED IMPLEMENTATION PLAN

HEALTH (Medical, WASH, Nutrition, Mental Health, and Psychosocial Support)

Response Cluster Lead: Office on Health Services (OHS)

Members: CDRRMO, OCSWDS, BFP, LNB, CRMC, MILG

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

Several individuals need medical attentions and medical transport. Injuries ranging from simple puncture wounds to severe fractures and wounds were treated on site at the advance medical post, drowned and near drowned victims were transported to the nearest hospital. However, sudden influx of injured individuals overwhelmed the advance medical post. Health cluster is activated do necessary actions.

Specific Objectives

1. To provide emergency health assistance services for men, women and children and other vulnerable groups;
2. To provide technical assistance, medicines and supplies and essential equipment to support basic health services for the affected population;
3. To address the medical, public health, WASH, and nutritional requirements of the affected population and ensure their mental well-being; and
4. Establish coordination, collaboration, and networking within and among cluster

Roles and Responsibilities

The health cluster shall have the following roles and responsibilities

1. Provides support for timely and appropriate public health services to the affected population;
2. Conduct rapid health assessment within 48 hours and develop an action plan

3. Provision of Emergency Medical and Public Health services, particularly First Aid for the wounded individuals;
4. Ensure the timely and appropriate delivery of quality package of nutrition interventions to affected population particularly on the promotion and protection of infant and young child feeding practices, micronutrient supplementation, supplementary feeding, integrated management of acute malnutrition and others;
5. Ensure that foods provided and distributed are nutritionally adequate especially for the vulnerable groups;
6. Ensure access to WASH services for affected populations such as safe and adequate water supply, proper and adequate sanitation in terms of excreta;
7. Disposal hygiene promotion and education, solid waste management and drainage and vector control during emergencies and disaster; and
8. Consolidate all the activities made by the teams into one cluster report.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the Health Cluster led by the OHS will convene at the Emergency Operation Center to undertake coordination;
2. The Cluster Lead shall make available all manpower and resources for deployment to provide basic health, mental and psychosocial services to all affected individuals; and
3. The Cluster shall establish regular monitoring system and submission of a daily Cluster Report to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 14: Response Activities for Health

Response Clusters	Health (Medical, WASH, Nutrition, Mental Health, and Psychosocial Support)	
Time Frame	Needs / Activities	Responsible Agencies and Offices
Day -2	<ul style="list-style-type: none"> Inventory of food and medical commodities available 	OHS, OCSWDS, LNB, OCAGRI, OCVET, MILG
Day -1	<ul style="list-style-type: none"> Prepositioning of available resources and personnel 	OHS, OCSWDS, LNB, OCAGRI, OCVET, MILG
Day 0	<ul style="list-style-type: none"> Distribution of first aid kit and medicines to health team and barangays and establishment of advance medical post 	OHS, OCSWDS, LNB, OCAGRI, OCVET, MILG
Day + 12 HOURS	<ul style="list-style-type: none"> Continuous monitoring and replenishment of medical commodities needed, 	OHS, OCSWDS, LNB, OCAGRI, OCVET, MILG
Day + 1	<ul style="list-style-type: none"> Provide adequate medical commodities and deployment of WASH cluster 	OHS, OCSWDS, LNB, OCAGRI, OCVET, MILG
Day + 2	<ul style="list-style-type: none"> Deployment of psychosocial and mental health teams 	OHS, OCSWDS

RESOURCE INVENTORY

Table 15: Resource Inventory for Health

Response Clusters	Health (Medical, WASH, Nutrition, Mental Health, and Psychosocial Support)		
Agency/Office	Resource	Quantity	Remarks
OHS	AMBULANCE	4 UNITS	SERVICEABLE
	UTILITY VEHICLE	2 UNITS	SERVICEABLE
	TRANSPORT VEHICLE	3 UNITS	SERVICEABLE
	MEDICAL TEAM	4 TEAMS	READY TO DEPLOY
	WASH	1 TEAM	READY TO DEPLOY
	NUTRITION	1 TEAM	READY TO DEPLOY
	MHPSS	1 TEAM	READY TO DEPLOY
	DOCTORS	1 TEAM	READY TO DEPLOY
	PHARMACY	1 TEAM	READY TO DEPLOY

RESOURCE PROJECTION

Table 16: Resource Projection for Health

Response Clusters	Health (Medical, WASH, Nutrition, Mental Health, and Psychosocial Support)					
	Resource	Need	Have	Gaps (Need - Have)	Activities / Sources to fill the gaps	Cost Estimates
Tent (Advanced Medical Post)	3	0	3	Procurement	Php 300, 000.00	LDRRMF/ NGOs/ INGOs/ MSSD
Solar Operated Refrigerator	1	0	1	Procurement	Php 200, 000.00	LDRRMF
Therapeutic Food	1,000	500	500	Procurement	Php 1, 000, 000.00	ECCD
Solar Water Purifier	1	0	1	Procurement	Php 1, 000, 000.00	LDRRMF
Beneficial Microorganism for Odor and Decomposition	15 gals	0	15 gals	Procurement	Php 1, 500, 000.00	LDRRMF
TOTAL					Php 4, 000, 000.00	LDRRMF

DETAILED IMPLEMENTATION PLAN

IDP PROTECTION AND CAMP COORDINATION & MANAGEMENT

Response Cluster Lead: Office of the City Social Welfare and Development Services (OCSWDS)

Members: OHS, PNP, OCGSO, OCPSO, AFP, LNB, CDRRMO, OCE, OCENRO, OCAGRI, OCVET

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

The affected families are temporarily evacuated in various evacuation centers. At the evacuation center, several modular tents were set up to observe and maintain privacy. However, the space is still inadequate for the sudden influx of evacuees.

Additional security personnel are necessary to ensure the safety of IDPs and other vulnerable groups in the evacuation center.

Specific Objectives

1. To secure smooth camp coordination and management of identified evacuation centers to house internally displaced persons (IDPs) while observing the minimum health standard protocols;
2. To ensure the protection and well-being of the internally displaced persons (IDPs) from all forms of violence and exploitations; and
3. To aid and augment all requirements for the management and evacuation of individuals and families affected by the incident.

Roles and Responsibilities

The IDP Protection, Camp Coordination and Management clusters have the following roles and responsibilities:

1. Ensure the availability of established safe camps and accessible evacuation centers during emergencies and disasters;

2. Ensure that all IDPs inside camps are properly accounted for using Disaster Assistance Family Access Card (DAFAC) and other approved profiling systems;
3. Ensure that IDPs are provided with protection and assistance services including basic needs such as but not limited to food and essential non-food items;
4. Ensure that basic medical, public health, mental health and psychological support and nutrition services are available 24/7 for IDPs;
5. Ensure multi-sectoral response to assist and protect all IDPs, including IDPs participation in all activities inside the camps;
6. Ensure protection and well-being of women, children, and other vulnerable population specifically from all forms of exploitation, abuse, and violence while still inside the evacuation camps; and
7. Ensure that evacuation centers are well-managed including the establishment of designated areas for livestock, pets, vehicles as well as provision of communication facility and information board.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the IDP Protection, Camp Coordination and Management Cluster will convene at the Emergency Operation Center to undertake coordination;
2. The Cluster Lead shall make available all manpower resources for deployment, in coordination with the barangay officials, particularly those trained managers to cover all systems of an effective evacuation camp management;

3. The Cluster should conduct profiling using Disaster Assistance Family Access Card (DAFAC) and other approved profiling systems;
4. The Cluster shall establish Camp Grievance mechanism and referral system of special cases
5. The Cluster shall establish regular monitoring system relevant to EC operation including the submission of a daily Cluster Report which shall be submitted to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 17: Response Activities for IDP & CCCM

Response Clusters	IDP Protection, Camp Coordination and Management	
Time Frame	Needs / Activities	Responsible Agencies and Offices
D – 2 Days	<ul style="list-style-type: none"> CCCM Cluster will convene for an emergency meeting to plan and activate the Camp Management Teams (CMTs) 	OCSWDS
D – 1 Day	<ul style="list-style-type: none"> Prepositioning of available resources and personnel 	OCSWDS, OHS, OGSO, OCE, CDRRMO
D	<ul style="list-style-type: none"> Deploy the Camp Management Team (CMT) and set up the camps (Shelter and accommodation, Camp. Mgt. desk or office, Community kitchen, Storage area, Child friendly space, Conjugal/couples room, Prayer room, Area for management of livestock and domestic animals owned by the IDPS) 	OCSWDS, OHS, OGSO, OCE, OCAGRI, OCVET, CDRRMO
	<ul style="list-style-type: none"> Register IDPs using Disaster Assistance Family Access Card (DAFAC) or available profiling system and consolidate data by posting and updating the Information Board 	OCSWDS
	<ul style="list-style-type: none"> Coordinate, monitor and report status of delivery of services and conduct of activities in the camp 	OCSWDS
D + 12 Hours	IDP-Led formulation of house/camp rules	OCSWDS
	Organization Activation of Camp Management IDP support teams	OCSWDS, OHS, OGSO, OCE, PNP, OCPSO, CDRRMO
	<ul style="list-style-type: none"> Deployment of RRM team Establish plan and policies in the Evacuation Center Coordinate with the city agriculture for the temporary animal shelter placements 	OCSWDS

<i>D + 1 Day</i>	<ul style="list-style-type: none"> • Provide counselling to post traumatic events victims in the evacuation areas 	OCSWDS, OHS
	Establish Camp Grievance mechanism and referral system of special cases, Women and Children, Gender-Based Violence Protection Services	OCSWDS
	Maintenance and care of camp facilities	OCSWDS
	Continuous monitoring, assessment, and reporting	OCSWDS

RESOURCE INVENTORY

Table 18: Resource Inventory for IDP & CCCM

Response Clusters	IDP Protection, Camp Coordination and Management		
Agency/Office	Resource	Quantity	Remarks
City Social Welfare and Development Office (CSWDO)	EVALUATORS	2 TEAMS	READY TO DEPLOY
	CAMP MANAGEMENT	2 TEAMS	READY TO DEPLOY
	RRM	1 TEAM	READY TO DEPLOY
	UTILITY VEHICLE	1 UNIT	SERVICEABLE
LNB	Manpower (BHW)	2 PAX PER BARANGAY	READY TO DEPLOY
	Manpower (Tanod)	10 PAX PER BARANGAY	READY TO DEPLOY
	Patrol vehicle	1 UNIT PER BARNAGAY	SERVICEABLE
City Health Office (CHO)	Manpower	4 TEAMS	READY TO DEPLOY
	First Aid Kit	1000 UNITS	STOCK PILE
	Ambulance	4 UNIT	SERVICEABLE
Philippine National Police	Mobility Assets (Organic Patrol Cars)		
	Patrol Car	10	SERVICEABLE
	Human Resource (PNP Personnel)	300	READY TO DEPLOY
General Services Office	Manpower	2 TEAMS	READY TO DEPLOY
	Modular Tents	4 UNITS	SERVICEABLE

RESOURCE PROJECTION

Table 19: Resource Projection for IDP & CCCM

Response Clusters	IDP Protection, Camp Coordination and Management					
Resource	Need	Have	Gaps (Need – Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
Temporary Animal Shelter	37	0	37	Procurement	Php 1, 000, 000	LDRRMF/MAFAR
Alternative Temporary Shelters	37	0	37	Procurement	Php 10, 000, 000	LDRRMF
<i>TOTAL</i>					Php 11,000,000	

DETAILED IMPLEMENTATION PLAN

LOGISTICS

Response Cluster Lead: Office of the General Service Officer (OGSO)

Members: CDRRMO, OHS, OCSWDS, OCE, PNP, AFP, BFP, PCG, LNB, OCAGRI, OCVET

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

The affected families are temporarily evacuated in various evacuation centers. At the evacuation center, several modular tents were set up but insufficient due to the sudden influx of evacuees.

SSR/medical and CCCM teams requires additional resources to manage the sudden influx of IDPs and patients.

