

BOOK 1 / 2022 EDITION

CITY OF MALOLOS

CONTINGENCY PLAN

HYDROMETEOROLOGICAL HAZARDS,
EARTHQUAKE AND COVID-19



Republika ng Pilipinas
Lalawigan ng Bulacan
Lungsod ng Malolos

TANGGAPAN NG SANGGUNIANG PANLUNGSOD

HANGO SA KATITIKAN NG IKA-23. KARANIWANG PULONG NG SANGGUNIANG PANLUNGSOD NG MALOLOS NA GINANAP SA BULWAGANG PULUNGAN NG SANGGUNIANG (ANNEX), IKA-LIMANG PALAPAG NG BAGONG GUSALI NG PAMAHALAANG LUNGSOD NG MALOLOS NOONG IKA-05 NG DISYEMBRE, 2022.

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ANG LAHAT AY NAKADALO:

KAPASITYAHANG PANLUNGSOD BLG. 334-2022

ISANG KAPASITYAHANG PANLUNGSOD NA PINAGTITIBAY AT INA-ADOPT ANG CONTINGENCY PLAN ON HYDROMETEOROLOGICAL HAZARDS, EARTHQUAKE AND COVID-19 NG LUNGSOD NG MALOLOS

ITINAGUYOD NI: KGG. EMMANUEL R. SACAY
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SAPAGKAT, ang City Disaster Risk Reduction and Management Council (CDRRMC) ay bumuo ng Contingency Plan on Hydrometeorological Hazards, Earthquake and Covid-19 bilang paghahanda sa mga posibleng epekto ng kalamidad sa Lungsod ng Malolos;

SAPAGKAT, ang ilang piling kawani ng Pamahalaang Lungsod ay dumaan sa mga pagsasanay at pakikipag-ugnayan upang makabuo ng plano bilang paghahanda sa mga posibleng banta ng panganib na maaaring idulot ng pagbaha at lindol sa mga mamamayan;

SAPAGKAT, ang nasabing plano ay titiyak sa seguridad o pangangalaga sa mgaari-arian, kalusugan at buhay ng mgamamamayan ng lungsod na sumasang-ayon sa itinatadhana ng RA 7160, kilala sa taguring Local Government Code of 1991 partikular sa Seksyon 16 nito na naghahayag na tungkulin ng Pamahalaang Lokal na isulong ang kagalingang panlahat, kaya

Sa pamamagitan ng kahilingan ni Kgg. Emmanuel R. Sacay na sinang-ayunan ng lahat, ay

IPINASIYA, gaya ng dito ay ginagawang pagpapasiya na pagtibayin at i-adopt ang Contingency Plan on Hydrometeorological Hazards, Earthquake and Covid-19 ng Lungsod ng Malolos.

PINAGTIBAY.

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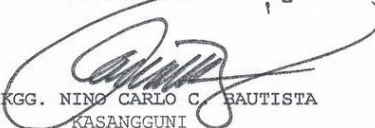
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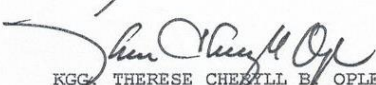

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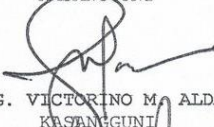

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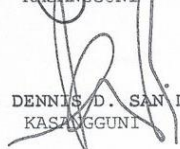

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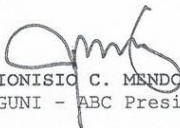

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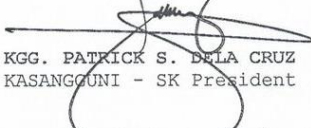

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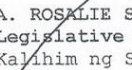

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PINATUTUNAYAN ko, na ang nasabing Kapasiyahang Panlungsod ay pinagtibay ng Sanggunian.


MA. ROSALIE SP. CRUZ
Local Legislative Staff Officer V
Pansamantalang Kalihim ng Sangguniang Panlungsod

PINATUTUNAYAN:


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*hindi nakadalo

DherieTrago(SDC2)*12052022





Republic of the Philippines
Province of Bulacan
CITY OF MALOLOS

MESSAGE

Indeed, preparedness must be the battle cry of the city so as to ensure that should lightning strike the second time around, losses – should it be inevitable, shall be down to its minimum so little so that it should be negligible. Contingency planning is the sword for our battle cry. The NDRRMC Manual for LGUs on Contingency Planning has perfectly set the tone on defining the purpose of contingency planning: “Contingency planning ensures the availability of stand-by resources and provides mechanism for rapid decision-making that can shorten disaster response and ultimately saves lives.”

Being the Local Chief Executive of the City, I am honored in overseeing the continuous effort of the City Disaster Risk Reduction Management Council as it strives to bring into public awareness the importance of contingency planning that is rooted not just on the perfection of effective emergency preparedness and response, but also on increasing self-discipline and community concern amongst the Maloleños.

The Contingency Plan of the City of Malolos albeit a humble step in the city’s emergency response, shall surely serve its purpose in bringing about preparedness in the most practical way possible.

Sama-samang pagkilos patungo sa mas ligtas na Malolos!

ATTY. CHRISTIAN D. NATIVIDAD

City Mayor
Chairman, CDRRMC



FOREWORD

This Contingency Plan aims to strengthen and enhance the operational capabilities of the City Government of Malolos in responding to flooding, earthquake and any emergency situation. Furthermore, this contingency plan also aims to generate commitment among parties involved to act in a coordinated manner before the emergency occurs, in mobilizing effective actions and resources for emergency response and to serve as guide and pattern to a concrete and continuous plan until the emergency occurs, continuously updating such plans as long as the hazard is no longer threatening.

Contingency planning is 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.

The Contingency Plan be a useful reference to all CDRRMC and BDRRMC members, NGOs, private and volunteer organizations and other stakeholders as an indicative guide in preparedness, response and assessing disaster events or potential hazards that have affected or may likely affect the communities.



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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 as a result 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 (CP): 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.



Coronavirus Disease 2019 (COVID-19): is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment.

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 in order 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): a designated facility that is staffed and equipped with resources to undertake multi-stakeholder coordination, manage information, and facilitate resource mobilization in anticipation of and/or to support incident operations.

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

Goal: an observable and measurable end result having one or more objectives to be achieved within a more or less 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.

Hydro-meteorological Hazard: REFER TO RA 10121

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.

Mental Health and Psychosocial Support Services: REFER TO DOH DEFINITION

Minimum Public Health Standards: REFER TO DOH DEFINITION

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.

New Normal (COVID-19): refers to the emerging behaviors, situations, and minimum public health standards that will be institutionalized in common or routine practice and remain even after the pandemic while the disease is not totally eradicated through means such as widespread immunizations. These include actions that will become second nature to the general public as well as policies such as bans to large gatherings that will continue to remain in force.

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 (PDRA): a process to evaluate a hazard’s level of risk given the degree of exposure and vulnerability in a specific area. PDRA 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 on the basis of 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 as a result of the occurrence of natural or human-induced hazard.

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.

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.



LIST OF ACRONYMS

CBMS	:	Community Based Management Information System
CLUP	:	Comprehensive Land Use Plan
CM	:	Crisis Management
CMC	:	Crisis Management Committee
CP	:	Contingency Planning
CSO	:	Civil Society Organization
DRR	:	Disaster Risk Reduction
DRRM	:	Disaster Risk Reduction and Management
DRRMC	:	Disaster Risk Reduction and Management Council
DRRMF	:	Disaster Risk Reduction Management Fund
DRVA	:	Disaster Risk and Vulnerability Assessment
EO	:	Executive Order
EOC	:	Emergency Operations Center
HADR	:	Humanitarian Assistance and Disaster Response
IMT	:	Incident Management Team
IC	:	Incident Commander
ICS	:	Incident Command System
IHA	:	International Humanitarian Assistance
IRR	:	Implementing Rules and Regulations
JMC	:	Joint Memorandum Circular
LDRRMF	:	Local Disaster Risk Reduction and Management Fund
LGU	:	Local Government Unit
MC	:	Memorandum Circular
NCMCM	:	National Crisis Management Core Manual
NDRP	:	National Disaster Response Plan
NDRRMC	:	National Disaster Risk Reduction and Management Council
NGA	:	National Government Agency
NGO	:	Non-Government Organization
PDNA	:	Post-Disaster Needs Assessment
PDRA	:	Pre-Disaster Risk Assessment
PDRRMC	:	Provincial Disaster Risk Reduction and Management Council
PDRRMS	:	Philippine Disaster Risk Reduction and Management System
PWD	:	Persons with Disabilities
QRF	:	Quick Response Fund
RA	:	Republic Act
RDANA	:	Rapid Damage Assessment and Needs Analysis
RO	:	Responsible Official
SMARTER	:	Specific, Measurable, Attainable, Realistic, Time-Bound, Extending, Rewarding
SFDRR	:	Sendai Framework for Disaster Risk Reduction
SOP	:	Standard Operating Procedure
SUC	:	Schools, Universities, and Colleges
UNESCAP	:	United Nations Economic and Social Commission for Asia and the Pacific
UNHCR	:	United Nations High Commissioner for Refugees





CHAPTER 1

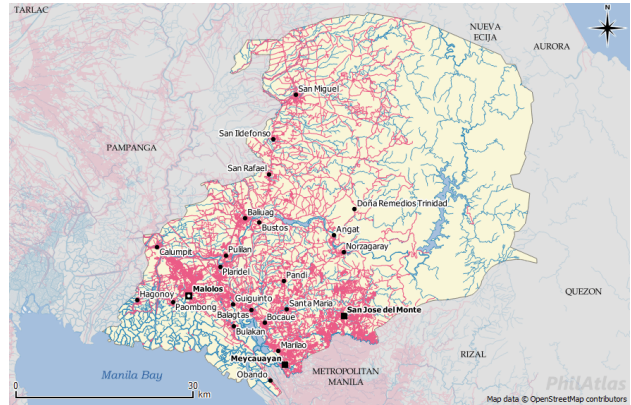
BACKGROUND



CHAPTER I. BACKGROUND

A. Introduction

Natural disasters that occur in the City of Malolos are generally the result of severe weather conditions such as heavy rain, storm surges, thunderstorms and tropical cyclones. These events can result in considerable disruption to transport and other essential services and cause floods, landslips and other incidents giving rise to casualties. Tsunami, which is a geophysical hazard that poses a threat to coastal communities worldwide, has a very small chance of affecting Hong Kong significantly. The consequences of any natural disaster and the counter measures required to deal with it will vary according to the circumstances.



The City of Malolos Contingency Plan establishes the minimum standards in the provision of services with regards to disaster response in order to adopt the most effective and efficient ways of saving lives, protecting property and the environment from damage and destruction during calamities. This contingency plan summarizes the City of Malolos’ alerting systems and organizational framework for responding to such disasters. Functions and responsibilities of government departments and other bodies in the event of natural disasters including those resulting from severe weather conditions are also set out in this plan.