Specific Objectives

1. To provide an efficient and effective logistics support to other sector's operations and ensure regular info-sharing among all stakeholders and other partners by providing timely and reliable information;
2. To build up inter-agency interaction and collaboration to enhance predictability, timeliness and efficiency of the logistics response and meet affected areas/population needs; and
3. The logistics cluster shall continue to assist and monitor in the conduct of recovery and rehabilitation of affected areas such as immediate repair/restoration of lifeline infrastructures and connectivity of the road networks.

Roles and Responsibilities

The logistics cluster shall have the following roles and responsibilities:

1. Oversees all logistics-related activities in the operation including the supply chain, assess, materials, and security and ensures their implementation;
2. Ensures that the logistics department is staffed to adequately support operation;

3. Ensures the availability and functionality of properties and equipment;
4. Monitors and analysis the security context in the affected areas;
5. Identifies and addresses logistics gaps, bottlenecks and duplication in humanitarian operations and ensures that they are appropriately address;
6. Organizes and monitors the reporting within the affected areas and evacuation centers ensuring the preparation and submission of adequate and timely reports to the cluster members;
7. Thru coordination, monitoring, identification, deployment covers the transportation, inventory, warehousing and tracking of deployed items;
8. Develop MOA/MOU with private companies of transportation, pharmaceutical, petroleum, courier, and others logistics; and
9. Consolidate all the activities made by the teams into one cluster report.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the cluster led by the Office on General Services will convene at the Emergency Operation Center to undertake coordination;
2. The cluster shall provide an efficient and effective strategic emergency logistics service for all clusters in terms of supplies and inventory, transportation, warehousing, and services management;
3. The cluster shall organize four (4) sub-clusters, namely: Supplies and Inventory – provide fuel, generators, and other emergency resources for cluster operations. Further, ensure the tracking of deployed items; and B. Transportation (land, sea, and air) – provide mobility assets for all cluster operations; C. Warehousing – provide space for the storage and safekeeping of relief goods, supplies, materials, and equipment of the

different clusters; 104 D. Services – provide road clearing operations including the restoration and maintenance of utilities such as electricity and water supplies

4. The cluster-members shall immediately submit updated reports on all possible resources and assets that can be utilized immediately;
5. All communication for ordering shall be directed to Cluster Lead through the EOC who shall then facilitate prioritization and mobilization; and
6. The Cluster shall come up with a daily Cluster Report which shall be submitted to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 20: Response Activities for Logistics

Response Clusters	Logistics	
Time Frame	Needs / Activities	Responsible Agencies and Offices
Day -2 Days	Mapping inventory of available resources and personnel /teams	OCGSO, OCE, CDRRMO, OCSWDS, OHS
Day -1 Day	Prepositioning of available resources and personnel/teams	OCGSO, OCE, CDRRMO, OCSWDS, OHS
Day 0	Mobilization of available resources issuance of available resources to respective clusters	OCGSO, OCE, CDRRMO, OCSWDS, OHS
Day+1 Day	Continuous monitoring and replenishment of supplies	OCGSO, OCE, CDRRMO, OCSWDS, OHS
Day +2 Days	<ul style="list-style-type: none"> ● Warehousing and inventory of remaining supplies ● Tap additional sources of logistics (donations from NGO and INGO) ● Tracking of deployed assets and logistics 	OCGSO, OCE, OCSWDS, OHS
	Continuous facilitation of the logistical requirements required by the different response clusters of the on-going operation	OCGSO, OCE, CDRRMO, OCSWDS, OHS
	Assist and monitor in the conduct of recovery and rehabilitation of affected areas such as immediate repair/restoration of lifeline infrastructures and connectivity of the road networks.	OCGSO, OCE, OCSWDS, OHS, OCVET, OCAGRI

RESOURCE INVENTORY

Table 21: Resource Inventory for Logistics

Response Clusters	Logistics		
Agency/Office	Resource	Quantity	Remarks
CDRRMO	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> Rescue Vehicle Rescue Boat Utility vehicle <u>Personnel with Equipment</u> RDANA Team SAR Team Medical Teams USAR Team	1 UNIT 1 UNIT 2 UNITS 1 TEAM 4 TEAMS 4 TEAMS 1 TEAM	SERVICEABLE/ READY TO DEPLOY
OHS	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> Ambulance Utility Vehicle Transport vehicle <u>Personnel with Equipment</u> <ul style="list-style-type: none"> Medical Teams WASH Nutrition MHPSS Doctors Pharmacy 	4 UNITS 2 UNITS 3 UNITS 4 TEAMS 1 TEAM 1 TEAM 1 TEAM 1 TEAM 1 TEAM	SERVICEABLE/ READY TO DEPLOY
AFP	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> Trucks Airboats Scout Boats <u>Personnel</u>	4 UNITS 3 UNITS 2 UNITS 4 teams	SERVICEABLE/ READY TO DEPLOY
COTABATO LIGHT	Special Line (GenSet)	3 MW	
PNP	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> Patrol Cars <u>Personnel</u> <ul style="list-style-type: none"> SAR Team Security 	10 10 TEAMS (8-MAN TEAM) 300 PERSONS	SERVICEABLE/ READY TO DEPLOY

CPSO	<u>Personnel</u> <ul style="list-style-type: none"> • Auxiliary 	70 PERSONS	SERVICEABLE/ READY TO DEPLOY
OCGSO	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> • utility vehicle <u>Equipment</u> Tents GenSet	2 UNITS 4 UNITS 2 UNITS	
OCE	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> • Dump Trucks • backhoes <u>Personnel</u> <ul style="list-style-type: none"> • RDANA 	5 UNITS 2 UNITS 1 TEAM	SERVICEABLE/ READY TO DEPLOY
CENRO	<u>Personnel</u> <ul style="list-style-type: none"> • Trimming Team • RDANA teams 	1 TEAM 1 TEAM	SERVICEABLE/ READY TO DEPLOY
OCAGRI	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> • Seaborn Patrol <u>Personnel</u> <ul style="list-style-type: none"> • RDANA Team <u>Equipment</u> <ul style="list-style-type: none"> • Drone 	1 UNIT 1 TEAM 1 UNIT	SERVICEABLE/ READY TO DEPLOY
OCSWDS	<u>Motorized Vehicle</u> <ul style="list-style-type: none"> • monitoring/ utility vehicle (4X4 Pick up) <u>Personnel</u> <ul style="list-style-type: none"> • evaluators • Camp management • relief packing and Distributing RRM 	1 UNIT 2 TEAMS 2 TEAMS 4 TEAMS 1 TEAM	SERVICEABLE/ READY TO DEPLOY
BFP	<u>Motorized Vehicle</u> <ul style="list-style-type: none"> • fire trucks • Ambulance <u>Personnel</u> <ul style="list-style-type: none"> • Responders (SRR) EMT 	8 UNITS 2 UNITS 10 TEAMS 4 TEAMS	SERVICEABLE/ READY TO DEPLOY
PCG (flooding)	<u>Motorized Vehicle</u> <ul style="list-style-type: none"> • monitoring / utility Vehicle (4x4) rubber boats with outboards 	1 UNIT 2 UNITS	SERVICEABLE/ READY TO DEPLOY

RESOURCE PROJECTION

Table 22: Resource Projection for Logistics

Response Clusters	Logistics					
Resource	Need	Have	Gaps (Need - Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
ALTERNATIVE TENTS FOR WAREHOUSING	1	0	1	PROCUREMENT	Php 1, 000, 000	LDRRMF
POWER TOOLS	10	0	10	PROCUREMENT	Php 1, 000, 000	LDRRMF
PORTABLE GENSETS	10	0	10	PROCUREMENT	Php 500,000	LDRRMF
TOTAL					Php 2, 500, 000	

DETAILED IMPLEMENTATION PLAN

EMERGENCY TELECOMMUNICATIONS

Lead: Office of the City Information Officer (OCM - CIPD)

Members: WHITEHOUSE, CDRRMO, OCSWDS, OCPDC, LNB, OHS

Scenario:

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

The communication transmissions are disrupted due to damaged wires and insulators so there is a need to establish command and control to ensure immediate response operations and emergency/alternative communication channels.

Specific Objectives:

1. To establish, oversee and orchestrate an effective and efficient overall response mechanism during emergencies and disasters.
2. To ensure that all forms of communication systems are adequate, reliable, and available for efficient flow of coordination among involved entities of this plan always.
3. Restoration of power supply.

Roles and Responsibilities:

1. Shall be responsible in providing an open and secured communications link between and among agencies, offices and divisions concerned
2. Provide for the maintenance and availability of communications equipment to the command and operational units
3. Provide updated information regarding the condition of disaster/calamity affected areas
4. Provide updates on the effects of flooding and other hazards related to the incident for the residents to undertake necessary measures to avoid loss of life and injury
5. Provide information to the public and media regarding the event status.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the cluster will convene at the Emergency Operation Center to undertake coordination;
2. All communication for ordering shall be directed to Cluster Lead through the EOC who shall then facilitate prioritization and mobilization; and
3. The Cluster shall come up with a daily Cluster Report which shall be submitted to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 23: Response Activities for Emergency Telecommunications

RESPONSE CLUSTER	EMERGENCY TELECOMMUNICATIONS	
TIMEFRAME	RESPONSE ACTIVITIES	RESPONSIBLE AGENCIES/OFFICES
D – 3 Days	<ul style="list-style-type: none"> • Open communication lines between responsible agencies and connecting radio frequencies • Provide communication facilities • Monitor weather condition and updates using available resources and dissemination of information to the concerned personnel. 	OCM - CIPD
D- 1 Day	<ul style="list-style-type: none"> • Prepositioning of the communication equipment and necessities • Relay 24-hour weather condition and advisories • Pre- positioning of communication team to provide technical assistance to radio users and checking the service ability of all issued communication equipment • Pre-program all radios to the assigned disaster frequencies on order 	OCM - CIPD
D	<ul style="list-style-type: none"> • Open emergency communication line • Frequent signal checks for radio uses • Reporting of situational reports every hour as needed 	OCM - CIPD
D+1 day	<ul style="list-style-type: none"> • Continuous communication until the operations terminated • Continuous dissemination of warning information AOP • Continue situational reports as needed 	OCM - CIPD

RESOURCE INVENTORY

Table 24: Resource Inventory for Emergency Telecommunications

RESPONSE CLUSTER	Emergency Communication		
AGENCY/OFFICE	RESOURCE	QUANTITY	REMARKS
OCM - CIPD	HAND HELD RADIO	50 UNITS	DISTRIBUTED FUNCTIONAL
WHITEHOUSE	RADIO SIGNAL REPETER	2 UNITS	FUNCTIONAL
CDRRMO	MOBILE HOTLINES	2 UNITS	FUNCTIONAL
CDRRMO	TELEPHONE HOTLINE	1 UNITS	FUCTIONAL

RESOURCE PROJECTION

Table 25: Resource Projection for Emergency Telecommunications

RESPONSE CLUSTER	Emergency communication					
RESOURCE	NEED	HAVE	GAPS (NEED - HAVE)	ACTIVITIES/ SOURCES TO FILL THE GAPS	COST ESTIMATES	SOURCE OF FUNDS
CELLULAR RADIO	100	0	100	PROCUREMENT	Php 1,200,000.00	LDRRMF
BASE RADIO	37	0	37	PROCUREMENT	Php 370,000.00	LDRRMF
					Php 1,570,000.00	

DETAILED IMPLEMENTATION PLAN

EDUCATION

Response Cluster Lead: Ministry of Basic, Higher, and Technical Education (MBHTE)

Members: OCSWDS

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

The books, learner's materials and school bags of the school-aged children and teaching paraphernalia of teachers were damaged leaving them with nothing to use as they go back to their respective schools.

Specific Objectives

1. To provide immediate and continued access to quality education to all school- aged children in the affected area as well as to ensure safe teaching-learning environment; and
2. To provide affected teachers with psychological first aid intervention to ease their feeling of loss and distress.

Roles and Responsibilities

The Education cluster shall have the following roles and responsibilities:

1. Provide interventions for the well-being of affected learners;
2. Seek support and assistance to enable early return of affected learners and teachers to their respective schools;
3. Provide Psychological First Aid Intervention for affected learners and teachers; and
4. Preposition Assistance from Education Cluster Partners.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the cluster led by the Department of Education will convene at the Emergency Operation Center to undertake coordination;
2. The cluster shall coordinate with respective district coordinators both for resources and any possible needs of the affected learners and teachers;
3. The cluster to conduct Rapid Damage Assessment and Needs Analysis (RDANA); and
4. The Cluster shall come up with a daily Cluster Report which shall be submitted to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 26: Response Activities for Education

Response Clusters	Education	
Time Frame	Needs / Activities	Responsible Agencies and Offices
D + 1 Day	Re-orientation on Child Friendly Spaces during evacuation	MBHTE, OCSWDS
	Inventory of Schools used as Temporary evacuation center/camp	MBHTE, OCSWDS
	Coordination with SDO DRRM Team, School Heads, and School DRRM Coordinator	MBHTE, OCSWDS
	Activation of School for possible Evacuation and SDO Incident Management Team	MBHTE, OCSWDS
D + 2 Days	Monitoring and conduct Rapid Damage Assessment and Needs Analysis (RDANA)	MBHTE, OCSWDS
	Provision of Psychological First Aid to affected learners and teachers	MBHTE, OCSWDS
	Provision of Teachers Kits and Learners Kits	MBHTE, OCSWDS
	Continuous monitoring, assessment, and reporting	MBHTE, OCSWDS

RESOURCE INVENTORY

Table 27: Resource Inventory for Education

Response Clusters	Education		
Agency/Office	Resource	Quantity	Remarks
MBTHE	FIRST AIDE KIT	20 UNITS	
	SDRRM COODINATOR	1 PER SCHOOL	
	CLINIC	1 PER SCHOOL	
	COVERT COURT	1 PER SCHOOL	
	MAN POWER	2 TEAMS	
	UTILITY VEHICLE	1 PER SCHOOL	

RESOURCE PROJECTION

Table 28: Resource Projection for Education

Response Clusters	Education					
Resource	Need	Have	Gaps (Need - Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
MEDICAL EQUIPMENTS (SPINE BOARDS)	1 PER IDENTIFY SCHOOL EVACUATION	0	37	PUCUREMENT / DONATED BY LGU AND NGO's	1,295,000.00	LDRRMF/ MBTHE
OXYGEN TANK WITH REGULATOR AND MASK	1 PER IDENTIFY SCHOOL EVACUATION	0	37	PUCUREMENT / DONATED BY LGU AND NGO's	1,110,000.00	LDRRMF/ MBTHE
TENTS	1 PER IDENTIFY SCHOOL EVACUATION	0	37	PUCUREMENT / DONATED BY LGU AND NGO's	1,000,000.00	LDRRMF/MBTHE
					3,405,000.00	

DETAILED IMPLEMENTATION PLAN

SEARCH, RESCUE AND RETRIEVAL (SRR)

Response Cluster Lead: City Disaster Risk Reduction and Management Office (CDRRMO)

Members: OHS, PNP, AFP, BFP, PCG, LNB, MILG, CRMC, OCPSO

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

The situation requires additional medical and rescue teams to cater several injured and trapped individuals. 5 individuals were reported to be missing and presumed dead due to drowning. SRR operation is challenged due to piled-up debris and murky flood waters.

Specific Objectives

1. To conduct effective, timely, organized, and systematic search, rescue, and retrieval operations; and
2. To provide logistical support to other SRR groups operating on the ground.

Roles and Responsibilities

The Search, Rescue and Retrieval (SRR) cluster shall have the following roles and responsibilities:

1. Make size-up reports for an effective fire ground operation.
2. Deploy SRR to support the Incident Management Teams (IMTs);
3. The victims are properly rescued and dead bodies are properly recovered and handed-over to concerned or proper authorities; and
4. The responders have properly turned-over the SRR responsibilities to the proper authorities.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the cluster led by the Bureau of Fire Protection will convene at the Emergency Operation Center to undertake coordination;
2. Upon ordered, the SRR cluster shall deploy available SRR team. The cluster shall direct the SRR Team to report to the Incident Command for assignment and accounting;
3. The SRR team to turn-over the rescued victims and the recovered remains/bodies to concerned or proper authorities;
4. The SRR team to perform decontamination process of retrieved remains before turn-over to the MDM Cluster; and
5. The Cluster shall come up with a daily Cluster Report which shall be submitted to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 29: Response Activities for SRR

Response Clusters	Search, Rescue and Retrieval (SRR)	
Time Frame	Needs / Activities	Responsible Agencies and Offices
Day -2	<ul style="list-style-type: none"> Mapping of available resources and personnel teams 	CDRRMO, BFP, PNP, AFP, OCGSO, OCE
Day -1	<ul style="list-style-type: none"> Prepositioning of available resources and personnel and teams Deployment of operation and warning section team to the barangays 	CDRRMO, OCGSO, OCE
Day 0	<ul style="list-style-type: none"> Mobilization of available resources (Clearing operation) Activation of BERT in their respective barangays 	CDRRMO, BFP, PNP, AFP, OCGSO, OCE
Day +1 hour	Mobilization of available resources (SRR)	CDRRMO, BFP, PNP, AFP, OCGSO, OCE
Day + 3 hours	<ul style="list-style-type: none"> Mobilization of available resources Continuous monitoring and replenishment of supplies 	CDRRMO, BFP, PNP, AFP, OCGSO, OCE
D + 6 Hours	Turn-over the rescued victims and the recovered remains/bodies to concerned or proper authorities	CDRRMO, BFP, PNP, AFP, OCGSO, OCE, MILG
	Decontamination process of retrieved remains before turn-over to the MDM Cluster	CDRRMO, BFP, PNP, AFP, OCGSO, OCE, MILG
D + 1 Day	Undertake continuous monitoring, coordination for the response and augmentation	CDRRMO, BFP, PNP, AFP, OCGSO, OCE

RESOURCE INVENTORY

Table 30: Resource Inventory for SRR

Response Clusters	Logistics		
Agency/Office	Resource	Quantity	Remarks
CDRRMO	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> Rescue Vehicle Rescue Boat Utility vehicle 	1 UNIT 1 UNIT 2 UNITS	SERVICEABLE/ READY TO DEPLOY
	<u>Personnel with Equipment</u> RDANA Team SAR Team Medical Teams USAR Team	1 TEAM 4 TEAMS 4 TEAMS 1 TEAM	
OHS	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> Ambulance Utility Vehicle Transport vehicle 	4 UNITS 2 UNITS 3 UNITS	SERVICEABLE/ READY TO DEPLOY
	<u>Personnel with Equipment</u> Medical Teams WASH Nutrition MHPSS Doctors Pharmacy	4 TEAMS 1 TEAM 1 TEAM 1 TEAM 1 TEAM 1 TEAM	
AFP	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> Trucks Airboats Scout Boats <u>Personnel</u>	4 UNITS 3 UNITS 2 UNITS 4 teams	SERVICEABLE/ READY TO DEPLOY
COTABATO LIGHT	Special Line (GenSet)	3 MW	
PNP	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> Patrol Cars <u>Personnel</u> <ul style="list-style-type: none"> SAR Team Security 	10 10 TEAMS (8-MAN TEAM)	SERVICEABLE/ READY TO DEPLOY

		300 PERSONS	
CPSO	<u>Personnel</u> <ul style="list-style-type: none"> • Auxiliary 	70 PERSONS	SERVICEABLE/ READY TO DEPLOY
OCGSO	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> • utility vehicle <u>Equipment</u> <ul style="list-style-type: none"> • Tents • GenSet 	2 UNITS 4 UNITS 2 UNITS	
OCE	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> • Dump Trucks • backhoes <u>Personnel</u> <ul style="list-style-type: none"> • RDANA 	5 UNITS 2 UNITS 1 TEAM	SERVICEABLE/ READY TO DEPLOY
CENRO	<u>Personnel</u> <ul style="list-style-type: none"> • Trimming Team • RDANA teams 	1 TEAM 1 TEAM	SERVICEABLE/ READY TO DEPLOY
OCAGRI	<u>Motorized Vehicles</u> <ul style="list-style-type: none"> • Seaborn Patrol <u>Personnel</u> <ul style="list-style-type: none"> • RDANA Team <u>Equipment</u> <ul style="list-style-type: none"> • Drone 	1 UNIT 1 TEAM 1 UNIT	SERVICEABLE/ READY TO DEPLOY
OCSWDS	<u>Motorized Vehicle</u> <ul style="list-style-type: none"> • monitoring/ utility vehicle (4X4 Pick up) <u>Personnel</u> <ul style="list-style-type: none"> • evaluators • Camp management • relief packing and Distributing • RRM 	1 UNIT 2 TEAMS 2 TEAMS 4 TEAMS 1 TEAM	SERVICEABLE/ READY TO DEPLOY
BFP	<u>Motorized Vehicle</u> <ul style="list-style-type: none"> • fire trucks • Ambulance <u>Personnel</u> <ul style="list-style-type: none"> • Responders (SRR) • EMT 	8 UNITS 2 UNITS 10 TEAMS 4 TEAMS	SERVICEABLE/ READY TO DEPLOY
PCG (flooding)	<u>Motorized Vehicle</u> <ul style="list-style-type: none"> • monitoring / utility Vehicle (4x4) • rubber boats with outboards 	1 UNIT 2 UNITS	SERVICEABLE/ READY TO DEPLOY

RESOURCE PROJECTION

Table 31: Resource Projection for SRR

Response Clusters	Search Rescue and Retrieval (SRR)					
Resource	Need	Have	Gaps (Need – Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
Rescue Vehicle	5	1	4	Procurement	Php 10,000,000	LDRRMF
Rubber Boat with Outboard	2	0	2	Procurement	Php 2,000,000	LDRRMF
Drone with tablet and accessories	2	1	1	Procurement	Php 500,000	LDRRMF
SRR Personnel	250	150	100	Capacity Training	Php 500,000	LDRRMF
SRR Equipment	20 kits	0	20 kits	Procurement	Php 2,000,000	LDRRMF
TOTAL					Php 15,000,000	

DETAILED IMPLEMENTATION PLAN

MANAGEMENT OF THE DEAD AND MISSING (MDM)

Response Cluster Lead: Ministry of Interior and Local Government (MILG)

Members: CDRRMO, OHS, OCSWDS, AFP, PNP, BFP, PCG, LNB, CRMC

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

The search, rescue, and retrieval teams were already on the ground together with the management of the dead and missing cluster after reported cases of dead persons from the devastating flooding incident. There were also several missing persons that were not yet found.

Specific Objectives

1. To aid in the proper identification and disposition of human remains in a sanitary and dignified manner with caution to prevent negative psychological and social impact on the bereaved family and the community;
2. To establish resource-sharing mechanisms among key players in the MDM.