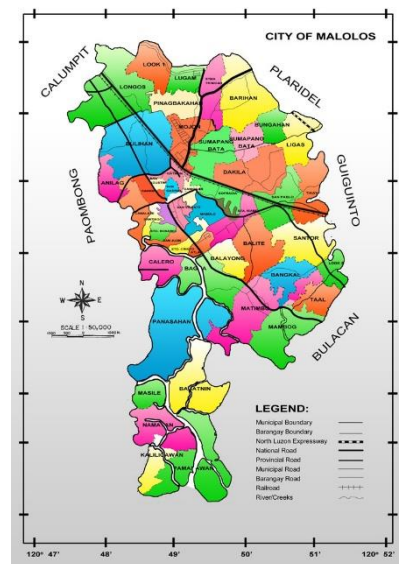
In the event of a disaster, it will be necessary to exercise strict control over access to the disaster site in order to ensure that the emergency services are not deflected from their task of saving lives, protecting property and safeguarding the disaster site for subsequent expert investigation. This control will apply to both members of the Civil Service and the public.

A.1 Brief Profile of the City of Malolos

A.1.1 Location, Land Area, and Political Subdivisions

The City of Malolos lies in the southern portion of the Province of Bulacan approximately within the longitudinal coordinates 120° 46' 48.50" E and 120° 51' 53.00" E and within the latitudinal coordinates 14° 45' 26.00" N and 14° 53' 29.86" N. It belongs to the five (5) coastal towns of Bulacan with a coastline reaching to more than 4 kilometers. It is accessible by land through the Manila North Road, which is about 40 kilometers north of Manila.

There are five (5) municipalities surrounding the City of Malolos. Two (2) of which also belongs to the coastal towns of Bulacan, the Municipalities of Paombong and Bulakan located on the western and



eastern part respectively. The rest of the municipalities surrounding the city are part of the lowland towns of Bulacan comprising the Municipality of Plaridel on the north, the Municipality of Guiguinto on the east and the Municipality of Calumpit on the west. The southernmost part of the city is bounded by the Manila Bay.

The City of Malolos has a total land area of 7,105.16 hectares based on the Barangay Boundary Index Mapping (*BBIM*) survey done by the Department of Environment and Natural Resources-Land Management Bureau (*DENR-LMB*) in year 2014-2015.

A.1.2 Population and Settlements

The 2015 Census of Population of the City of Malolos resulted to a total of 252,074 inhabitants which is 7.66 percent of the total population of Bulacan. With these figures, the city ranks third among other cities and municipalities in terms of 2015 Census of population. The City of Malolos grows at a slower rate than that of the province and the country at Annual Growth Rate (*AGR*) of 1.41 percent based on the Census of population in 2010. The records of population show that the growth is faster from 1970 onwards and with the current rate, the City of Malolos will double its population in almost 52 years. The table below shows the historical Censuses of Population including that of the province, which population growth is usually faster than that of City of Malolos except in 1970, 2000, and 2010.

The housing facilities are being provided by the 81 residential subdivisions situated across the city aside from the housing facilities along the barangay and the city roads. There are also two (2) government housing projects in the area with more than 3,300 housing units situated in Barangays Bangkal and Mabolo. The Northville 8 in Barangay Bangkal is a resettlement site to more than 3,200 families being managed by the National Housing Authority (*NHA*). The Bagong Tuklas Resettlement in barangay Mabolo is administered by the city government.

The informal settlers in the city as of 2015 were around 550 families. They are scattered in 6 barangays of the city. Barangays Tikay, Look 2nd, and Atlag have the most number of informal settlers recorded at 162, 141, and 103, respectively.

Table 1: Population Density

BARANGAY	LAND AREA IN HAS.	% TO TOTAL LAND AREA	2015 POPULATION	POPULATION DISTRIBUTION	DENSITY (POP. /HA.)
1. Anilao	132.30	1.86	3,078	1.22	23.27
2. Atlag	37.88	0.53	5,294	2.10	139.74
3. Babatnin	440.24	6.20	958	0.38	2.18
4. Bagna	89.44	1.26	5,321	2.11	59.49
5. Bagong Bayan	68.12	0.96	3,688	1.46	54.14
6. Balayong	134.47	1.89	3,338	1.32	24.82
7. Balite	178.68	2.51	2,813	1.12	15.74
8. Bangkal	122.92	1.73	12,437	4.93	101.18
9. Barihan	222.45	3.13	5,833	2.31	26.22
10. Bulihan	413.75	5.82	13,510	5.36	32.65
11. Bungahan	93.41	1.31	2,965	1.18	31.74
12. Caingin	55.67	0.78	6,899	2.74	123.93
13. Calero	150.16	2.11	1,281	0.51	8.53
14. Caliligawan	95.98	1.35	302	0.12	3.15
15. Canalate	30.70	0.43	4,124	1.64	134.31
16. Caniogan	42.15	0.59	5,132	2.04	121.74
17. Catmon	25.83	0.36	2,382	0.94	92.21



18. Cofradia	50.83	0.72	3,937	1.56	77.46
19. Dakila	249.85	3.52	5,352	2.12	21.42
20. Guinhawa	42.20	0.59	4,086	1.62	96.83
21. Liang	9.45	0.13	1,661	0.66	175.73
22. Ligas	183.92	2.59	6,624	2.63	36.01
23. Longos	405.14	5.70	14,864	5.90	36.69
24. Look 1st	140.48	1.98	6,808	2.70	48.46
25. Look 2nd	71.91	1.01	3,108	1.23	43.22
26. Lugam	77.52	1.09	4,711	1.87	60.77
27. Mabolo	141.08	1.99	6,435	2.55	45.61
28. Mambog	217.72	3.06	2,673	1.06	12.28
29. Masile	92.68	1.30	832	0.33	8.98
30. Matimbo	288.36	4.06	6,516	2.58	22.60
31. Mojon	130.19	1.83	18,239	7.24	140.10
32. Namayan	193.26	2.72	771	0.31	3.99
33. Niugan	72.12	1.02	828	0.33	11.48
34. Pamarawan	231.99	3.27	3,336	1.32	14.38
35. Panasahan	704.65	9.92	8,818	3.50	12.51
36. Pinagbakahan	144.09	2.03	6,087	2.41	42.25
37. San Agustin	13.02	0.18	2,262	0.90	173.73
38. San Gabriel	13.02	0.18	2,467	0.98	189.47
39. San Juan	76.92	1.08	4,388	1.74	57.05
40. San Pablo	128.03	1.80	5,240	2.08	40.93
41. San Vicente	25.44	0.36	2,790	1.11	109.65
42. Santiago	40.04	0.56	1,973	0.78	49.27
43. Santisima Trinidad	134.41	1.89	6,524	2.59	48.54
44. Santor	215.26	3.03	8,646	3.43	40.17
45. Sto. Cristo	42.68	0.60	2,025	0.80	47.45
46. Sto. Niño	10.11	0.14	561	0.22	55.48
47. Sto. Rosario	67.28	0.95	7,633	3.03	113.45
48. Sumapang Bata	114.81	1.62	2,645	1.05	23.04
49. Sumapang Matanda	169.02	2.38	7,554	3.00	44.69
50. Taal	92.68	1.30	2,231	0.89	24.07
51. Tikay	180.87	2.55	10,094	4.00	55.81
TOTAL	7,105.16	100.00	252,074	7.66	35.48

A.2 Physical Resources

A.2.1 Topography

The City of Malolos is characterized by flat terrain extending from its narrow coastline at the south to the agricultural plains in the north. This is evident by the largely spaced contour lines in the northern part of the city and spot elevations on the south. Having the Manila Bay at its coastal boundary, major rivers, and tributaries traverses the town and drains all the way to the sea including the rivers of Pamarawan, Galas, Malaway, Pangagtan, and Bugwan. These rivers and many other tributaries interweaving the City of Malolos cover 4.00 % of its total land area.

A.2.2 Climate

The City of Malolos has two (2) pronounced seasons; the wet season which is usually from the month of May to November and the dry season which is usually from December to April. The climate appears to be almost equally distributed among the land of the city which is basically a flat terrain from south to the north.



A.2.3 Slope

Bulacan is categorized into three (3) thematic areas: the coastal area, lowland area, and upland or highland area. Lowland areas are characterized by slopes having 0 to 3% or level to gently sloping. These areas have the greatest portion in Bulacan totaling to about 41% of the whole area of the province.

The City of Malolos belongs to coastal area of Bulacan. The whole territory of the city is characterized by a slope ranging from 0 to 3% or having a land with generally flat terrain.

A.2.4 Soil Classification

Quingua soil series comprises majority of the soil types found in the territory of the City of Malolos representing about 37% of its entire territory. This soil series is where the rich soil of the city can be found. This is evident by the areas' suitability for rice paddy farming in many parts of the city. Land

A.2.5 Classification

Land Classification in Bulacan is divided into two (2) major types, Alienable and Disposable (*A & D*) and Forest Lands. *A & D* refers to lands of public domain which have not been the subject of the present system of classification and declared not needed for forest purposes. This is further classified into settlements, built-up, and production areas. It is estimated that about 66% (*1,851 sq.km.*) of the total land area in Bulacan is *A & D* (*source, LMB*). Forest Lands are further categorized into three (3), protected forest land (*NIPAS*), *NON-NIPAS* Protection Forests, and the production forests. The whole area of City of Malolos falls within the *A & D* classification of public domains.

A.2.6 Geology

The whole territory of the City of Malolos has a geologic composition of alluvium formation which indicates suitability for urban development. Alluvial rock formation is the result of the deposition of weathered rock materials by rivers, creeks, and streams of low-level areas. It is a term used when the generally characterized with soils that are loose at the surface, well-drained and permeable, with good water-holding capacity.

Alluvial rock formation characterizes the majority of the geologic structure of the Province of Bulacan which are commonly found in its western section and estimated to cover about 40% to 50% of its landmass.

A.3 Local Economy

The economy of City of Malolos is driven by the secondary (*industry*) and the tertiary (*service*) sectors. The tertiary sector dominates in terms of number at 87 percent, but the secondary sector has the biggest slice of the economy based on annual gross receipts at 69 percent. It suggests that the businesses under the industry group are larger with huge capitalization. Specifically, the biggest sub sectors are manufacturing for the industry group while trading for the service sector.



Given that the urbanization level in the City of Malolos is advancing, the contribution of the primary sector to its economy is not as substantial as that of the other sectors. It only constitutes less than 1 percent of the annual gross receipts, and the same percentage holds true with the number of registered businesses.

A.3.1 Primary Sector

The primary sector includes agriculture, fishery, livestock, and forestry. Meanwhile, the secondary sector is also referred as the industry group. It relates to the production of goods production such as mining and quarrying of minerals; manufacturing; generation of electric power; production of gas and steam; development of waterworks systems; and construction. And finally, the tertiary or the service sector are the businesses of wholesale and retail trading; transportation, storage, and communication; finance, insurance, real estate, and business services; and community, social, and personal services.

A.4 Hazard Identification

The City Planning and Development Office completed a Disaster Risk and Vulnerability Assessment (DRVA) Report in 2021. This report summarizes substantial research and information on the hazards and risks faced by Bulacan Province. The DRVA Report was written for the purpose of development planning and decision making, and does not include all hazards relevant for DRRM, such as human and animal health. Nonetheless, it has provided the basis for much of the risk and hazard assessment in this Plan, and can be referred to for further detail on the hazard exposure of the City of Malolos.

The identified hazards of the City of Malolos were as follows given the probability, impact and rank.