Roles and Responsibilities

The Management of the Dead and Missing cluster shall have the following roles and responsibilities:

1. Proper retrieval, identification, and disposition of remains in a sanitary manner;
2. Strengthen the coordination and collaboration among partner agencies;
3. Ensure the protection and safety of the responders and volunteers in the retrieval, handling, transport, and disposition of body parts or dead bodies; and
Over-all manage the bereaved families by addressing their physiologic, social, medical, and psychological needs.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the contingency plan, all key representatives of the cluster led by the DILG will convene at the Emergency Operation Center to undertake coordination efforts.
2. The recovery and retrieval of dead bodies shall be done through the different Search and Rescue Units and will be coordinated through the SRR Cluster. The MDM Cluster will only handle the bodies that were already declared dead by the CHO. The same bodies will be handed over to the MDM Cluster for processing and management.
3. The MDM Cluster shall cover the areas of Identification of the dead body and its final arrangement, management of the missing persons as well as attending to the concerns of the bereaved families.
4. The Cluster shall come up with a daily Cluster Report which shall be submitted to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 32: Response Activities for MDM

Response Clusters	Management of the Dead and Missing	
Time Frame	Needs / Activities	Responsible Agencies and Offices
D	Pre-positioning of MDM teams to staging areas	MILG
	Conduct of Search and Recovery Operation (Tagging, Retrieval, Handling)	CDRRMO, OHS, BFP
D + 1 Day	Gathering of evidences and Identification of retrieved dead bodies (Including issuance of certificate of Identification (PNP) and Issuance of Death Certificate (OHS))	PNP, OHS, MILG
	Final arrangement and disposal of the identified dead bodies to the rightful claimant	OHS, MILG
	MLGU to dispose unidentified bodies either by burying in public cemeteries each with unique labels and case numbers	MILG
	Management of the Missing Persons	MILG
D + 2 Days	Management of the Bereaved Families	OCSWDS
	Continuous monitoring and reporting	MILG

RESOURCE INVENTORY

Table 33: Resource Inventory for MDM

Response Cluster	Management of the Dead and Missing		
Agency/Office	Resource	Quantity	Remarks
Department of the Interior and Local Government (DILG)	Trained MDM Focal Person	1 PERSON	READY TO DEPLOY
Office of Health Services (OHS)	Manpower	1 TEAM	READY TO DEPLOY
	Cadaver/ Body Bag	100 UNITS	SERVICEABLE
	Camera	1 UNIT	SERVICEABLE
	Vehicle	1 UNIT	SERVICEABLE
Philippine National Police (PNP)	Manpower (MDM Focal Person)	1 TEAM	READY TO DEPLOY
Bureau of Fire Protection	Manpower	2 TEAMS	READY TO DEPLOY
City Disaster Risk Reduction and Management Office (CDRRMO)	Trained MDM Focal Person	0	STILL FOR TRAINING
	Cadaver/ Body Bag	20	SERVICEABLE
	Vehicle	1	SERVICEABLE
LNB	Manpower (BHW)	1 PAX PER BARANGAY	READY TO DEPLOY
	Manpower (Tanod)	10 PAX PER BARANGAY	READY TO DEPLOY
	Patrol vehicle	1 UNIT PER BARANGAY	READY TO DEPLOY

RESOURCE PROJECTION

Table 34: Resource Projection for MDM

Response Clusters	Management of the Dead and Missing						
	Resource	Need	Have	Gaps (Need – Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
CADAVER VEHICLE		2	0	2	PROCUREMENT	Php 3, 000, 000	LDRRMF

DETAILED IMPLEMENTATION PLAN

LAW AND ORDER

Response Cluster Lead: Philippine National Police (PNP)

Members: AFP, LNB, OCPSO, PCG

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

Some of the evacuees were concerned of their safety since there were a lot of people inside the evacuation areas. There were also reports that relief distribution on some areas became chaotic as people were already harassing the distributors of the relief goods. Units from the Philippine National Police were requested on each evacuation areas to ensure law and order and attend to security reports.

Specific Objectives

1. To ensure appropriate Law and Order operations in critical incident areas;
2. To ensure appropriate escalation protocols prior to dispatch of force and resources;
3. To provide security in the affected area, affected population, properties, cluster personnel and logistics;
4. To monitor, coordinate and resolve any issues of all aspects; and
5. To ensure vulnerable population specially women, children, person with disabilities and senior citizens receive proper assistance and protected from threats such as sexual violence trafficking and violence within family units.

Roles and Responsibilities

The Law-and-Order cluster shall have the following roles and responsibilities:

1. Establish a team to protect the affected population, properties, cluster personnel and logistics;
2. Monitor the situation to address the protection concerns in the event of disaster;
3. Coordinates response for life saving protection intervention;
4. Mainstreaming protection and promote the non-discriminatory assistance;

5. Prevention and response to violence abuse and exploitation;
6. Convene cluster meetings for monitoring assessment and further planning.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the Law-and-Order Cluster led by CCPO will convene at the Emergency Operation Center to undertake coordination;
2. The Cluster Lead shall ensure appropriate escalation protocols prior to dispatch of force and resources; and
3. The Cluster shall establish regular monitoring system and submission of a daily Cluster Report to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 25: Response Activities for Law and Order

Response Clusters	Law and Order	
Time Frame	Needs / Activities	Responsible Agencies and Offices
Day -2	<ul style="list-style-type: none"> Mapping of available resources and personnel teams 	PNP, AFP, LNB, OCPSO, PCG
Day -1	<ul style="list-style-type: none"> Prepare and organize appropriate number of personnel for security plan Prepositioning of available resources and personnel/teams 	PNP, AFP, LNB, CPSO, PCG
Day 0	<ul style="list-style-type: none"> Convene meeting with the CDRRM Council Members Activation of the Cluster Disaster Incident Management Task Group Activation of the Incident Command Post and Local Task Group Conduct timely and rapid disaster response Activation and deployment of PSO auxiliary teams 	PNP, AFP, LNB, OCPSO, PCG
Day + 1	<ul style="list-style-type: none"> Conduct assessment and monitoring of the situation activation of LNB for monitoring and patrols within their barangays 	PNP, AFP, LNB, OCPSO, PCG
D + 1 Day	Conduct assessment and monitoring of the situation	PNP
D + 1 Day	Conduct timely and rapid disaster response according to the needs in the area such as Search and Rescue operation, evacuation and relief operation, emergency medical services and security and traffic management operation in support and coordination with the LGU	PNP

RESOURCE INVENTORY

Table 36: Resource Inventory for Law and Order

Response Clusters	Law and Order		
Agency/Office	Resource	Quantity	Remarks
LNB	PER BARANGAY	10 PERSONS	READY TO DEPLOY
	UTILITY VEHICLE PER BARANGAY	1 UNIT	SERVICEABLE
Philippine National Police	Manpower	300 PERSONS	READY TO DEPLOY
	PATROL VEHICLE	10 UNITS	SERVICEABLE
CPSO	Manpower	70 PERSONS	READY TO DEPLOY

RESOURCE PROJECTION

Table 37: Resource Projection for Law and Order

Response Clusters	Law and Order					
Resource	Need	Have	Gaps (Need - Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
UTILITY VEHICLE	2	0	2	PROCUREMENT	3,000,000.00	LDRRMF

DETAILED IMPLEMENTATION PLAN

SHELTER

Response Cluster Lead: Office of the City Engineer

Members: CDRRMO, OCPDC, OCGSO, OCENRO, MILG, LNB, OCPSO, OCSWDS

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

There were about 9000 people, from children to elderly, who were displaced due to the incident with some of them being sheltered at different evacuation areas. Some have reported that their houses were flooded and must wait for the flooding to subside so they can safely return home. Shelter cluster is tasked to provide alternative shelter for the IDPs and their live stocks and assist in the rehabilitation of their damaged houses.

Specific Objectives

1. To assess and analyze the emergency shelter needs of the affected families.
2. To Establish mechanism to coordinate shelter and shelter related items during response for IDPs; and
3. To meet the shelter needs of affected populations more effectively by strengthening leadership, coordination, and accountability in the shelter sector, BLGU and the Community people.

Roles and Responsibilities

The Shelter cluster shall have the following roles and responsibilities:

1. Assess the emergency shelter needs of affected families and set targets for prioritization;
2. Determine and ensure the implementation of standards for the provision of emergency shelter assistance and other relevant support services for shelter;
3. Maximize all available materials and resources that can be used for the construction of shelter;
4. Responsible for coordinating the response to meet emergency needs, coordinates shelter, settlement, and shelter-related non-food items (NFIs) and long-term needs;

5. Responsible for site planning and settlement design working in close cooperation with other clusters, in particular the CCCM cluster to ensure that the views of the community are well represented;
6. Ensure that coordination mechanisms are established and properly supported
7. Monitor and report on the cluster strategy and its results, and recommend corrective action where necessary; and
8. Ensure that the shelter needs of affected populations are met according to agreed standards and good practices.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the cluster led by the City Engineering Office will convene at the Emergency Operation Center to undertake coordination;
2. The cluster shall come up with an assessment of the shelter status, needs and priorities of the affected families; and
3. The Cluster shall come up with a daily Cluster Report which shall be submitted to the Emergency Operation Center.

RESPONSE ACTIVITIES

Table 38: Response Activities for Shelter

Response Clusters	Shelter	
Time Frame	Needs / Activities	Responsible Agencies and Offices
D	Conduct Rapid Disaster Assessment and Needs Analysis Provision of alternative shelter to the evacuees	OCE, OCPDC
D + 1 Days	Develop tools and guidance for shelter operations	OCE
	Familiarization of team and Pre-identify Shelter Cluster Partners	OCE, OCPDC
	Coordination and meeting with other clusters. (CCCM, Logistics, Health, and Protection)	OCE, OCSWDS
D + 2 Days	Creation of Technical Working Group (TWG) as needed	OCE
D + 5 Days	Provision of cash assistance and housing materials	OCE, OCSWDS
	Continuous monitoring, assessment, and reporting	OCE

RESOURCE INVENTORY

Table 39: Resource Inventory for Shelter

Response Clusters	Shelter		
Agency/Office	Resource	Quantity	Remarks
City Engineering Office	TRUCKS	5 UNTIS	SERVICEABLE
	BACK HOE	1 UNITS	SERVICEABLE
	ENGINEERS	2 TEAMS	READY TO DEPLOY
	MANPOWER	20 PAX	READY TO DEPLOY
LNB	MAN POWER	10 PAX PER BARANGAY	READY TO DEPLOY
	UTILITY VEHICLE	1 PER BARANGAY	READY TO DEPLOY

RESOURCE PROJECTION

Table 40: Resource Projection for Shelter

Response Clusters	Shelter					
Resource	Need	Have	Gaps (Need - Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
PORTABLE TOOLS	10	0	10	PROCUREMENT	Php 1,000,000.00	LDRRMF

DETAILED IMPLEMENTATION PLAN

EARLY RECOVERY

Response Cluster Lead: Office of the City Planning and Development Coordinator (OCPDC)

Members: OCE, OCGSO, OCPDC, CENRO, AFP, LNB, OCAGRI, MILG, OCPSO, MBHTE, MCWD, COTABATO LIGHT

Scenario

A strong typhoon made its landfall to the south eastern part of Mindanao and has brought more than 3 consecutive days' moderate to heavy rain with water level reaching 50 meters (red level/critical level) on water level marker and large volume of water from upstream rivers draining at Rio Grande Mindanao and Tamontaka affecting 37 barangays. There is an outflow of water hyacinths that clog the water/river ways and bridges of the city. As it hit the coast of Cotabato City, the coastal barangays of Cotabato City have been devastated by the accompanying storm surge.

The different response clusters were already activated and carried-out their respective functions. After a few days, the flooding has slowly subsided and the evacuees were gradually returning to their homes. Though this was still under the response phase of disaster risk reduction and management, early recovery interventions shall be provided by the designated cluster.

Specific Objectives

1. To institutionalize the Early Recovery Cluster, specifying its composition, objectives, roles, and interface with other response clusters of the LDRRMC;
2. To determine the specific early recovery interventions with specific timelines of implementation;
3. To involve different agencies, non-government organizations (NGOS), Civic Society Organizations (CSOS), private partners and other external stakeholders in the early recovery operations;
4. To undertake assessment to determine the early recovery needs and priorities of the affected families;
5. To establish mechanism for the provision of livelihood and other economic opportunities to enable restoration to normal living conditions;
6. To facilitate gathering of all available resources from various government and non-government stakeholders for the purpose of early recovery; and
7. To transition to Disaster Rehabilitation and Recovery efforts.

Roles and Responsibilities

The Early Recovery cluster shall have the following roles and responsibilities:

1. Undertake assessment to determine the early recovery needs and priorities;
2. Outsource funding for financial assistance to subsidize early recovery activities;
3. Coordinate with other response clusters who are implementing their respective early recovery efforts;
4. Facilitate food-for-work or cash-for-work schemes; and
5. Provide resources, services and alternative to livelihood and economic opportunities for the affected communities.

EREID Protocol

In the onset of a conflagration with emerging and re-emerging infectious disease outbreaks, the following special protocols shall be observed:

1. All personnel and volunteers involved in the cluster are recommended to have completed vaccines for the identified infectious disease.
2. Specimen collection shall be conducted after thorough assessment of the Barangay Health Emergency Response Team (BHERT) for staff or volunteers who exhibited signs and symptoms of the infectious disease.
3. All personnel and volunteers shall wear the prescribed personal protective equipment while inside the designated evacuation camp. Camp chefs and food serving crew shall always wear from food preparation to food serving.
4. In cases of airborne infectious diseases outbreak, evacuees are required to wear face mask and observe social distancing.
5. There shall be a yellow bin in the evacuation camp that is intended only for disposal of hazardous or infectious wastes including face masks, hand gloves, and others.
6. There shall be a hand washing area at the entrance of all evacuation camps.
- 7.