Table 2. CP FORM 1: Hazard Analysis / Identification

Hazard	Probability		Impact		Average $\frac{P+I}{2}$	Rank
	Rate	Remarks	Rate	Remarks		
1. Flooding (Urban flooding, Coastal/High Tide) Typhoon Storm Surge	7	Location of Bulacan along the, existence of several river system and topography of Bulacan are natural conditions that contribute to flooding	7	Silted River System and clogged Water ways contributes to the rapid flood water rise during heavy rains	7	1
		Low lying areas and coastal towns				
		Brought by heavy rains specifically in the low-lying areas		Extreme weather such as typhoons is also associated with this period, but heavy monsoon rains alone are frequently responsible for severe floods.		
		Geographic location; past experiences such as Typhoons Pedring, Ulysses and Karding The south-west monsoon, or habagat, brings heavy rains from May to October to most of the Philippines, including Bulacan in northern Luzon. Most of the annual rainfall arrives in this period.				
Storm surges are an abnormal rise in sea water level caused by strong winds and low atmospheric pressure during typhoons and storms.	The coastal barangays are prone to this type of specific hazard					



		Considered as Secondary hazard to typhoon.				
2. Earthquake Ground Shaking Tsunami	6	The West Valley Fault System (approx. 100 km long) traverses the Province of Bulacan – DRT, Norzagaray, SJDM City. An active fault that can generate an earthquake with 7.2 magnitude	6	Earthquake alone can cause a death toll that reaches an estimate of 9,671 This does not count deaths that can occur due to events in the aftermath	6	2
		There are areas in the City of Malolos that are vulnerable to tsunami in case of an off- land earthquake that will trigger this hazard. Secondary hazard to earthquake		The City of Malolos are located along the shorelines of Manila Bay, which, according to PHIVOLCS have been affected by tsunamis.		
3. Fire	5	The increasing population that parallels to the increasing housing/settlement requirement. A number of industries are also present in the city. A primary hazard in the case of Human Induced but in natural disaster this is considered to be secondary to earthquake.	5	Increasing incidents of fire and injury involving residential fires.	5	3
4. Human Health and Disease (Epidemics/ Biological Health Hazard)	4	The continuous evolution of new infectious threats to human health that emerge – often without warning – from the natural environment.	4	The Philippines continues to witness outbreaks of emerging infectious diseases, including epidemic prone communicable diseases.	4	4
5. Animal Health and Disease African Swine Flu (ASF)	3	It is important for livestock raisers and livestock extension workers to closely monitor and prevent possible livestock disease outbreaks that may occur in their area.	3	Diseases are one of the major factors that affect farm productivity especially for livestock raisers. Not only does it affect the operations of just one farm; with livestock, it may also infect other animals of other farms when not treated correctly	3	5
6. Drought	2	Malolos City experiences a dry season from November to April, and is susceptible to drought in that period.	2	The main consequences are economic harm to agricultural production, water shortages, and increased risk of fires. .	2	6
		The risk of drought is predicted to increase due to climate change over coming years				
7. Volcanic Eruption Ash Fall	1	Bulacan does not have any live/active volcanoes within the province. However, it is exposed to the impacts of nearby volcanoes outside the province	1	Bulacan was affected by ashfall and other disruption caused by the eruption of Mount Pinatubo in 1991 Although ash falls rarely endanger human life directly, threats to public health and disruption to critical infrastructure services, aviation and primary production can lead to potentially substantial societal impacts and costs, even at thicknesses of only a few millimetres	1	7

The top 2 hazard of the City of Malolos as seen in the above probability and impact ratings are flooding and earthquake. Under flooding which is rank 1 are secondary hazards such as typhoon and storm surge. On rank number 1 is earthquake, with ground shaking and tsunami as secondary hazards. The massive devastation that could happen if a magnitude 7.2 earthquake or the Big One jolts the west valley fault line that could cause massive devastation in the city.

Possible causes of flooding in the City of Malolos are usually heavy rains associated with typhoons; overflow from silted rivers and creeks; coastal flooding (high tide); inadequate drainage and excessive surface run-off from different waterways.



A. Hydro-meteorologic Hazards

The following section will discuss the consequence analysis results for hydro-meteorologic hazards identified in the City of Malolos such as flooding and storm surge. The discussion will focus on the exposure of the population to these hazards.

Flooding

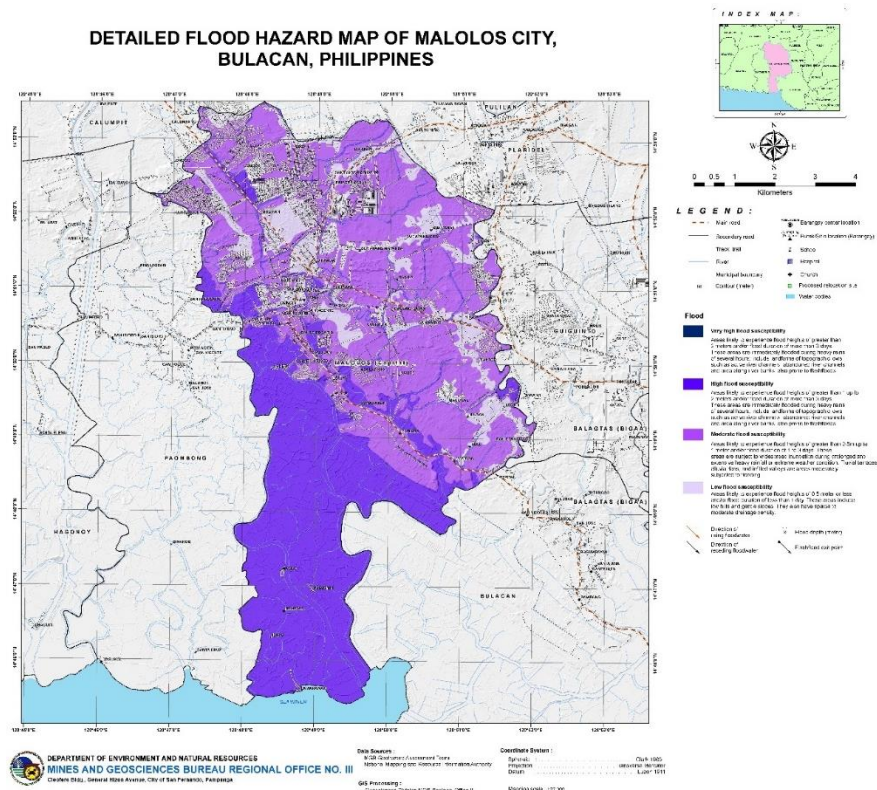
Based on the updated flooding hazard prepared by MGB, the City of Malolos is prone to three levels of flooding susceptibility. The coastal municipalities along Manila Bay and topographically low-lying areas of the city are highly susceptible to more than one (1) up to two (2) meter of flood waters. These areas are usually flooded for several hours during heavy rains aggravated by high tide. Other barangays are likewise moderately to low susceptible flooding. These areas are usually inundated during prolonged and extensive heavy rainfall of extreme weather conditions.

The flooding hazard map was further processed to determine level of susceptibility to represent the frequent, likely and rare which are identified based on the following matrix:

Identifying Potentially Affected Population

The following are the population exposure tables and its map representation for flooding hazard.

Flood Hazard Map of the City of Malolos



According to the data generated from GeoAnalyticsPh from the Department of Science and Technology, the barangays of Namayan, Pamarawan, Caliligawan, Babatnin, Masile and Calero registered to have the highest population exposed to high flooding. These barangays with the highest proportion of population exposed to flooding hazard deserves to have the most attention in terms of capability to cope with the impacts of flooding.



Table 3. Population Exposed to Flooding

Assesment (No. of Population Affected) Flood					
No.	Barangay	Total Population	Low	Moderate	High
1	Anilao	3,078	0	802	2,276
2	Atlag	5,294	0	3,730	1,564
3	Babatnin	958	0	0	958
4	Bagna	5,321	0	1,141	4,180
5	Bagong Bayan	3,688	786	2,623	279
6	Balayong	3,337	112	2,387	838
7	Balite	2,813	16	2,387	410
8	Bangkal	12,436	1,120	8,423	2,893
9	Barihan	5,833	723	4,678	432
10	Bulihan	13,510	4,047	8,212	1,251
11	Bungahan	2,966	1,192	1,561	213
12	Caingin	6,899	3,028	1,699	2,172
13	Calero	1,281	0	0	1,281
14	Caliligawan	302	0	0	302
15	Canalate	4,124	0	752	3,372
16	Caniogan	5,132	1,185	2,746	1,201
17	Catmon	2,382	1,622	418	342
18	Cofradia	3,938	774	2,854	310
19	Dakila	5,352	569	4,377	406
20	Guinhawa	4,086	3,682	119	285
21	Ligas	6,623	1,622	4,660	341
22	Liyang	1,661	1,334	107	220
23	Longos	14,864	2,408	10,215	2,241
24	Look 1st	6,808	863	5,499	446
25	Look 2nd	3,108	1,256	926	926
26	Lugam	4,711	1,247	3,000	464
27	Mabolo	6,435	2,742	3,312	381
28	Mambog	2,673	59	923	1,691
29	Masile	832	0	0	832
30	Matimbo	6,516	0	2,826	3,690
31	Mojon	18,239	10,633	6,576	1,030
32	Namayan	771	0	0	771
33	Niugan	828	234	565	29
34	Pamarawan	3,334	0	0	3,334
35	Panasahan	8,818	0	807	8,011
36	Pinagbakahan	6,086	1,308	4,172	606
37	San Agustin	2,262	799	1,194	269
38	San Gabriel	2,467	1,766	701	0
39	San Juan	4,388	19	1,813	2,556
40	San Pablo	5,240	768	4,122	350
41	San Vicente	2,790	34	2,055	701
42	Santiago	1,973	0	224	1,749
43	Santisima Trinidad	6,524	1,545	4,410	569
44	Santo Cristo	2,025	0	1,759	266
45	Santo Niño	561	5	477	79
46	Santo Rosario	7,633	0	6,625	1,008
47	Santol	8,646	1,584	6,846	216
48	Sumapang Bata	2,644	590	1,938	116
49	Sumapang Matanda	7,554	1,944	5,160	450
50	Taal	2,232	407	1,728	97
51	Tikay	10,093	2,569	6,856	668
TOTAL		252,069	54592	138405	57509