Activation Protocol

1. Upon activation of the Contingency Plan, all key representatives of the cluster led by the City Disaster Risk Reduction and Management Office will convene at the Emergency Operation Center to undertake coordination;
2. The cluster shall coordinate with other response clusters and conduct a multi-sectoral assessment and analysis to determine early recovery needs and priorities; and
3. The Early Recovery cluster shall periodically report the Essential Elements of Information (EEI) to the Emergency Operation Center (EOC), together with the detailed breakdown and other necessary attachments: a) Number of beneficiaries/families/individuals; b) Total Cost of assistance and services provided.

RESPONSE ACTIVITIES

Table 41: Response Activities for Early Recovery (for Cotabato Light)

Response Clusters	Early Recovery	
Time Frame	Needs / Activities	Responsible Agencies and Offices
Day 1 + 4 hours	<ul style="list-style-type: none"> • Emergency response to meter related trouble calls <ul style="list-style-type: none"> ○ Temporary Isolation of some flooded areas ○ Energization of areas that are safe to hazards. 	COTABATO LIGHT
Day 1 + 8 hours	Monitoring and control of the power system, which starts with availability of supply from the grid to maintaining uninterrupted power supply to end-users	COTABATO LIGHT
Day 1 + 24 hours	<ol style="list-style-type: none"> 1. Assess the damages to assets (Actual) by Damage Assessment Team (DAT) <ol style="list-style-type: none"> a. Substations b. Primary poles Assets c. Secondary pole assets 2. Assess manpower (Actual not affected) by Human Resource & CDMS <ol style="list-style-type: none"> a. Organic Manpower b. Contractor Manpower <ol style="list-style-type: none"> i. This is to check whether we need back up from sister companies (Davao Light or VECO) - Communication is okay. (1-APRM Alert) <p>If communication is down, automatically they will send the workforce.</p>	COTABATO LIGHT
Day 2 Onwards	Start of massive power restorations to make sure that power is available as early as possible. - Operations Team	COTABATO LIGHT

RESPONSE ACTIVITIES

Table 42: Response Activities for Early Recovery (for OCPDC)

Response Clusters	Early Recovery (OCPDC)	
Time Frame	Needs / Activities	Responsible Agencies and Offices
D + 5 Days	Create and establish the Early Recovery Cluster based on needs	OCPDC
D + 10 Days	Conduct multi-sectoral assessment to determine the early recovery needs and priorities	OCPDC, OCGSO, OCE, OCENRO
	Submit Essential Elements of Information (EEI) together with the detailed breakdown and other necessary attachments: a) Number of beneficiaries/families/individuals; b) Total Cost of assistance and services provided.	OCPDC
	Coordinate and sustain early recovery priorities of other response clusters	OCPDC
	Facilitate continuous provision of camp management and protection services and sustain the stable provision of food and non-food items to displaced families	OCSWDS
	Uninterrupted access and provision for affected families of essential health services	OHS
	Continuous support in the delivery of education services in coordination with schools	MBHTE
	Coordinate with concerned service utilities/offices for restoration of critical facilities and lifelines	OCGSO, COTABATO LIGHT
	Provide financial shelter assistance	OCE, OCSWDS
	Continuous monitoring, assessment, and reporting	OCPDC

RESPONSE ACTIVITIES

Table 43: Response Activities for Early Recovery (for MCWD)

Response Clusters	Early Recovery (MCWD)	
Time Frame	Needs / Activities	Responsible Agencies and Offices
<i>D + 2 hours</i>	The MCWD will assess the damage caused to water infrastructure, including pipelines, treatment plants, reservoirs, and pumping stations.	Metro Cotabato Water District (MCWD)
<i>D + 3 hours</i>	Repairing and restoring damaged water infrastructure. The MCWD will repair pipelines, treatment plants, and pumping stations to ensure the immediate restoration of a safe water supply.	Metro Cotabato Water District (MCWD)
<i>D + 8 hours</i>	Post-disaster, water quality monitoring, and assessment.	Metro Cotabato Water District (MCWD)
<i>D + 24 Hours</i>	Providing information to the affected population in evacuation camps on safe water usage, conservation methods, and measures to prevent water contamination to avoid water-borne diseases.	Metro Cotabato Water District (MCWD)

RESOURCE INVENTORY

Table 44: Resource Inventory for Early Recovery

Response Clusters	Early Recovery		
Agency/Office	Resource	Quantity	Remarks
Cotabato Light and Power Company	Gang Trucks (Contractors)	11	Intended for Power line restorations and other Line Activities.
	Light Vehicles	6	Intended for Power line restorations and other Line Activities.
	Trimming Crew	3	Intended to clear trees from Power lines unless otherwise we cannot enter the area due to blockage
	Motorbike	5	Intended for Power line restorations and other Line Activities
	Generator Set	4.45 MW	<ul style="list-style-type: none"> ● Intended to supply power to: <ul style="list-style-type: none"> ○ Hospitals (CRMC & NDH), ○ Emergency Operation Center (EOC), (CityHall) ○ Incident Command System (ICS), (CityHall) Selected Feeders & Reclosers
	Relief Assistance	TBD	Part of Company's Corporate Social Responsibility (CSR) through Aboitiz Foundation, Inc.
LNB	BERT (Barangay Emergency Response Team)	2 Teams (5 member per team)	Ready to be deployed

RESOURCE PROJECTION

Table 45: Resource Projection for Early Recovery

Response Clusters	Early Recovery					
	Need	Have	Gaps (Need - Have)	Activities / Sources to fill the gaps	Cost Estimates	Sources of Funds
Drone with tablet and accessories	1	0	1	Procurement	Php 200,000	LDRRMF
Crop Insurance	1	0	1	Compliance to MAFAR Requirments	Php 100,000	MAFAR
Seedlings	70 kgs	20 kgs	50 kgs	Procurement	Php 150,000	MAFAR

RESOURCE GAP SUMMARY

Table 46: Resource Gap Summary

Response Cluster	Total Resource Gaps	Total Cost Estimates
Food and Non-Food Items	8	16,200,000.00
Health	5	4,000,000.00
IDP Protection Camp Coordination and Management	2	11,000,000.00
Logistics	3	2,500,000.00
Emergency Telecommunications	2	1,570,000.00
Education	3	3,405,000.00
Search, Rescue and Retrieval	5	15,000,000.00
Management of the Dead and Missing	1	3,000,000.00
Law and Order	1	3,000,000.00
Shelter	1	1,000,000.00
Early Recovery	3	450,000.00

COORDINATION, COMMAND & CONTROL

FEATURES OF THE EMERGENCY OPERATION CENTER (EOC)

The Cotabato City DRRM Emergency Operation Center is the repository of information and main hub for coordination of the Cotabato City LGU. It serves as the main communication link for all responding units, receives emergency and non-emergency calls, monitors the security and surveillance cameras municipal wide, dispatches call to concerned responding unit, receives data and reports from responding units.

The CDRRMOC operates a 24/7 basis once potential and on-going emergency situations come into affliction within the territorial jurisdiction of the city in coordination with security and lined agencies. It will undertake information management function in the event of on-going disaster situations, being the center of all response coordination at the city and barangay level. It will also monitor the transition from emergency response and relief to recovery phase.

During normal conditions, the operation center functions as a regular office with a skeletal duty team during special operations such as holidays. During emergency conditions and other disaster situations brought about by both sudden onset and slow onset disasters, the CDRRMOC will activate its Duty Alert System whereby duty personnel work round-the-clock to continuously monitor the evolving situation. It will process information received from various sources and provides an analysis to get a clear picture of the magnitude of the situation as well as identify the gaps and emergency needs in addressing the requirements of the affected population. It also recommends appropriate actions to undertake to expedite the decision-making process.

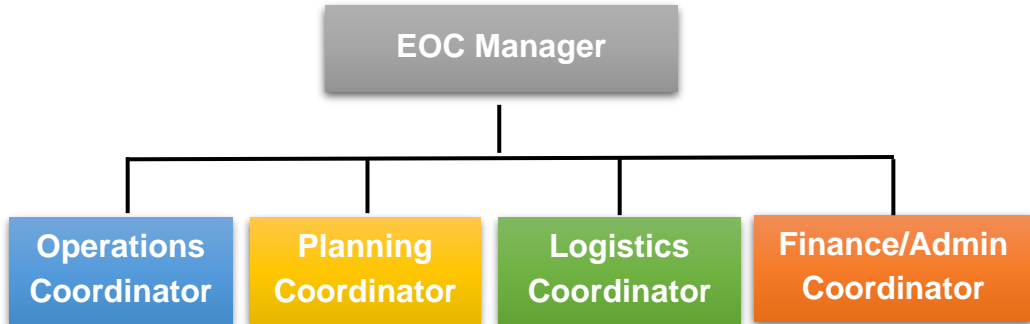
The EOC serves as repository of information and main hub for coordination of services and resources to support the management of the disaster for all response clusters and external stakeholders that will be aiding and augmentation during the emergency.

It shall utilize support system such as early warning and emergency broadcast system, incident command system, rapid damage assessment and needs analysis, emergency logistics management, public private partnerships for emergency response, and humanitarian assistance coordination mechanism.

ORGANIZATIONAL STRUCTURE OF THE EMERGENCY OPERATION CENTER (EOC)

The EOC will be operated with the hereunder organizational structure:

Figure 10. Organizational Structure of EOC



The following are the roles and responsibilities for each position that shall be carried out by the designated personnel within the emergency operation center

Table 47: Roles and Responsibilities of EOC

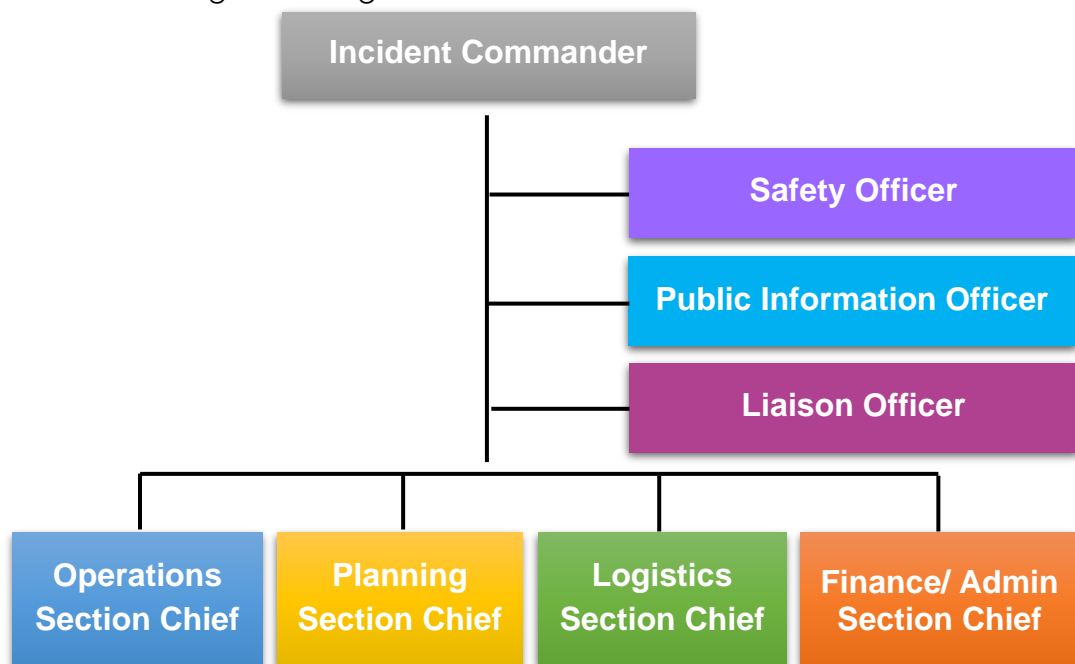
POSITION	ROLES AND RESPONSIBILITIES
EOC Manager	Takes guidance from Responsible Official Provides overall leadership in the EOC Assigns responsibility to the EOC staff
Operations Coordinator	Coordinates requirements for emergency response
Planning Coordinator	Collects, analyzes, and displays information Develops, maintains, and disseminates situation reports Prepares action plan Tracks resources
Logistics Coordinator	Maintains EOC facilities and equipment Provides transportation, food, and medical services for all duty personnel
Finance and Administration Coordinator	Manages all financial and administrative concerns of the EOC

INCIDENT COMMAND SYSTEM

The Incident Command System is an on-scene response mechanism that is being implemented for tactical response. Once all the teams have been mobilized on the ground during the worst-case scenario, they will operate under this system, to be led by the Incident Management Team.