Table 4: Breakdown of Affected Population due to Flooding

Assesment (No. of Population Affected) For Flood																				
No.	Barangay	Total Population	Male										Female							
			0 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70	71 - 80	80 and Over	0 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70	71 - 80	80 and Over
1	Anilao	3,078	335	319	264	239	171	122	70	18	4	317	277	264	249	189	129	71	26	14
2	Atlag	5,294	505	477	414	417	325	248	160	46	11	449	491	443	410	339	253	195	76	35
3	Babatnin	958	99	74	86	85	58	42	34	6	3	94	60	74	82	59	56	24	18	4
4	Bagna	5,321	548	524	499	410	310	214	102	32	12	536	523	466	360	349	221	137	59	19
5	Bagong Bayan	3,688	275	360	330	219	228	193	97	27	13	303	385	320	263	275	206	112	52	30
6	Balayong	3,337	382	320	295	242	196	146	73	23	6	305	318	284	264	203	148	87	37	9
7	Balite	2,813	295	225	254	199	181	130	74	29	3	249	244	239	206	181	140	92	48	24
8	Bangkal	12,436	1,694	1,520	1,041	837	721	381	152	43	4	1,602	1,417	885	881	659	351	171	66	12
9	Barihan	5,833	599	563	478	460	332	236	138	51	13	538	542	504	460	334	303	181	73	28
10	Bulihan	13,510	1,140	1,324	1,082	1,091	753	555	386	115	13	1,218	1,303	1,187	1,211	846	631	435	160	60
11	Bungahan	2,966	333	288	265	238	170	127	76	19	2	272	239	237	252	166	130	92	45	14
12	Caingin	6,899	680	643	679	476	393	334	155	43	4	614	634	617	512	472	320	203	83	37
13	Calero	1,281	180	126	123	88	78	41	25	2	152	119	108	102	60	44	24	7	2	0
14	Caliligawan	302	31	35	23	17	21	12	9	5		42	27	14	21	23	9	9	2	2
15	Canalate	4,124	384	378	350	320	245	182	105	41	9	386	353	368	309	272	186	132	67	37
16	Caniogan	5,132	573	512	506	354	280	205	102	40	6	498	445	485	359	302	225	145	63	32
17	Catmon	2,382	209	235	178	205	137	109	68	24	5	189	226	208	182	165	100	91	36	15
18	Cofradia	3,938	386	416	330	298	220	186	81	24	7	373	356	377	293	231	193	106	39	21
19	Dakila	5,352	548	511	456	459	330	188	122	31	12	491	484	481	449	343	217	150	58	22
20	Guinhawa	4,086	72	275	1,000	983	612	213	75	20	6	67	88	181	195	140	93	34	15	17
21	Ligas	6,623	725	657	599	537	392	265	141	50	10	660	536	583	522	403	276	174	66	28
22	Liyang	1,661	174	185	135	123	99	58	34	14	3	130	169	146	142	110	59	48	23	9
23	Longos	14,864	1,398	1,525	1,256	1,016	978	652	335	114	23	1,278	1,450	1,346	1,155	1,026	697	406	159	50
24	Look 1st	6,808	739	694	577	549	392	290	134	47	6	709	653	548	526	406	278	175	65	20
25	Look 2nd	3,108	338	299	289	242	182	122	73	21	7	320	274	279	232	190	120	73	36	11
26	Lugam	4,711	538	452	421	371	251	208	79	29	18	442	435	415	364	256	217	137	54	24
27	Mabolo	6,435	665	608	546	476	382	255	164	34	18	593	603	583	538	380	301	182	67	40
28	Mambog	2,673	290	273	219	210	179	111	57	24	7	230	237	231	212	176	128	55	26	8
29	Masile	932	99	87	70	58	51	36	16	8	1	87	80	52	69	59	34	13	11	1
30	Matimbo	6,516	659	633	544	487	391	300	176	51	13	570	599	540	520	389	332	200	81	31
31	Mojon	18,239	1,714	1,810	1,708	1,282	1,051	857	452	127	40	1,535	1,733	1,640	1,336	1,159	938	524	243	90
32	Namayan	771	95	87	51	57	53	37	20	7	2	75	79	57	49	37	26	25	9	5
33	Niugan	828	113	77	78	63	48	35	12	5	1	92	74	61	63	44	37	16	6	3
34	Pamarawan	3,334	388	329	322	245	205	150	70	19	5	388	304	269	207	192	146	58	25	14
35	Panasahan	8,818	859	836	810	667	548	423	182	58	12	803	811	762	684	600	425	207	87	44
36	Pinagbakahan	6,086	574	582	463	489	366	222	133	48	12	617	554	541	529	385	279	192	76	25
37	San Agustin	2,262	203	213	208	190	134	92	61	28	8	198	187	196	181	127	119	64	36	17
38	San Gabriel	2,467	251	259	215	178	160	100	53	21	3	239	237	195	187	173	90	66	22	18
39	San Juan	4,388	389	440	378	319	279	181	115	37	12	373	429	352	320	301	221	149	70	23
40	San Pablo	5,240	483	456	499	392	358	207	145	36	17	417	499	448	436	364	241	150	66	26
41	San Vicente	2,790	303	344	218	211	164	83	50	16	6	353	281	236	218	133	85	60	25	4
42	Santiago	1,973	201	185	178	137	123	79	48	18	5	170	180	182	146	123	89	74	27	8
43	Santisima Trinidad	6,524	766	663	555	503	433	240	115	39	8	660	632	525	486	402	240	163	63	31
44	Santo Cristo	2,025	208	180	168	162	115	94	55	21	9	173	162	159	148	135	92	79	47	18
45	Santo Niño	561	39	56	70	63	52	21	12	4	0	36	33	57	46	23	27	14	5	3
46	Santo Rosario	7,633	748	773	668	568	461	314	212	60	19	697	741	616	591	449	349	225	90	52
47	Santol	8,646	1,078	893	762	656	496	308	171	50	9	981	806	707	652	491	314	175	71	26
48	Sumapang Bata	2,644	265	255	240	224	167	101	55	23	8	231	232	242	200	175	107	69	39	12
49	Sumapang Matanda	7,554	680	738	613	560	495	340	195	88	19	578	744	616	595	516	367	246	121	43
50	Taal	2,232	226	230	222	149	134	93	52	22	4	226	213	195	158	124	94	60	21	8
51	Tikay	10,093	965	991	941	779	653	405	187	54	14	914	976	936	786	704	397	257	100	35

*Data based on PSA 2015



Table 5: Population Exposure from Storm Surge Hazard

No. of Population Affected by Storm Surge				
No.	Barangay	Total Population	Safe	Inundation of >1 meters to 4 meters surge
1	Anilao	3,078	3,078	0
2	Atlag	5,294	4,879	415
3	Babatnin	958	17	941
4	Bagna	5,321	1,747	3,574
5	Bagong Bayan	3,688	3,688	0
6	Balayong	3,337	3,337	0
7	Balite	2,813	2,813	0
8	Bangkal	12,436	12,436	0
9	Barihan	5,833	5,833	0
10	Bulihan	13,510	13,510	0
11	Bungahan	2,966	2,966	0
12	Caingin	6,899	6,899	0
13	Calero	1,281	95	1,186
14	Caliligawan	302	6	296
15	Canalate	4,124	3,659	465
16	Caniogan	5,132	5,132	0
17	Catmon	2,382	2,382	0
18	Cofradia	3,938	3,938	0
19	Dakila	5,352	5,352	0
20	Guinhawa	4,086	4,086	0
21	Ligas	6,623	6,623	0
22	Liyang	1,661	1,661	0
23	Longos	14,864	14,864	0
24	Look 1st	6,808	6,808	0
25	Look 2nd	3,108	3,108	0
26	Lugam	4,711	4,711	0
27	Mabolo	6,435	6,435	0
28	Mambog	2,673	2,463	210
29	Masile	832	0	832
30	Matimbo	6,516	5,724	792
31	Mojon	18,239	18,239	0
32	Namayan	771	0	771
33	Niugan	828	828	0
34	Pamarawan	3,334	806	2,530
35	Panasahan	8,818	2,716	6,102
36	Pinagbakahan	6,086	6,086	0
37	San Agustin	2,262	2,262	0
38	San Gabriel	2,467	2,467	0
39	San Juan	4,388	4,160	228
40	San Pablo	5,240	5,240	0
41	San Vicente	2,790	2,790	0
42	Santiago	1,973	1,662	311
43	Santisima Trinidad	6,524	6,524	0
44	Santo Cristo	2,025	1,443	582
45	Santo Niño	561	561	0
46	Santo Rosario	7,633	7,633	0
47	Santol	8,646	8,646	0
48	Sumapang Bata	2,644	2,644	0
49	Sumapang Matanda	7,554	7,554	0
50	Taal	2,232	2,232	0
51	Tikay	10,093	10,093	0
TOTAL NUMBER OF POPULATION AFFECTED BY STORM SURGE				19,235

*Data based on PSA 2015



Table 6: Breakdown of Affected Population due to Storm Surge

Assesment (No. of Population Affected) for Storm Surge																																						
No	Barangay	Total Population	Male (Safe)										Male (Prone)										Female (Safe)								Female (Prone)							
			0 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70	71 - 80	80 and over	0 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70	71 - 80	80 and Over	0 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70	71 - 80	80 and Over	0 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70	71 - 80	80 and Over
1	Atlag	5,294	465	440	382	384	300	229	147	42	10	40	37	32	33	25	19	13	4	1	414	453	408	378	312	233	180	70	32	35	38	35	32	27	20	15	6	3
2	Babatnin	958	2	1	2	2	1	1	1	0	0	97	73	84	83	57	41	33	6	3	2	1	1	1	1	0	0	0	92	59	73	81	58	55	24	18	4	4
3	Bagna	5,321	180	172	164	135	102	70	33	11	4	368	352	335	275	208	144	69	21	8	176	172	153	118	115	73	45	19	6	360	351	313	242	234	148	92	40	13
4	Balayong	3,337	342	287	264	217	176	131	65	21	5	40	33	31	25	20	15	8	2	1	273	285	254	237	182	133	78	33	8	32	33	30	27	21	15	9	4	1
5	Balite	2,813	281	214	242	190	172	124	70	28	3	14	11	12	9	9	6	4	1	0	237	232	228	196	172	133	88	46	23	12	12	11	10	9	7	4	2	1
6	Bangkal	12,436	1,104	991	678	545	470	248	99	28	3	590	529	363	292	251	133	53	15	1	1,044	923	577	574	429	229	111	43	8	558	494	308	307	230	122	60	23	4
7	Calero	1,281	13	9	9	7	6	3	2	0	0	167	117	114	81	72	38	23	2	0	11	9	8	8	4	3	2	1	0	141	110	100	94	56	41	22	6	2
8	Caliligawan	302	1	1	0	0	0	0	0	0	0	30	34	23	17	21	12	9	5	0	0	0	0	0	0	0	0	0	41	26	14	21	23	9	9	2	2	
9	Canalate	4,124	341	335	311	284	217	161	93	36	8	43	43	39	36	28	21	12	5	1	342	313	326	274	241	165	117	59	33	44	40	42	35	31	21	15	8	4
10	Mambog	2,673	267	252	202	194	165	102	53	22	6	23	21	17	16	14	9	4	2	1	212	218	213	195	162	118	51	24	7	18	19	18	17	14	10	4	2	1
11	Masile	932	0	0	0	0	0	0	0	0	0	99	87	70	58	51	36	16	8	1	0	0	0	0	0	0	0	0	87	80	52	69	59	34	13	11	1	
12	Matimbo	6,516	579	556	478	428	343	264	155	45	11	80	77	66	59	48	36	21	6	2	501	526	474	457	342	292	176	71	27	69	73	66	63	47	40	24	10	4
13	Namayan	771	0	0	0	0	0	0	0	0	0	95	87	51	57	53	37	20	7	2	0	0	0	0	0	0	0	0	75	79	57	49	37	26	25	9	5	
14	Pamarawan	3,334	94	79	78	59	50	36	17	5	1	294	250	244	186	155	114	53	14	4	94	73	65	50	46	35	14	6	3	294	231	204	157	146	111	44	19	11
15	Panasahan	8,818	265	257	249	205	169	130	56	18	4	594	579	561	462	379	293	126	40	8	247	250	235	211	185	131	64	27	14	556	561	527	473	415	294	143	60	30
16	San Juan	4,388	369	417	358	302	265	172	109	35	11	20	23	20	17	14	9	6	2	1	354	407	334	303	285	210	141	66	22	19	22	18	17	16	11	8	4	1
17	Santiago	1,973	169	156	150	115	104	67	40	15	4	32	29	28	22	19	12	8	3	1	143	152	153	123	104	75	62	23	7	27	28	29	23	19	14	12	4	1
18	Santo Cristo	2,025	148	128	120	115	82	67	39	15	6	60	52	48	47	33	27	16	6	3	123	115	113	105	96	66	56	33	13	50	47	46	43	39	26	23	14	5

* Data based on PSA 2015

* Prone - Inundation of >1 meters to 4 meters surge



Among the barangays of the City of Malolos, the coastal barangays have the highest population exposure to storm surge hazard occurrences at very high and high category respectively.

The government will have to consider development of adaptive measures aside from alternative livelihood for fishing families in the aforementioned areas such as building of infrastructures that may lessen the impact of storm surges to the settlement along the coastlines.

C. Hazard to Plan for – FLOODING

Based on the assessment of the hazards, City of Malolos requires having a contingency plan for flooding that shall help ensure preparedness for effective response in the 51 barangays.

The City of Malolos was already experiencing increasing flood frequency, magnitude and duration. The anatomy of flooding is shown below:

Table 7: CP Form 2: Anatomy of the Hazard – Flooding

Root Causes	Early Warning Signs	Triggering Factors	Existing Mitigating Measures
Monsoon Rains	Science-based agencies Advisories, Emergency Alert and Warning Messages (EAWM), continuous heavy rains, installed rain and water level gauge	Poor Drainage System, Silted Rivers, Improper Waste Disposal, Encroachment of Waterways, High tide	<p>Structural:</p> <ul style="list-style-type: none"> - Rehabilitation/Reconstruction/Upgrading of drainage/ Water System - Construction/Repair/ Rehabilitation of flood control structures - Upgrading of roads - Construction of Relocation Sites for informal settlers living along waterways - Installation of early warning system <p>Non-Structural:</p> <ul style="list-style-type: none"> - Strict implementation of RA 9003 and other environmental laws and codes - Dredging and desilting of waterways - Relocation of informal settlers



Tropical Cyclone	Science-based agencies Advisories, Emergency Alert and Warning Messages (EAWM), Project NOAH; installed rain and water level gauges served as warning devices		<ul style="list-style-type: none"> - Reforestation/Tree Planting - Implementation of Zoning Ordinances (No Habitation Zone) and National Building Code - Updating and mainstreaming of DRR-CCA in Local Development Plans (CLUP and CDP) - Strict implementation of Water Code of the Philippines - Political will of elected officials and sanctions to the erring individuals - Conduct of IECs to communities living in flood plain areas and near flood control structures - Enforcement of local ordinance on pre-emptive evacuation/ forced evacuation
<ul style="list-style-type: none"> ▪ Surge of the monsoon / incessant heavy rainfall; ▪ Urbanization and deforestation are important causes of the worsening floods. Many subdivisions were built in which fields were put up as subdivision; 	<ul style="list-style-type: none"> ▪ Thunderstorms, rain and public storm warning signals (PSWS) given during tropical cyclones; ▪ Rain Gauges and other Local Flood Early Warning Systems (LFEWS); ▪ Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) Weather Bulletin and other social networking sites; ▪ News either from television or local DRRMOs; 	<ul style="list-style-type: none"> ▪ Continuous heavy rain of 7.5mm in 4 hours straight; ▪ High Tide; ▪ Siltation (typically undesirable) increase in concentration and or of deposition of water-borne silt in a body of water) 	<ul style="list-style-type: none"> ▪ CBFMP (Community Based Flood Mitigation Program); ▪ Up-to-date information on risks and hazards from CPDO; ▪ Upgrading of roads and retrofitting of bridges with provision of drainage; ▪ Dredging operation and construction of slope protections; ▪ Dredging/ Floodgate projects; ▪ Infrastructures/buildings assessment and resiliency; ▪ Communication facilities connected to 51 LGUs; ▪ Mangrove reforestation; ▪ Search and Rescue Operation;



<ul style="list-style-type: none"> ▪ The illegal structures along the rivers and water, even in the drainage and irrigation canals in which the flood water would have flowed. This is also one of the reasons in slow subsidence of flood water; ▪ Improper garbage disposal; ▪ Abuse of our groundwater is the most serious cause of increased flooding; ▪ Siltation and encroachment of channels by fishponds 	<ul style="list-style-type: none"> ▪ Risk monitoring data and alert signals using radio, mobile telephone and indigenous and traditional communication media such as bells, megaphones and human communicators on foot, or motorbike who and which can communicate warning levels to the communities. 	<ul style="list-style-type: none"> ▪ Climate Change; ▪ Absence of proper drainage system; ▪ Conversion of agricultural lands to commercial spaces or subdivisions. 	<ul style="list-style-type: none"> ▪ Environmental Code of Bulacan; ▪ Waste Segregation; ▪ Information and Education Campaign; ▪ Construction of Seawall for coastal areas; ▪ Rehabilitation and Recovery Programs; ▪ Strict implementation of solid waste management and establishment of SWM Board in all barangays; ▪ Declogging of canals/drainage; ▪ Relocation of Informal Settlers; ▪ Business Continuity Plan.
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When waterways overflow or when rapidly accumulated street flood does not drain fast enough to the nearest stream channel, other major roads also gets flooded. Possible solutions include the elevation of roads or construction of well-designed drainage structures leading to the creeks.

D.1 Scenario

Different scenarios were identified in order to picture the effects of flooding given a specific scenario, taking into consideration the New Normal concept brought about by the COVID-19 pandemic. The said data will provide assessment on the capabilities of the local responders, on each level/case, to address a certain situation and identify where to get assistance if said situation exceeds the capability of the city to respond.

The worst-case scenario will be the basis for the development of the Contingency Plan in order to identify the optimum level of response and resources needed to address the requirements of the affected community/ies.

Below is the worst-case scenario that can possibly occur should there be a tropical cyclone of a super typhoon category that would traverse and directly impact the landmass of Central Luzon.

Population and Settlements

Flooding is the most common hazard that is intermittently occurring in the City of Malolos, specifically in the low-lying areas and coastal barangays. It is usually caused by heavy rains from typhoon or monsoon rains. The coastal barangays of Masile, Caliligawan, Babatnin, Namayan, Pamarawan and even Calero are also experiencing floods caused by high tides and storm surges from Manila Bay.



Table 8: Affected Population – Flooding

Assesment (No. of Population Affected) Flood					
No.	Barangay	Total Population	Low	Moderate	High
1	Anilao	3,078	0	802	2,276
2	Atlag	5,294	0	3,730	1,564
3	Babatnin	958	0	0	958
4	Bagna	5,321	0	1,141	4,180
5	Bagong Bayan	3,688	786	2,623	279
6	Balayong	3,337	112	2,387	838
7	Balite	2,813	16	2,387	410
8	Bangkal	12,436	1,120	8,423	2,893
9	Barihan	5,833	723	4,678	432
10	Bulihan	13,510	4,047	8,212	1,251
11	Bungahan	2,966	1,192	1,561	213
12	Caingin	6,899	3,028	1,699	2,172
13	Calero	1,281	0	0	1,281
14	Caliligawan	302	0	0	302
15	Canalate	4,124	0	752	3,372
16	Caniogan	5,132	1,185	2,746	1,201
17	Catmon	2,382	1,622	418	342
18	Cofradia	3,938	774	2,854	310
19	Dakila	5,352	569	4,377	406
20	Guinhawa	4,086	3,682	119	285
21	Ligas	6,623	1,622	4,660	341
22	Liyang	1,661	1,334	107	220
23	Longos	14,864	2,408	10,215	2,241
24	Look 1st	6,808	863	5,499	446
25	Look 2nd	3,108	1,256	926	926
26	Lugam	4,711	1,247	3,000	464
27	Mabolo	6,435	2,742	3,312	381
28	Mambog	2,673	59	923	1,691
29	Masile	832	0	0	832
30	Matimbo	6,516	0	2,826	3,690
31	Mojon	18,239	10,633	6,576	1,030
32	Namayan	771	0	0	771
33	Niugan	828	234	565	29
34	Pamarawan	3,334	0	0	3,334
35	Panasahan	8,818	0	807	8,011
36	Pinagbakahan	6,086	1,308	4,172	606
37	San Agustin	2,262	799	1,194	269
38	San Gabriel	2,467	1,766	701	0
39	San Juan	4,388	19	1,813	2,556
40	San Pablo	5,240	768	4,122	350
41	San Vicente	2,790	34	2,055	701
42	Santiago	1,973	0	224	1,749
43	Santisima Trinidad	6,524	1,545	4,410	569
44	Santo Cristo	2,025	0	1,759	266
45	Santo Niño	561	5	477	79
46	Santo Rosario	7,633	0	6,625	1,008
47	Santol	8,646	1,584	6,846	216
48	Sumapang Bata	2,644	590	1,938	116
49	Sumapang Matanda	7,554	1,944	5,160	450
50	Taal	2,232	407	1,728	97
51	Tikay	10,093	2,569	6,856	668
TOTAL		252,069	54592	138405	57509



According to the data generated from GeoRisk – GeoAnalyticsPh, roughly 99% of the population of the City of Malolos is exposed to flooding with the following percentage breakdown; Low susceptibility with 21.66%, moderate susceptibility covering 54.91% and high susceptibility comprising 22.81%. These proportions were computed by first obtaining the sum of all male and female population aged 0 to 100 residing within a particular barangay. The barangay's percentage of land area prone to hazard is also computed by dividing the barangay's total land area intersected by the hazard with the barangay's total land area. Multiply this percentage with the total population of the barangay to obtain the total population prone to hazard. If computing for total population of a municipality/city or province/district that is prone to a particular hazard, perform the same process but for all barangays within the chosen location. Upon obtaining the total prone population for each barangay, sum the values to obtain the overall total. (Source: GeoRiskPH)

Below is the worst-case scenario that can possibly occur should there be a tropical cyclone of a super typhoon category that would traverse and directly impact the landmass of Bulacan.