Below is the organizational structure of the Incident Management Team (IMT) to guide and define how activities such as tasking, coordination, and **supervision are directed towards the achievement of its operational goals.**

Figure 11. Organizational Structure of ICS



The following are the roles and responsibilities for each position that shall be carried out by the designated personnel.

Table 48: Roles and Responsibilities of ICS

POSITION	ROLES AND RESPONSIBILITIES
Incident Commander	Overall manages the incident
Command Staff	
Public Information Officer	Interacts with the media and public
Safety Officer	Assesses all operational safety concerns
Liaison Officer	Point of contact for other agencies
General Staff	
Operations Section Chief	Implements tactical activities
Planning Section Chief	Collects information and prepares reports
Logistics Section Chief	Provides facilities and services support
Finance and Administration Section Chief	Monitors and approves expenditures

The Incident Management Team headed by an Incident Commander after given the Delegation of Authority by the Responsible Official, performs a coordinated on-scene operation.

The incident commander views the entire incident from an analytical standpoint, keenly investigating, identifying the symptoms, and coordinating the incident response.

The IMT will set out an incident action plan, delegating tasks and liaising with the stakeholders involved. The main goal is to keep moving towards a resolution. The incident commander does this by deciding the next steps to carry out in the incident management process.

INTEROPERABILITY

The Incident Command System (ICS) and Cluster Approach system are proven to be effective tools in managing actual and potential disaster impacts by enhancing the mechanisms for resource management, reporting and documentation, and optimum achievement of response objectives;

These DRRM tools are interoperable in a sense that the EOC acts as a link between the IMTs and Response Clusters. Guided by the duly formulated Incident Action Plan, the team may operate as a Single or Unified Command, depending on the gravity of the conflagration incident.

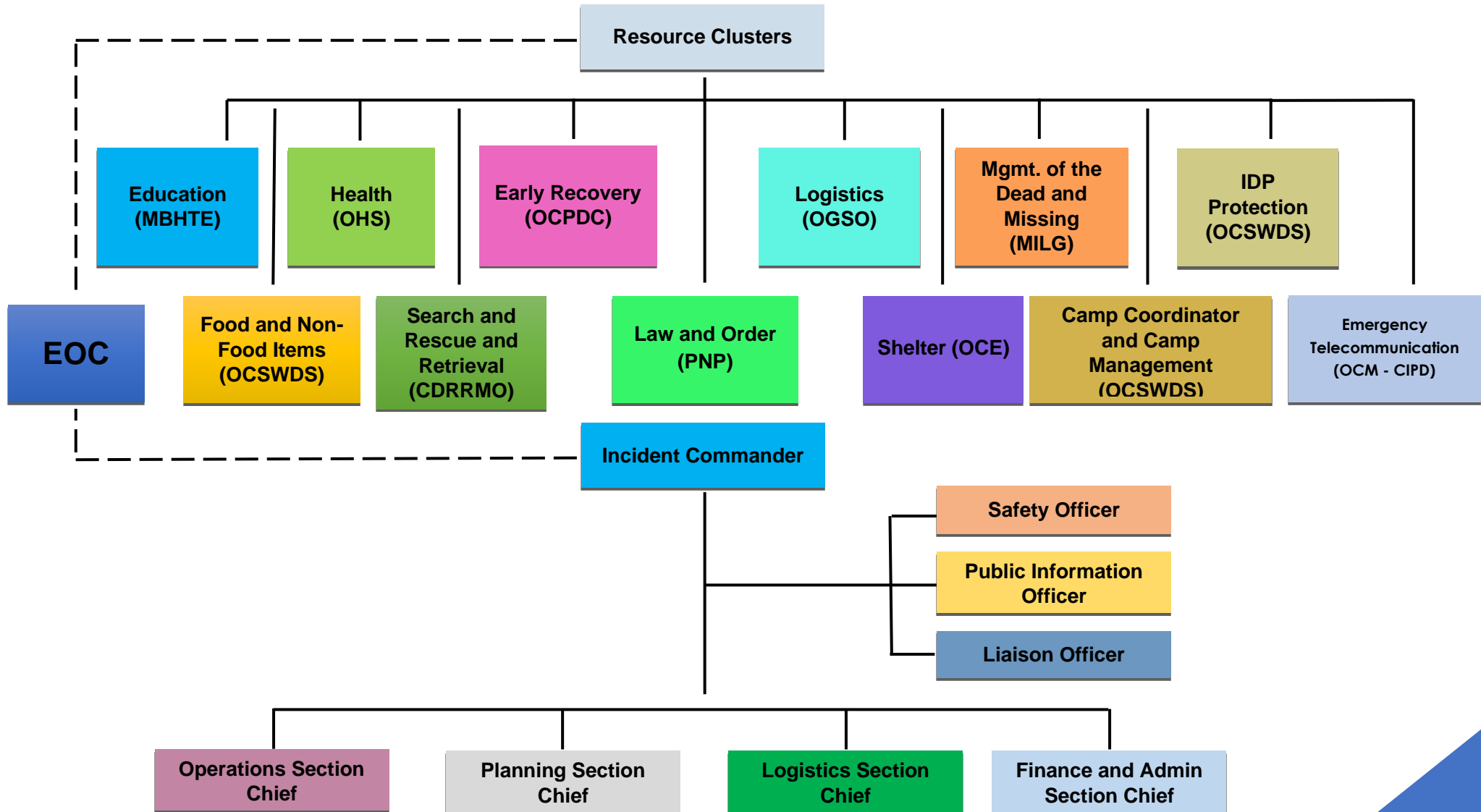
The Response Cluster Leads shall send their team and resources based on their mandates and will be required to check-in and work under the Incident Management Team following the Incident Command System principles.

The Clusters shall monitor the IMT's activities via the EOC and provide additional resources as needed and requested.

The Incident Management Team shall then be the Force-employers where ICS-trained responders operate while Clusters are the Force-providers where decision makers usually operate. Meaning, Cluster resources shall still perform according to their mandates, SOPs, and technical expertise. The IMT will just manage them tactically for proper placement and efficiency.





The Chairperson of the LDRRMC shall supervise the coordination activities and strategic decisions of the sectors. These decisions shall then be communicated to the IC through the EOC. The IC, on the other hand, shall report the tactical activities to the EOC going to the response clusters.

Figure 12. Interoperability



EMERGENCY OPERATION CENTER (EOC)

Table 49: EOC Contact Information

LOCATION	PEOPLE'S PALACE COMPOUND, ROSARY HEIGHTS 10, COTABATO CITY	
CONTACT INFORMATION		
Primary	Alternate	
 Landline: (064) 552 - 1085  Mobile: 0995-981-3015 / 0991-669-4553  Email Address: cotcitydrmo@yahoo.com.ph  Social Media: @Cdrmmocotabato	 Radio Frequency: 146.390 mHz (Whitehouse)	
EOC MANAGEMENT TEAM		
POSITION	NAMES AND AGENCY/ OFFICE/ ORGANIZATION	CONTACT INFORMATION
EOC Manager	HEAD OF CDRRMO	0991-669-4553
Operations Coordinator	CDRRMO OPERATIONS AND WARNING SECTION CHIEF	064 – 552 – 1085
Planning Coordinator	REPRESENTATIVES/LIAISON OF OCPDC	064 - 552 – 1252
Logistics Coordinator	REPRESENTATIVES/LIAISON OF OCGSO	064 - 552 – 0864
Finance & Administrative Coordinator	REPRESENTATIVES/LIAISON OF CBO	064 - 421 – 7807

INCIDENT COMMAND SYSTEM (ICS)

Table 50: ICS Contact Information

ICS FACILITIES		
Facilities	Location	
Incident Command Post	PEOPLE'S PALACE COMPOUND/CDRRMO OPCEN, RH 10, COTABATO CITY	
Staging Area	Depends on the situation	
Base	City Hall Compound	
Camp	Regional Evacuation Center, CDRRMO Compound, RH 10	
Helispot	Headquarters, 99IB, RH 9, Cotabato City	
Helibase	Awang, D.O.S, Maguindanao	
Others		
INCIDENT MANAGEMENT TEAM		
POSITION	NAMES AND AGENCY/ OFFICE/ ORGANIZATION	CONTACT INFORMATION
Incident Commander	LOCAL CHIEF EXECUITVE (City Mayor)	064 - 557 – 1612
Command Staff		
Public Information Officer	HEAD OF OCM - CIPD	064 - 429 – 0524
Liaison Officer	SECRETARY TO THE CITY MAYOR	064 - 421 – 8969
Safety Officer	HEAD OF OCPSO	064 - 421 -5197
General Staff		
Operations Section Chief	HEAD OF CDRRMO	064 – 552 - 1085
Planning Section Chief	HEAD OF OCPDC	064 - 552 – 1252
Logistics Section Chief	HEAD OF OCGSO	064 - 552 – 0864
Finance & Administrative Section Chief	HEAD OF OCBO	064 - 421 – 7807

CHAPTER IV: ACTIVATION, DEACTIVATION, AND NON - ACTIVATION



The EOC shall be activated upon the issuance of alert levels from the Provincial DRRMO/ Regional OCD, or based on the findings of Pre-Disaster Risk Assessment (PDRA) upon determining the triggers.

➤➤ SOP AND GUIDELINES DURING ACTIVATION PERIOD

It is imperative to organize and deploy an RDANA team to take a snapshot of the disaster situation. And based on the findings and recommendation of Rapid Disaster Assessment and Needs Analysis (RDANA) team, this Contingency Plan may be activated.

Rapid Damage Assessment and Needs Analysis (RDANA) is a disaster response tool that is used immediately during the early and critical state of onset of a disaster. This tool will help the EOC to identify the magnitude of a disaster by focusing on the general impact on the community and the affected population's coping capacity due to the conflagration incident. The RDANA will further help in determining the immediate relief and response requirements as dictated by the type, scale, and characteristics of the incident.