Table 9: CP Form 3A: Scenario Generation for Flooding

PARTICULARS	BAD	WORSE	WORST
General Description of Event	<ul style="list-style-type: none"> ▪ Tropical Cyclone made landfall with maximum sustained winds of 62- 88 kph categorized as Tropical Storm and enhanced by Southwest monsoon. ▪ Around 20% of the area in the municipality is submerged in flood, specifically for low-lying areas ▪ 7.5-15 mm rain (Yellow Rainfall Advisory) ▪ One (1) foot maximum flood level 	<ul style="list-style-type: none"> ▪ Tropical Cyclone made landfall with maximum sustained winds of 118- 184 kph categorized as Typhoon and enhanced by Southwest monsoon. ▪ Around 50% of the area in the municipality is submerged in flood ▪ 15-30 mm rain (Orange Rainfall Advisory) ▪ Three (3) feet flood level 	<ul style="list-style-type: none"> ▪ Tropical Cyclone made landfall with maximum sustained winds more than 185 kph categorized as Super Typhoon. ▪ Around 80% of the area in the municipality is submerged in flood ▪ >30 mm rain (Red Warning) ▪ Four (4) feet and above flood level
No. of Affected Individuals	10,700	20,500	59,773
No. of Dead	1	3	5
No. of Injured	11	23	57
No. of Missing	3	6	12
EFFECTS			
Communication	Communication signals are still stable	Communication signals are unstable in some areas	Communication signals are completely disrupted in most areas
Power/ Electricity	No power interruption	Power interruption in some areas	Complete shutdown of power/ electricity
Transportation	Minimal disruption of transportation operations	Some roads are no longer passable for small vehicles	Roads are no longer passable for all types of vehicles
Environment	No significant effects	Minimal	Extreme devastation
Response Capabilities	Manpower is still enough to extend assistances to the affected individuals	Augmentation from the Provincial level, is already needed.	There is already a need to seek the support of the Regional or even up to the National level, for further extension of assistance
<ul style="list-style-type: none"> a. Rescue Teams b. Stockpile of food and non-food items/ Equipment/ 	Capabilities are still enough to		



Vehicles used for Relief Operations c. Evacuation Management	cater the needs of the affected individuals		
Government Trust	No significant effect	People are clamoring for help/assistance; demanding immediate provision of basic necessities	People are clamoring for help/assistance; demanding immediate provision of basic necessities
Infrastructure	Not affected at all	15% of the total infrastructure damaged (roads and bridges) 10% of total schools and other infrastructures affected	25% of the total infrastructure damaged (roads and bridges) 20% of total schools and other infrastructures affected
Agriculture (damage to crops, farm lands)	10% of the total area affected	50% of the total area affected	95% of the total area affected
Health	Minimum number of water-borne related disease	Increasing number of infection cases on flood-related diseases	Notable/significant number of infection cases on flood-related diseases Shortage in health resources and hospitals are overwhelmed in the number of patients that seek medical assistance
Food	No significant effect	People are clamoring for help/assistance; demanding immediate	People are clamoring for help/assistance; demanding immediate provision of basic necessities

E. Human Health and Disease (Epidemics/ Biological Health Hazard)

The continuous evolution of new infectious threats to human health that emerge – often without warning – from the natural environment. The Philippines continues to witness outbreaks of emerging infectious diseases, including epidemic prone communicable diseases.

In March 2003, the Philippines was one of the countries that confronted the pandemic of Severe Acute Respiratory Syndrome (SARS) caused by a new virus never seen in humans.

Currently, people all over the world have been affected by coronavirus disease 2019 (COVID-19), which is the fifth pandemic after the 1918 flu pandemic.

The Department of Health (DOH) prepared and executed a number of plans involving different emerging and re-emerging infectious diseases such as SARS, MERS-CoV, Zika and COVID-19 to name a few, to serve as a guide for the national, regional and provincial health offices to communicate with the public in ways that build, maintain or restore trust to help them prepare for, cope with, and respond to the public health emergency event.

In order to be proactive and adequately prepared, the City Health Office (CHO) crafted a plan to address emerging and re-emerging infectious diseases.



Table 10: CP Form 4A: Affected Population

NO.	AREA	NO. OF AFFECTED INDIVIDUALS	DISPLACED POPULATION		
			NO. OF INDIVIDUALS INSIDE EVACUATION CENTERS	NO. OF INDIVIDUALS OUTSIDE EVACUATION	REASONS FOR DISPLACEMENT
1	Anilao	2,276	228	2,048	Low-lying area
2	Aitag	1,564	156	1,408	Riverside
3	Babatnin	958	96	862	Coastal area
4	Bagna	4,180	418	3,762	Low-lying area; riverside
5	Bagong Bayan	279	14	265	House made of light materials
6	Balayong	838	67	771	Low-lying area
7	Balite	410	21	389	House made of light materials
8	Bangkal	2,893	147	2,746	House made of light materials
9	Barihan	432	22	410	House made of light materials
10	Bulihan	1,251	101	1,150	Low-lying area; riverside
11	Bungahan	213	11	202	House made of light materials
12	Caingin	2,172	174	1,998	Low-lying area
13	Calero	1,281	128	1,153	Coastal area
14	Caliligawan	302	30	272	Coastal area
15	Canalate	3,372	337	3,035	Low-lying area; riverside
16	Caniogan	1,201	96	1,105	Low-lying area
17	Catmon	342	27	315	Low-lying area
18	Cofradia	310	16	294	House made of light materials
19	Dakila	406	32	374	House made of light materials
20	Guinhawa	285	14	271	Creekside
21	Ligas	341	17	324	House made of light materials
22	Liang	220	18	202	Low-lying area; riverside
23	Longos	2,241	179	2,062	Low-lying area; riverside
24	Look 1st	446	36	410	Low-lying area
25	Look 2nd	926	46	880	Riverside
26	Lugam	464	37	427	House made of light materials
27	Mabolo	381	19	362	House made of light materials
28	Mambog	1,691	135	1,556	Low-lying area; riverside
29	Masile	832	83	749	Coastal area
30	Matimbo	3,690	295	3,395	House made of light materials
31	Mojon	1,030	56	974	Low-lying area; creekside
32	Namayan	771	77	694	Coastal area
33	Niugan	29	2	27	House made of light materials
34	Pamarawan	3,334	333	3,001	Coastal area
35	Panasahan	8,011	801	7,210	Low-lying area; riverside
36	Pinagbakahan	606	30	576	
37	San Agustin	269	22	247	Low-lying area
38	San Gabriel	701	35	666	Low-lying area
39	San Juan	2,556	256	2,300	Low-lying area
40	San Pablo	350	18	332	House made of light materials
41	San Vicente	701	56	645	Low-lying area
42	Santiago	1,749	140	1,609	Low-lying area
43	Santisima Trinidad	569	28	541	House made of light materials
44	Santo Cristo	266	21	245	Riverside; light material house
45	Sto Niño	79	4	75	
46	Santo Rosario	1,008	101	907	Low-lying area
47	Santor	216	11	205	Low-lying area; riverside
48	Sumapang Bata	116	6	110	House made of light materials
49	Sumapang Matanda	450	36	414	Low-lying area
50	Taal	97	5	92	Low-lying area
51	Tikay	668	33	635	Riverside
TOTAL		59773	5071	54,702	



Table 11: CP Form 5: Cluster Identification

RESPONSE CLUSTER	AGENCIES/OFFICES INVOLVED (NUMBER OF FIELDS CAN BE INCREASED OR REDUCED)															LEAD AGENCY/ OFFICE
	CDRRMO	CHO	CSWDO	CEO	CVO	DILG	CGSO	PNP	BFP	PRC	PHIL ARMY	DepEd	BDRRMC RESCUE TEAMS	CPDO	CENRO	
Food and Non-Food Items																CSWDO
Health																CHO
Law and Order																PNP
Search, Rescue, and Retrieval																CDRRMO
Logistics																CGSO
Camp Coordination and Camp Management																CSWDO
Management of the Dead and Missing																DILG
Internally Displaced Persons (IDPS)																CPDO

RESPONSE CLUSTER	AGENCIES/OFFICES INVOLVED (NUMBER OF FIELDS CAN BE INCREASED OR REDUCED)																LEAD AGENCY/ OFFICE	
	CDRRMO	CHO	CSWDO	CEO	CTECO	CITO	DILG	CGSO	CVO	CIO	CMO	CEEDO	CPDO	CAGo	CadO	DepEd		NGOs/ CSOs
Education																		DepEd
Emergency Tele.																		CIO
Economy, Livelihood and Employment																		CEEDO
International Humanitarian Assistance																		Cas Office



Table 12: CP Form 6: Response Activities

RESPONSE CLUSTER	MANAGEMENT OF THE DEAD AND MISSING (MDM)	
TIMEFRAME	RESPONSE ACTIVITIES	RESPONSIBLE AGENCIES/OFFICES
Pre- Disaster	Conduct of MDM Pre-Arrangements Measures which includes the following: <ul style="list-style-type: none"> • Stockpiling of Cadaver Bags; • Procurement of supplies and equipment for the operationalization of the MDM process at the city level (i.e. Cadaver Bags, Cadaver Bag Tags, Disposal Personal Protection Equipment (PPEs); Body Substance Isolation (BSI), N95 Masks, Hard Hat, Stretcher, Backboard, and etc.); • Identification of Temporary Grave Site; • Identification of Temporary Morgue Area (MOA/MOU with local funeral parlors); and • Organize local MDM Support Teams, including transport, communications, supplies, and etc. 	DILG, CDRRMO, BDRRMCs, PRC, PNP, BFP, Philippine Army, CHO, CSWDO, DepEd, CGSO
During Disaster	Convene the MDM Cluster Core Group and coordinate with and mobilize the sub- clusters for augmentation of MDM support	DILG, NBI, PNP, CSWDO, LCR, CHO, CDRRMO, CEO, CGSO, BFP, CENRO
During/After Disaster	Retrieval of Human Remains <ul style="list-style-type: none"> • Provide perimeter security during the packaging, removal, and transportation of human remains; • Provide assistance in the conduct of clearing operations; • Provide technical assistance on health and sanitary concerns; • Assist in the validation and reporting of casualties; and • Under the Search, Rescue and Retrieval Sub-cluster, organize the Recovery Team composed of 7 members, namely: 1 Team Leader, 1 Logistics, 2 Documenters, 2 Handlers, and 1 Sweeper. 	CHO, CDRRMO, BDRRMCs, PRC, PNP, BFP, Philippine Army, CSWDO, DepEd, DILG
During/After Disaster	Disaster Victim Identification <ul style="list-style-type: none"> • Provide assistance and manpower; • Coordinate with concerned barangays; • Conduct forensic examination of retrieved human remains; 	PNP, BFP, CHO, CDRRMO, BDRRMCs, PRC, Philippine Army, CSWDO, and DILG



	<ul style="list-style-type: none"> • Determine and verify the names of the alleged missing disaster victims; • Collect and compare available ante-mortem data of the missing calamity victims and the relative of the alleged deceased; • Compare the ante-mortem to the post-mortem data of the retrieved human remains; • Coordination with the National Bureau of Investigation (NBI) for the identification of human remains (in case of natural disasters); • Issue a certificate of identification for all examined/processed and identified human remains; • Turn over the human remains to the legitimate claimants or to the concerned local government units; and • Issue and register the Death Certifications 	
After Disaster	<p>Management of Bereaved Families</p> <ul style="list-style-type: none"> • Provide financial assistance to the bereaved families of the dead and those persons missing; • Attend to the psychosocial, social, medical and physiological needs of the surviving families of the deceased and missing disaster victims; - Physiological needs to the bereaved shall include food assistance, financial assistance, livelihood assistance, clothing assistance, Management of the Orphans and Food/Cash for work. - Social needs of the bereaved families shall include Family Peer Support System; Welfare Inquiry Desk/Information Center - Educational Assistance and Legal Needs; and - Psychological needs of the bereaved families shall include Psychological First Aid; and other special needs like psychiatric or mental health services. 	CSWDO, DepEd, PRC, CHO, and Philippine Army
As Need Arises	Animal Evacuation	CVO