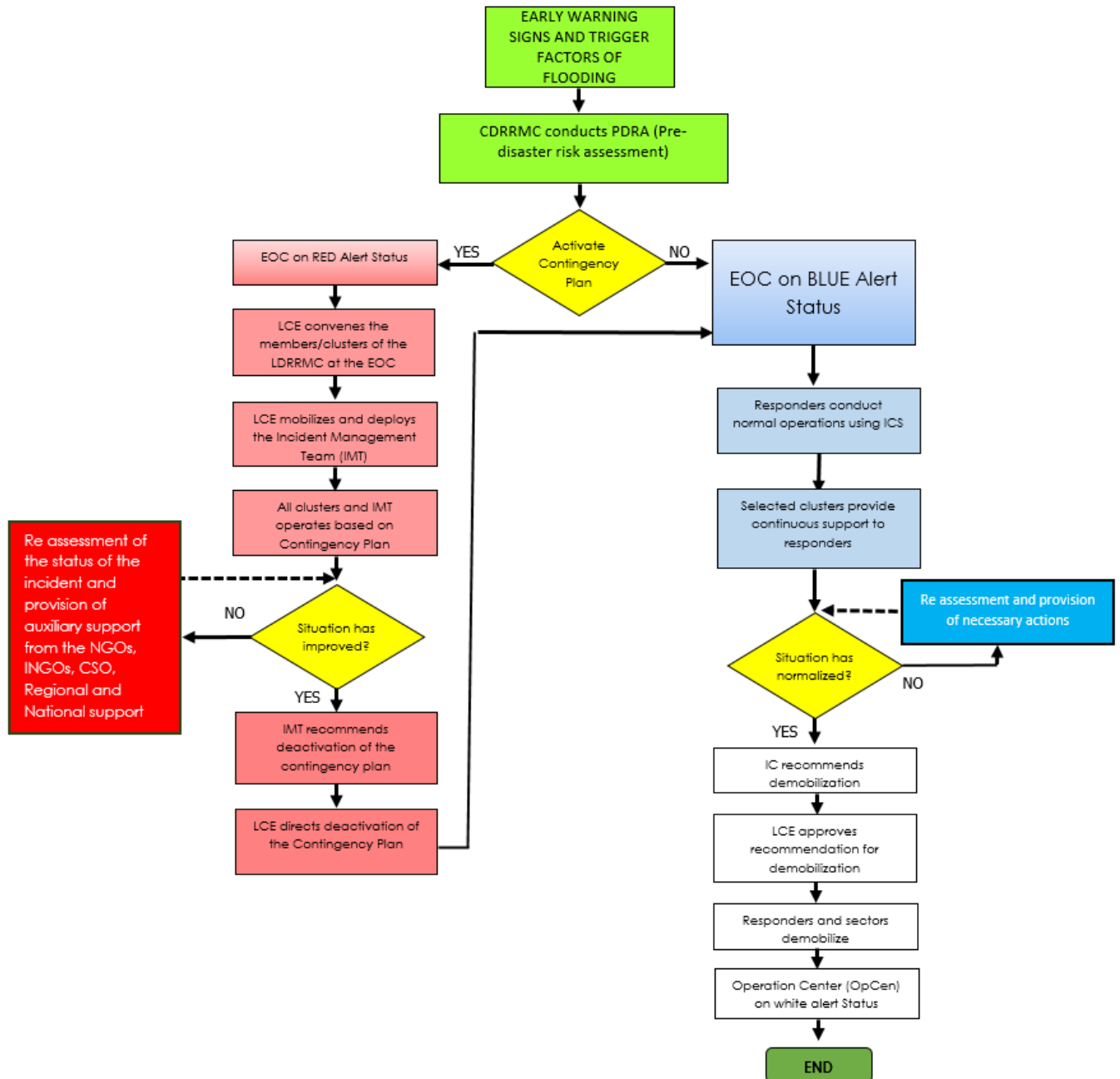
➤➤ RESPONSE REQUIREMENTS

1. Prepare Situational Reports and RDANA Report for the Chairman, LDRRMC.
2. Coordinate with implementing agencies to maximize mobilization of resources.
3. Monitor the declaration of BDRRMCs their area under the State of Calamity and report it to PDRRMC and OCD.
4. Immediately implement the cluster approach coordination mechanism and the CDRRMO Secretariat shall facilitate the conduct of emergency meetings presided by Local Chief Executive or his designate with the cluster leads to effectively address the response requirements.

ACTIVATION AND DEACTIVATION FLOWCHART

The procedures for activating and deactivating the contingency plan shall adhere to the flowchart below:

Figure 13. Activation and Deactivation Flowchart



Upon activation of the Emergency Operation Center (EOC), the Local Chief Executive shall convene all the response clusters to assess the situation and activate the Incident Command System (ICS) and delegate authority to the Incident Commander (IC) and to proceed to organizing the Incident Management Team (IMT) and implement tactical activities based on the strategic decisions of the response clusters.

The contingency plan shall be deactivated once the situation has improved and when heightened alert is no longer required. The recommendation for deactivation shall emanate from the Incident Commander to the Local Chief Executive via the Emergency Operation Center (EOC). Once deactivated, operation will remain until such time that the EOC will be back to "white alert" status. At this point, the operation is already terminated.

Downgrading or lowering the CDRRMO EOC's alert status shall be upon the memorandum order of LDRRMC, and the recommendation of Head, LDRRMC Duty Personnel. Downgrading from RED to BLUE to WHITE shall be determined based on the condition of affected population/barangay. Termination of disaster response such as relief operations, search, rescue and retrieval can be the basis of downgrading the alert status.

However, when downgraded into normal condition (white), LDRRMC member- agencies are still required to submit report/update to CDRRM EOC from time to time.

NON - ACTIVATION

The Contingency Plan shall be deemed as non-activated until triggers or early warning signs are being considered. The plan will be maintained as a perpetual or a continuing plan for it can still be utilized for future use in case the same hazard will occur.

This Contingency Plan can also be incorporated to the plan of the Local Disaster Risk Reduction and Management Plan of the Cotabato City LGU to improve our preparedness and response capacities and allocating financial resources to address the gaps identified through this plan.



ANNEX 1: TECHNICAL WORKING GROUP

»» TERMS OF REFERENCE

Purpose: The Working Group shall be the focal body in charge of the refinement, finalization, testing, evaluation, packaging, updating and improvement of the contingency plan under the supervision of the Local Disaster Risk Reduction and Management Office (LDRRMO). The group shall work closely with the planners of Cotabato City LGU for the attainment of the Contingency Planning objectives.

Functions:

1. Facilitate the refinement and finalization of the contingency plan to include testing, evaluation, packaging, updating and improvement;
2. Develop work plan for the completion and updating of the contingency plan;
3. Organize consultation meetings with the planners and relevant subject matter experts regarding the development of the contingency plan; and
4. Facilitate the presentation and endorsement of the contingency plan to Chairperson, LDRRMC and Local Sangguniang Panlungsod for comments and approval.

Members' Duties and Responsibilities:

1. Overall Coordinator: in charge of the CP process; monitors the progress of CP; initiates the conduct of meetings to review, evaluate and update the contingency plan, as necessary; disseminates updates on the contingency plan to agencies/offices concerned; leads the conduct of simulation exercises to test the coherence and integrity of the plan.
2. Secretariat: facilitates CP meetings, workshops, and simulation exercises; drives the CP participants to achieve the target outputs; documents proceedings of the meetings, workshops, and simulation exercises; take charges of the reproduction and distribution of the contingency plan and other materials to the concerned meeting attendees and workshop participants.

3. Technical Staffs: write the contents of the actual contingency plan; assimilates comments, inputs and recommendations gathered during meetings, workshops, and simulation exercises to improve the contingency plan; consolidates the outputs from the clusters and integrates them into the overall contingency plan.
4. Sector Leads: facilitates the completion of sub-plan for the respective sector, including the accomplishment of the CP forms; ensures the availability of data for the specific sector; coordinates with other clusters to ensure that the preparation of sub-plans is on track, that the different cluster plans are consistent with each other, and that all clusters are familiarized with their tasks likely to be performed in case of an emergency.

Composition:

Role	Names	Office	Contact Number
Over-all Coordinator	Amil P. Esmael	CDRRMO	09959813015
Secretariat/ Technical Staff	Amirah L. Juanday, RN Karen Pete S. Liloc, RCrim Reyuard B. Jose Engr. Primitiva Joy Visitacion	CDRRMO	09167059025 09751746178 09366671662 09453347165
Food and Non-Food Items Cluster Lead	Asrap R. Abubakar, RSW Rehana R. Abubakar, RSW	OCSWDS	09772180344
Health (Medical, WASH, Nutrition, Mental Health, and Psychosocial Support) Cluster Lead	Alfred S. Nograles, RM	OHS	09155398219
IDP Protection Cluster Lead	Asrap R. Abubakar, RSW Rehana R. Abubakar, RSW	OCSWDS	09772180344
Camp Coordination and Management Cluster Lead	Asrap R. Abubakar, RSW Rehana R. Abubakar, RSW	OCSWDS	09772180344
Logistics Cluster Lead	Engr. Nerio Zambrano	OCGSO	09177260509
Education Cluster Lead	Representative from school division of Cotabato City	MBHTE	064 – 552 - 3221
Search, Rescue and Retrieval Cluster Lead	Rashman Nazer D. Lim, RN, EMT, CTM SFO3 Darwin Sapayani	CDRRMO BFP	09478917441 09754277985
Management of the Dead and Missing Cluster Lead	Amirah Fatmah Nowanghan	MILG	09564485913
Law and Order Cluster Lead	PLT. Jonathan L. Marciano Letty C. Perocho	PNP CPSO	09685401606 09557097142
Shelter Cluster Lead	Ivann Gerard J. Kamensa	OCE	09270057235
Early Recovery Cluster Lead	Engr. Oscar B. Rendon Engr. Abdulbady Madugay	OCPDC	09665685679 09205281663

ANNEX 2: LDRRMC DIRECTORY

OFFICE	NAME/POSITION	CONTACT NO.
OFFICE OF THE CITY MAYOR	MOHAMMAD ALI C. MATABALAO	064 – 557 – 1612
OFFICE OF THE CITY ADMINISTRATOR	ABDULWAHAB D. MIDTIMBANG	064 – 557 – 2132
CITY DISASTER RISK REDUCTION & MANAGEMENT OFFICE	AMIL P. ESMAEL	064 – 552-1085
CITY PLANNING AND DEVELOPMENT OFFICE	ENGR. MA. ADELA A. FIESTA, MPA, ENP	064 – 552-1252
OFFICE ON HEALTH SERVICES	HARRIS ALI, MD	09276122375
CITY ENVIRONMENTAL & RESOURCE OFFICE	ENGR. CRISANTO B. SAAVEDRA	064 – 557-1453
CITY OCAGRIULTURE OFFICE	ROY JESUS B. FIESTA	09554209416/09678520659
CITY ENGINEERING OFFICE	ENGR. SAMUEL JOROLAN	064 – 557 – 1807
CITY BUDGET OFFICE	REGINA G. DETALLA	064 – 421 – 7807
CITY PUBLIC SAFETY OFFICE	ADAM GUIAMAD	064 – 421 – 3569
OFFICE OF GENERAL SERVICES	PEDRO D. TATO	064 – 522-0864
CITY TREASURY OFFICE	TEDDY U. INTA	064 – 421 – 3506
OFFICE ON SOCIAL WELFARE AND DEVELOPMENT OFFICE	ASRAP P. ABUBAKAR, RSW	064 – 421-3140
MINISTRY OF LOCAL GOVERNMENT-COT CITY	MUHAMMAD FARZIEH B. ABUTAZIL	09174790068
COTABATO CITY POLICE OFFICE	PCOL QUERUBIN L MANALANG, JR	09975445872
ARMED FORCES OF THE PHILIPPINES – JTF	COL GLENN LORETO T. CABALLERO INF (GSC)PA	09974814033
COTABATO LIGHT & POWER COMPANY	VALENTINE S. SALUDES III, PEE	09065296208
METRO COTABATO WATER DISTRICT	ENGR. JASPER OCHIA	0920 668 5454
DEPARTMENT OF EDUCATION	SARAPIA G. TALAPAS	09171337952
COTABATO REGIONAL AND MEDICAL CENTER	ISHMAEL R. DIMAREN, MD, MHA, FPCS, FPSGS, FPSCRS	0998 878 1305
PHILIPPINE RED CROSS-COTABATO CHAPTER	AUTHORIZED REPRESENTATIVE	0975 399 7748
BUREAU OF FIRE – COTABATO CITY	F/INSP IKE J. LACHICA, JR.	064 – 552 – 1785

ANNEX 3: DEMOGRAPHIC PROFILE BY PREGNANT AND TEENAGE MOTHERS

PREGNANT							TOT AL	TEENAGE MOTHER		TOT AL
13-18	19-22	23-29	30-34	35-39	40-44	45-49		13-18	19-22	
F	F	F	F	F	F	F		F	F	
0	25	48	37	35	25	15	185	28	10	38
1	2	0	3	3	0	0	9	4	4	8
10	8	4	3	0	0	0	25	3	0	3
5	57	35	38	0	11	3	149	18	0	18
0	13	15	13	9	0	0	50	5	0	5
0	10	31	16	4	1	0	62	0	2	2
25	18	15	12	8	0	0	78	25	0	25
10	18	22	31	8	0	0	89	16	9	25
15	13	14	16	12	6	0	81	6	0	6
0	0	9	3	5	1	0	18	5	1	6
0	0	12	6	1	0	0	19	0	0	0
0	4	14	11	6	0	0	35	1	1	2
0	8	7	8	6	2	0	31	0	8	8
19	70	62	62	13	10	16	252	15	16	31
0	0	22	11	12	3	0	48	4	15	19
10	15	18	33	21	7	0	104	15	10	25
3	6	8	6	0	1	0	24	4	10	14
0	21	13	80	0	0	0	114	4	0	4
8	2	1	0	0	0	0	11	1	10	11
0	0	1	0	1	0	0	2	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	23	31	19	14	3	0	90	18	0	18
6	13	25	7	0	0	0	51	10	13	23
0	3	7	5	4	0	0	19	5	0	5
50	28	0	0	0	0	0	78	100	0	100
0	3	2	2	1	0	0	8	2	15	17
0	19	4	2	3	0	0	28	1	0	1
2	3	5	2	1	0	0	13	6	0	6
0	0	2	1	2	0	0	5	4	0	4
5	20	26	10	15	13	0	89	0	0	0
2	5	4	3	5	0	0	19	4	9	13
23	29	6	6	0	2	0	66	13	18	31
194	441	463	446	189	85	34	1852	317	151	468