	Deployment of health emergency response teams.	CHO-Public Health
	Establishment of medical consultation area and provision of medicines	CHO-Public Health
	Provision of health services (health promotion, nebulization, temperature checks, blood pressure monitoring, etc)	CHO-Public Health

RESPONSE CLUSTER	EMERGENCY TELECOMMUNICATIONS	
TIMEFRAME	RESPONSE ACTIVITIES	RESPONSIBLE AGENCIES/OFFICES
D	Dissemination of Situational Reports to CDRRMC members, media and concerned agencies during a disaster	CDRRMO, CIO
D	Preparation and dissemination of News and Photo Releases through E-mail, social media (Facebook page) and the CGM Official Website	CIO
D	Preparation and dissemination of information digital banners such as info cards, pub mats, audio-visual presentations, announcement banners through social media (Facebook page) and other online platforms such as the CGM Official Website	CIO, CDRRMO
D	Coordination with the barangays during a disaster	CIO, CDRRMO
D	Documentation/coverage during a disaster; Media assistance	CIO
D	Ensure internet connectivity to conduct necessary actions such as uploading/posting and information dissemination	CITD
D + 1 Day	Preparation and dissemination of Post News and Photo Releases through E-mail, social media (Facebook page) and the CGM Official Website	CIO
D + 1 Day	Dissemination of informational materials and pub mats regarding details of post-disaster	CIO, CDRRMO
D + 1 Day	Documentation/coverage after a disaster	CIO
D + 1 Day	Coordination with the Information Officers of the barangays after a disaster	CIO



RESPONSE CLUSTER	CAMP COORDINATION AND MANAGEMENT	
TIMEFRAME	RESPONSE ACTIVITIES	RESPONSIBLE AGENCIES/OFFICES
	Request received from barangays thru LCE Hon. Christian D. Natividad, CDRRMC Chairman	CSWDO
	Activation of Evacuation Center Management Team by CSWDO head as the Evacuation Center Management Council Chairman, simultaneously Setting – Up the Evacuation Center and its facilities	CSWDO
	Arrival and registration of Internal Displaced Person, Identify the Evacuation Center Leaders and conduct orientation to Evacuation Leaders	CSWDO
	Regular Reporting/ Maintenance	CSWDO
	Site Closure and Demobilization	CSWDO
	Inventory of Beneficiary Kit, Modular Tent, Facilities and others	CSWDO
	Debriefing of ECMT	CSWDO
	Final Reporting	CSWDO



RESPONSE CLUSTER	FOOD AND NON-FOOD ITEM	
TIMEFRAME	RESPONSE ACTIVITIES	RESPONSIBLE AGENCIES/OFFICES
3 – D	Validate and submit report of all prepositioned resources (stockpile, service vehicle and personnel)	CSWDO, CGSO, CEO
D- 0	Monitoring and reporting to CDRRMC Activation of Functional Evacuation Centers Reports validation of CAD Reporting to the Chairperson Repacking/ Stockpiling of Relief Goods Coordination with the barangays/ barangay chairmans Delivery/ Distribution of Family Food Packs	CSWDO, CGSO, CEO, CDRRMO, CMO
D – 1	Submission of Consolidated and final reports to CDRRMC Provision of Stress Debriefing to the victims of calamity Provision of Livelihood Assistance (SEA)	CSWDO, CTECO, CDRRMO, CMO, LOCAL FINANCE COMMITTEE



Table 13: CP Form 7: Resource Inventory

RESPONSE CLUSTER	FOOD and NON-FOOD			
AGENCY / OFFICE	RESOURCE	QUANTITY	REMARKS	
CEO	Backhoe	5	Mobilize tools and heavy equipment to clear debris and request support groups for augmentation of tools, equipment and manpower.	
	Crane	1		
	Grader	1		
	Bulldozer	1		
	Dump truck	2		
	Elf	1		
	Wrecker	1		
	Trailer	1		
	Man lifter	1		
	Jack hammer	1		
	Grass cutter	2		
	Concrete cutter	1		
	Concrete mixer	1		
	Chainsaw	2		
	Welding machine	1		
	Manpower (on-call)	32		
Manpower (Rehabilitation)	59			
PNP	Mobility (Patrol Cars)	2		
	Personnel	85		
	UHF Portable Radios	26		
RESPONSE CLUSTER	HEALTH			
	Physician	6	Licensed	
	Nurse	19	Licensed	
	Midwife	36	Licensed	
	Medicines			
	Amoxicillin drops	600		
	Amoxicillin syrup	500		
	Doxycycline	1,800		
	Ketoconazole	20		
	Measles vaccine	200		
	Paracetamol tab	8,000		



CHO	Paracetamol syrup	350	
	Paracetamol drops	470	
	Supplies		
	cold dogs	20+	
	Syringe	3,000	
	Vaccine carriers	10+	
	Transportation		
	Ambulance	3	
RESPONSE CLUSTER	CAMP COOR MANAGEMENT		
CSWDO	Food items for 5,132/ 1,026 families for 5 days		
	Rice	50 cavans	Kitchen
	Canned goods	5,000 cans	Kitchen
	Coffee	3,000 packs	Kitchen
	Noodles	5,000 packs	Kitchen
	Mineral water	w/ potable	Kitchen
	Bath soap	500	
	Detergent bar	500	
	Toothbrush and Toothpaste	sufficient	
	Used Clothes		
	<i>Elderly:</i>		
	Men	500 500	
	Women	500 500	
	<i>Children:</i>		
	Boys	336 336	
	Girls	400	
	Infants	100	
	<i>Adult:</i>		
	Men	700 700	
	Women	1,000 1,000	



RESPONSE CLUSTER	SEARCH, RESCUE and RETRIEVAL		
CDRRMO	Television	1	Used in monitoring weather conditions, etc.
	Radio	1	Used for communicating with different barangay and agencies
	Telephone	2	
	Fax Machine	1	
	Computer & Printer	1	Main tool in producing the communication materials needed.
	White board	1	Used for posting updates and information materials on social media and other online platforms
	CDRRMO Personnel/MRS	20	
	Rigid C-Collar	5	Used in operations (medical, trauma, transport of patients, search and rescue)
	Splint	2	
	Portable Oxygen Tank	4	
	Medical Kit Bag	32	
	Flash Light (rechargeable)	42	
	Portable Radios (ind.)	261	
	Ambulance	6	
	MOB Helmet	7	
	Life Vest	8	
	Oxygen Regulator	3	
	Mega Phone	2	
	Rubber Boat w/ Cover	1	
	Out Board Motor (30hp)	1	
	Spine Board	2	
	Scoop Board w/ Strap	1	
	Soft Cervical Collar	1	
	Knee Support	3	
	Ambu Bag	3	
	Oxygen Tank (15 lbs.)	5	
Early Warning Device	3		
Sphygmomanometer	4		
Stethoscope	1		



	Medical Kit Box	2	
	Aluminum Splint	3	
	Rope	15	
	Search Light (yellow)	2	
	VHF FM Transceiver Radio	4	
	Fiber Glass Boat	3	
	Mobile Antenna Regulated	4	
	Power Supply	1	
RESPONSE CLUSTER	LOGISTICS		
GSO	Utility vehicles (Adventure)	18	
	Dump Truck Ten-Wheeler	1	
	Dump Truck (Mini)	2	
	Dump Truck 6-Wheeler	3	
	Elf Truck	1	
	Man lift Truck	1	
	Wrecker	1	
	Ambulance	5	
	Motorized Banca/ Rubber boats	1	
	Boat (Fiber)	3	
	Backhoe	7	
	Grader	1	
Manpower Personnel (Driver/Operator)	38		
RESPONSE CLUSTER	MANAGEMENT OF THE DEAD		
BFP	Fire truck (Central Station)	4	
	Fire truck (Panasahan)	1	
	Fire truck (Mapuma)	3	
	Fire hose	53	
	Fire nozzle	13	
	Ladder	1	
	Handheld radio	4	Used for communicating with different barangay and agencies
	Base radio (Central Station)	1	
	Base radio (Panasahan)	1	
	Breathing apparatus	1	
	Helmet	11	
	Fire coat	8	



	Fire boot	10	
	Fire glove	12	
	Fire trouser	8	
	PO Allocation	15 liters/truck twice a week	
RESPONSE CLUSTER	EMERGENCY TELECOMMUNICATION		
CDRRMO	Computer	1	Main tool in producing the communication materials needed.
	Internet connection	1	Used for posting updates and information materials on social media and other online platforms
	Regulated Power Sup.	2	
	Telephone	2	
	Fax Machine	1	
	UHF Base Transceiver	1	Used for communicating with different barangay and agencies
	UHF Port. Radios	1	
	VHF Base Transceiver	1	
	VHF Portable Radios	114	
	Radio Base Antenna	2	
	Repeater System	1	
	6SM Battery	2	
	Television	1	
	Rain Gauge Reader	1	Used in monitoring the rain level
	Generator	1	



Table 14: CP Form 8: Resource Projection

RESPONSE CLUSTER	FOOD and NON-FOOD ITEMS					
RESOURCE	NEED	HAVE	GAPS (Need-Have)	ACTIVITIES / SOURCES TO FILL THE GAPS	COST ESTIMATES (FILL-UP ONLY WHEN APPROPRIATE)	SOURCE OF FUNDS (FILL-UP ONLY WHEN APPROPRIATE)
Television	4	1	3	Request for budget		DRRMF
Radio	4	1	3	Request for budget		DRRMF
Telephone	4	2	2	Request for budget		DRRMF
Fax Machine	2	1	1	Request for budget		DRRMF
Computer & Printer	3	1	2	Request for budget		DRRMF
White board	3	1	2	Request for budget		DRRMF
Generator	2	0	2	Request for budget		DRRMF
Emergency Lights	8	0	8	Request for budget allocation		DRRMF
Camera	2	0	2	Request for budget		DRRMF
Tape Recorder	2	0	2	Request for budget		DRRMF
Computer	2	1	1	Request Funding		DRRMF
Regulated Power Sup.	4	2	2	Request Funding		DRRMF
Internet Connection	3	1	2	Request Funding		DRRMF
Telephone	4	2	2	Request Funding		DRRMF
Fax Machine	3	1	2	Request Funding		DRRMF
UHF Port. Radios	2	1	1	Request Funding		
Repeater System	2	1	1	Request Funding		DRRMF
6SM Battery	4	2	2	Request Funding		DRRMF
Television	2	1	1	Request Funding		AIP
Rain Gauge Reader	5	1	4	Request Funding/ Solicit		DRRMF/NDRRMC
Generator	3	1	2	Request Funding		AIP
Mobility (Patrol Cars)	1 vehicle per 5 EC	2	3	Coordinate and request to the following: LGU/PNP (PPO/ PRO)		



Personnel	5/EC x 31 x 2 shifts = 330	85	255	Organize and deploy force multipliers (BPATs/NGOs)		
Megaphone	5	0	4	Request		
UHF Portable Radios	330	26	304	Coordinate w/ force multipliers		
Backhoe	7	5	2	Request funding for purchase of new tools and equipment's		DRRMF
Crane	7	1	6			DRRMF
Grader	7	1	6			DRRMF
Bulldozer	7	1	6			DRRMF
Manpower (on-call)	70	32	38	Mobilize & provide manpower		
Manpower (Rehabilitation)	70	59	11			
Handheld radio	28	3	25	Request for funding		NBFP-LGU
Utility vehicles (Adventure)		18	18	Coordinates/Prepares MOU/MOA approval w/ other GAs, GOs, NGAs, NGOs, and other entities		
Dump Truck Ten-Wheeler	6	1	5			
Dump Truck (Mini)	6	2	4			
Dump Truck 6-Wheeler	6	3	3			
Elf Truck	6	1	5			
Man lift Truck	6	1	5			
Wrecker	6	1	5			
Ambulance	12	5	7			
Motorized Banca/ Rubber boats		1	100			
Grader	6	1	5			
Manpower Personnel (Driver/Operator)		38	ANA			





CHAPTER 2

GOALS & OBJECTIVES



CHAPTER II – GOALS AND OBJECTIVES

2.1 Goal of the Contingency Plan

The goal of the contingency plan is to provide effective, efficient, timely and well-coordinated response mechanisms in the event of the occurrence of disaster in the City of Malolos. Such mechanisms shall help to protect lives, properties and the environment and restore the immediate needs of the affected communities.