SOURCE: OCSWDS Population Census 2023

ANNEX 3: DEMOGRAPHIC PROFILE BY SENIOR CITIZEN

SENIOR CITIZEN										TOTAL
60-64y.m		65-70y.m		71-80y.m		81-90y.m		91 above		
M	F	M	F	M	F	M	F	M	F	
322	220	216	213	140	142	60	52	40	30	1435
64	70	64	75	27	50	23	17	4	12	406
30	47	48	69	41	53	6	17	0	6	317
50	40	20	5	99	40	43	10	7	2	316
76	131	72	78	73	96	65	27	45	41	704
858	97	63	78	47	78	16	44	2	7	1290
202	215	255	94	220	177	130	1200	0	0	2493
150	50	69	65	50	30	0	0	0	0	414
559	235	467	276	376	266	320	200	0	0	2699
82	134	44	76	43	78	13	22	0	0	492
196	208	149	190	155	149	24	44	0	0	1115
77	64	68	60	27	22	8	3	4	1	334
39	56	44	66	31	50	9	9	4	6	314
95	69	143	136	72	76	28	33	2	1	655
40	55	45	50	35	45	0	0	0	0	270
40	90	40	90	40	90	41	156	1	1	589
43	32	26	42	9	39	6	15	0	4	216
16	20	31	36	31	29	21	19	1	30	234
21	27	10	20	16	16	0	0	0	0	110
53	59	39	60	35	53	5	41	0	1	346
68	63	60	61	35	41	4	6	2	3	343
74	114	75	96	32	68	21	30	0	0	510
15	46	24	3	0	0	0	0	0	0	88
31	20	38	35	35	79	10	14	5	3	270
62	124	45	90	23	45	1	2	0	0	392
76	78	37	56	19	28	6	13	0	3	316
14	26	5	11	14	12	2	4	0	4	92
8	7	7	5	13	21	5	10	2	2	80
85	92	32	42	20	36	15	19	0	0	341
373	391	339	340	177	178	146	146	12	8	2110
10	12	36	40	11	6	4	5	2	2	128
10	9	115	120	38	40	10	2	0	0	344
3839	2901	2726	2678	1984	2153	1042	2160	133	167	19763

SOURCE: OCSWDS Population Census 2023

ANNEX 3: DEMOGRAPHIC PROFILE BY PERSON WITH DISABILITY

										PWD																											
0-6 mo		7mo- 1y.		2-4y.		5-6y.		7-12y.		13-18y.		19-22y.		23-29y.		30-34y.		35-39y.		40-44y.		45-49y.		50-54y.		55-59y.		60-64y.		65-70y.		71-80y.		81-90y.			
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
5	4	4	6	7	2	5	3	5	2	4	2	6	4	4	5	5	3	5	4	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	1	1	8	3	1	1	5	4	1	1	3	2	2	0	3	0	5	2	6	1	0	0	0	0	0	0	0	0	0	
0	0	0	1	3	1	1	1	2	1	2	3	5	1		4	7	2	2	7	0	7	8	10	9	6	13	9	8	3	6	3	6	4	0	0		
0	0	0	0	0	0	0	0	8	5	0	0	12	15	3	0	0	0	5	5	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	1	0	2	0	0	0	4	10	8	2	6	3	4	3	15	3	8	3	0	0	0	3	2	1	5	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	1	23	3	7	2	2	3	0	2	1	1	3	1	2	3	2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	9	6	7	3	4	6	3	2	0	2	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	4	2	2	2	1	2	2	3	4	7	3	3	3	2	3	2	0	0	2	1	2	6	4	4	3	3	4	9	6	7	44	52	34	46		
0	0	0	0	3	2	7	5	5	6	3	4	2	1	2	3	3	2	4	3	5	3	4	5	5	2	2	7	0	0	0	0	0	0	0	0		
0	0	0	0	2	0	3	2	12	3	6	3	3	2	7	2	8	4	4	4	3	3	7	8	13	18	10	3	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	4	2	4	2	1	2	2	2	5	2	5	0	1	1	2	5	2	3	2	1	4	5	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	0	0	0	6	3	3	0	2	0	3	2	0	0	1	3	2	1	3	3	2	1	1	0	4	1	0	0	0	0		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	7	2	3	2	4	7	7	5	5	4	6		0	0	0	0	0	0	0	0	0		
0	0	0	0	1	1	7	3	16	4	10	8	9	6	7	3	2	6	7	6	2	6	3	4	4	3	5	6	0	0	0	0	0	0	0	0		
0	0	0	0	0	0	0	1	3	2	1	3	4	1	5	2	4	1	3	5	7	4	1	2	3	4	3	4	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	2	1	2	2	2	2	2	5	5	5	5	5	5	5	10	8	15	10	10	5	10	8	15	15	0	0	0	0	0	0	0	0	
0	0	0	0	4	5	0	2	2	3	4	1	0	1	4	1	1	2	0	0	0	0	0	1	0	0	0	0	0	0	3	2	0	0	0	0		
0	0	0	0	0	0	0	0	0	0	2	5	3	3	0	0	8	5	0	0	1	2	2	2	4	72	3	2	2	0	3	1	2	0	0	0		
0	0	0	0	0	0	0	0	3	2	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	1	0	14	0	3	0	0	0	7	4	5	0	2	0	2	5	3	3	2	3	2	5	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	4	0	0	1	3	0	2	3	3	1	1	1	2	2		2	3	2	4	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	13	4	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15	8	70	70	150	105	90		
0	0	0	0	1	0	0	0	11	3	5	0	0	1	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	1	1	2	3	1	0	4	6	5	4	5	4	2	5	2	0	0	0	2	0	4	0	0	0	1	1	0	0	0	0	0	0	0	0	
0	0	0	0	0	1	2	12	9	5	7	9	5	2	3	7	3	8	2	1	2	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	3	2	0	2	4	8	1	0	6	1	4	4	2	5	3	2	2	2	1	2	4	3	1	1	0	0	0	0	0	0	0	0	0	
0	0	0	0	1	2	0	1	0	1	1	2	0	0	1	1	0	0	2	1	2	0	2	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	1	1	2	1	1	0	1	0	0	3	1	1	2	4	2	1	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	2	4	0	0	5	3	10	11	0	0	2	2	0	0	0	3	2	6	5	4	2	6	5	7	2	0	0	
0	0	0	0	1	3	0	0	0	0	0	0	0	0	2	2	6	4	8	5	6	1	9	4	2	4	4	4	1	3	2	2	2	2	0	0		
0	0	0	0	0	0	4	6	5	6	7	4	1	1	4	2	4	3	4	3	0	0	2	2	1	3	2	2	5	7	10	8	20	15	0	0		
5	4	9	10	32	22	39	37	131	74	113	80	95	92	109	82	116	79	84	69	86	69	80	77	89	146	87	65	53	58	47	96	150	228	146	138		

ANNEX 3: DEMOGRAPHIC PROFILE BY INFORMAL SETTLER FAMILIES

																														ISF																		TOTAL
0-6 mo.n		7mo.n-1y.n		2-4y.n		5-6y.n		7-12y.n		13-18y.n		19-22y.n		23-29y.n		30-34y.n		35-39y.n		40-44y.n		45-49y.n		50-54y.n		55-59y.n		60-64y.n		65-70y.n		71-80y.n		81-90y.n		91 above												
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F											
0	0	0	0	0	0	0	0	0	0	0	0	48	35	45	30	30	25	12	10	12	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255									
0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	3	4	6	0	0	8	10	147	10	11	12	10	10	7	7	5	11	4	4	2	2	0	0	284										
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	12	8	6	8	5	8	4	3	2	2	6	6	0	0	0	0	0	0	0	75											
0	0	0	0	0	0	0	0	0	0	0	0	10	10	80	30	180	35	137	30	150	50	140	55	60	65	90	40	0	0	0	0	0	0	0	0	0	1162											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	15	50	15	43	7	45	23	42	24	37	36	36	14	31	15	0	0	0	0	0	0	470												
0	0	0	0	0	0	0	0	0	0	0	0	8	1	20	4	35	1	30	2	19	1	18	6	23	4	12	5	5	2	8	2	2	2	1	1	0	212											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	20			274	160	198	140	192	51	100	25	0	0	0	0	0	0	0	0	1190												
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	86	112	87	120	76	38	26	15	11	10	27	11	20	18	16	15	12	0	797											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	9	22	9	35	15	32	20	41	15	19	12	9	11	2	1	2	1	0	0	0	0	280												
0	0	0	0	0	0	0	0	0	0	0	0	2	4	5	3	13	4	9	6	12	13	15	12	14	5	9	7	8	12	8	9	0	0	0	0	170												
0	0	0	0	0	0	0	0	3	2		0	5	4	10	12	8	6	4	4	5	3	2	2	3	2	1	1	2	0	0	0	0	0	0	0	79												
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	15	5	46	8	15	10	30	10	17	8	42	3	10	2	0	0	0	0	238												
0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	11	14	3	21	4	20	8	14	10	6	10	2	0	7	2	0	0	0	0	0	0	145												
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	10	15	20	15	13	8	10	10	0	0	0	0	0	0	0	0	0	0	0	108												
0	0	0	0	0	0	0	0	0	0	0	0	10	15	20	25	25	25	120	150	150	145	110	115	90	120	105	205	15	15	10	10	5	5	5	5	2	2	1504										
0	0	0	0	0	0	0	0	0	0	15	25	13	20	30	46	48	40	65	46	101	89	125	61	150	48	48	40	27	26	4	3	16	16	0	0	1102												
0	0	0	0	0	0	0	0	0	0	1	0	2	0	15	5	20	11	20	10	30	11	26	10	19	12	24	5	11	4	3	4	1	0	1	0	245												
0	0	0	0	5	4	6	10	9	11	12	24	12	9	30	27	26	12	0	0	32	14	12	10	3	2	3	2	0	0	0	0	0	0	0	0	275												
0	0	0	0	0	0	0	0	0	0	0	0	9	3	16	4	21	10	24	8	53	19	29	11	18	12	16	9	9	6	11	3	10	2	0	1	0	304											
1	3	3	6	3	6	7	2	12	12	8	12	7	5	17	21	6	6	2	8	8	5	8	5	5	2	4	4	2	2	0	2	1	0	1	0	196												
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	99	0	0	100	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	278											
5	4	5	6	15	8	10	6	31	25	35	47	29	23	43	57	31	26	29	25	18	13	18	1323	14	12	11	0	0	0	0	0	0	0	0	0	1869												
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	8	5	2	11	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	36	0	14	3	12	6	0	6	0	1	0	3	0	0	0	0	0	0	106												
0	0	0	0	0	0	0	0	0	0	0	0	1	0	13	1	7	0	9	1	6	0	3	0	6	0	1	1	2	0	0	1	0	0	0	1	0	53											
0	0	0	0	0	0	0	0	0	0	2	25	8	33	20	50	25	54	15	18	8	37	2	40	7	32	4	15	4	14	5	15	5	12	0	1	0	451											
0	0	0	0	0	0	0	0	0	0	0	18	5	36	10	43	14	48	21	39	19	42	7	50	11	13	5	8	4	7	3	5	2	2	0	1	1	414											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
6	7	8	12	23	18	23	18	55	50	71	110	199	142	508	324	747	430	801	514	1327	800	1183	1932	848	472	566	409	210	136	96	76	77	52	39	22	4	3	12318										

SOURCE: OCSWDS Population Census 2023

ANNEX 4: PLANNING WORKSHOP PHOTOS