2.2 Objectives of the Contingency Plan

The objectives of the contingency plan are as follows:

1. To determine the immediate tasks required for response operations;
2. To conduct inventory of resources available among City / Barangay DRRMCs, CDRRMC member- agencies, NGOs and volunteer groups;
3. To establish proper coordination through efficient communication and linkage among City / Barangay DRRMCs, CDRRMC member-agencies, NGOs, volunteer groups and stakeholders;
4. To provide the immediate and appropriate needs of the affected population; and
5. To reinforce the standards of reporting system set by the CDRRMC, PDRRMC and OCD R3.

2.3 Objective per Cluster

2.3.1 Food and Non-Food Cluster

The Food and Non-Food Items Cluster aims is to provide food that are nutritious, age-appropriate and are socially and culturally acceptable to affected population and non-food items to the affected population during the emergency response phase in the short-term, and to restore at least the pre- disaster level of food security in the affected areas in the long-term.

Specifically, the Cluster aims:

- To ensure availability of family food packs, ready-to-eat food, and bottled drinking water and also non-food item such as sleeping gears, family clothing packs, dignity kits, kitchen kits, and shelter kits stockpiled at all levels;
- To undertake the coordinated provision of food and non-food assistance to the affected families; and
- Regularly monitor, in coordination with Nutrition Cluster as a part of Health Cluster, the nutritional status (include nutritional content, social and cultural acceptability anywhere in the food/non-food items) of the affected population, identify gaps in the provision of food assistance, and formulate strategic interventions to address the gaps.



2.3.2 Health Cluster - Public Health, Wash, Nutrition, Mental Health (PSI)

The Health Cluster, aims to ensure access to quality, appropriate and timely health services to the affected population.

Specific Objectives:

1. To guarantee uninterrupted health service delivery during emergencies and disasters, and avert preventable morbidities, mortalities, and other health and nutrition effects secondary to emergencies and disasters.

Public Health and Medical Services:

- manage injuries and acute conditions
- provide Maternal and Child Health services
- provide Minimum Initial Service Package for Sexual and Reproductive Health
- prevent and control spread of communicable and non-communicable diseases
- ensure functionality of the Health Referral system

To ensure no environmental-linked disease outbreaks secondary to emergencies and Disasters on Water, Sanitation and Hygiene Services:

- To assess WASH conditions in the evacuation centers
- To identify possible sources of water
- To conduct water quality surveillance, disinfection and treatment
- To ensure provision of sanitation facilities, excreta disposal and solid waste management

Nutrition

- To conduct Rapid Nutrition Assessment
- To support infant and child feeding
- To manage acute malnutrition cases
- To promote proper nutrition in emergencies and disasters

Mental Health and Psychosocial Support

- To provide Psychological First Aid to the general population
- To refer Psychiatric cases to appropriate Mental Health Facilities
- To protect and promote well-being of responders
- To provide psychological interventions to survivors of sexual violence and vulnerable groups

2.3.3 Search, Rescue and Retrieval Cluster

A rapid deployment team equipped with SEARCH, RESCUE and RETRIEVAL resources both human and equipment that is organized to address search for and provision of aid to people who are in distress or imminent danger including the retrieval of victims. To provide support for an effective, timely,



organized and systematic search, rescue and retrieval in all emergencies to further minimize loss of lives and casualties.

The Search, Rescue and Retrieval Cluster shall provide support for an effective, efficient, organized and systematic search, rescue and retrieval operations to disaster affected areas upon order to minimize loss of lives and casualties.

2.3.4 Camp Coordination and Camp Management Cluster

The CCCM Cluster aims to provide timely and well-coordinated humanitarian assistance and augmentation support in the management of the evacuation center.

Specific Objectives of the Cluster are:

- To ensure the availability of identified safe, secure and accessible evacuation centers for emergencies and disasters;
- To ensure that temporary refuge to individual and families potentially at risk or in actual danger are immediately provided;
- To ensure establishment of sex and age disaggregated data e.g. listing and profiling of affected families and internally displaced persons (IDPs) in evacuation centers or temporary displacement sites;
- To ensure that all IDPs in evacuation centers are provided with basic humanitarian needs compliant with SPHERE standards such as, but not limited to food with enough nutritional values, potable water, clothing, family items, hygiene kits and other essential non-food items;
- To ensure that Basic Medical public health and protection services are available 24/7;
- Ensure that ECs are off limits and have designated areas for pet animals and livestock; and
- Shall continue to seek opportunities for recovery, rehabilitation and developmental tasks as post response activities are undertaken, in case of prolonged stay.
- To provide assistance and augment all requirements for the management and evacuation of families affected by disasters.

2.3.5 Education Cluster

- Ensure safety of learners and personnel.
- Provide continued access to quality education to all affected learners
- To ensure safety of learners and DepEd personnel and to provide continued access to quality of education to all affected learner.
- The Education Cluster aims to ensure safety of learners and personnel. It also aims to provide continued access to quality education to all affected learners.

Specific Objectives of the Cluster are:

- Prepare field offices and schools by issuing alerts and warnings based on PHIVOLCS bulletins and/or local issuances;
- Conduct impact and needs assessment on affected teaching and non-teaching personnel, learners, and education resources;



- Provide the required temporary learning spaces, teaching and learning materials to allow for resumption of classes and education service delivery;
- Promote and activate the use of alternative delivery modes of learning in affected areas;
- Coordinate the provision of psychosocial support and services to both learners and personnel with concerned agencies; and
- Mobilize resources to facilitate delivery of other relevant assistance to affected teaching and non-teaching personnel.

2.3.6 Management of the Dead and the Missing

- To provide assistance: in locating the missing persons, proper identification/disposition of the dead and support to the bereaved family.
- The Management of the Dead and Missing Cluster aims to provide policies, standards, guidelines, systems and procedures to institutionalize MDM in all concerned agencies and stakeholders at all levels during emergencies and disasters.

Specifically, the Cluster aims to:

- Provide assistance 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;
- Strengthen coordination, collaboration and partnerships among agencies and stakeholders (non-government agencies, international humanitarian country teams, private sector) of MDM at all levels (national, regional and local government units); and
- Establish resource-sharing mechanisms among key players in the MDM.
- The DILG, as the lead, shall convene the MDM cluster composed of the following sub-clusters: (1) Disaster Victim Identification, (2) Disposition of the Dead, (3) Management of the Missing Persons, and (4) Management of the Bereaved Families to coordinate all support and resource requirements among member-agencies and their activities in order to address/augment MDM needs in the affected areas.

2.3.7 Logistics Cluster

- A rapid deployment team equipped with skills and expertise both human and facilities that is organized to address the process of planning, implementing and controlling the efficient, effective flow of goods, storage of goods, services and related information from the point of origin to the point of consumption for the purpose of conforming to victims requirements.
- To provide an efficient and effective logistics coordinating structure that will harmonize the activities of all clusters and encourage regular info-sharing among all stakeholders and other partners which covers the following: transportation (emergency road network, land, sea and air), warehousing, inventories, tracking of deployed items.



2.3.8 Protection Cluster - Internally Displaced Population (IDP)

- The Internally Displaced Persons (IDP) Protection Cluster aims to support and enhance the Government's capacity to ensure that protection issues do not arise in emergency situations and to respond and mitigate the effect of any protection issues that do arise.
- To ensure timely, appropriate & quality provision of multi-sectoral and survivor centered child protection and services.
- Establish and maintain appropriate coordination mechanism.
- To provide assistance in upholding human rights, especially of the vulnerable population (infant, children, elders or senior citizens, orphans, women, sick, PWD, ethnic minorities).

Specific Objectives:

- To ensure timely, appropriate & quality provision of multi-sectoral and survivor-centered child protection and gender-based violence services in accordance with local, national and international guidelines/standards on child protection and gender-based violence
- Establish and maintain appropriate coordination mechanism among all humanitarian actors, including coordination of protection inputs, reports, and humanitarian plan, and generation of resources
- Ensure that the protection response adequately takes into account the primary responsibility of the government to ensure protection of affected persons, by among others establishing adequate response mechanism and coordination with the national and local authorities;
- To advocate to all humanitarian clusters, protection, child protection and gender-based violence duty bearers, government, private sector, and civil society organization to mainstream child protection and gender-based violence response in programs, policies, and plans;
- To strengthen partnerships for complementation and coordinated child protection and gender-based violence response through the Provincial Inter-Agency Committees on Anti-Trafficking and Violence against Women and their Children (IACAT-VAWC) and the Local Council for the Protection of Children (LCPC);
- To establish common information, monitoring & reporting systems on child protection and gender-based violence, linked to the IDP Protection Cluster (IDPPC)

2.3.9 Law and Order Cluster

The Law and Order Cluster will assist the Response Operations and provide assistance to the affected areas through the:

- Provision of security to the Response Clusters operating in the affected area;
- Provision of traffic management that will facilitate the speedy movement of people, goods and equipment to the affected population and responding agencies; and
- Enforce law and order in the community through the provision of information on the disaster response operations and the maintenance of community policing to reduce or arrest criminality in the area.



- To enforce law and order in the community through the provision of information on the disaster response operations and the maintenance of community policing to reduce or arrest criminality in the area.

The Law and Order shall consider the immediate establishment of communications through Emergency Telecommunication Cluster and advance command post from the possible affected areas by the nearest territorial forces to stabilize security situation.

2.3.10 Emergency Telecommunications Cluster

A rapid deployment team equipped with ICT resources; both human and equipment that is organized to address the communications, electronics and information needs of the Emergency Operations Center (EOC) and/or Incident Command Posts (ICPs) in a disaster area.

- To strengthen ICT capacities at national down to local level responders to prepare for, respond to and recover from the impacts of disasters.
- To achieve the Emergency Telecommunications Cluster goal, the broad objective for the cluster's strategy is to strengthen ICT capacities at the national Cluster level down to local levels to prepare for, respond to and recover from the impacts of disasters.
- This will be organized by providing a timely, resilient and predictable Information and Communications Technology (ICT) support to improve:
 - a. Response and coordination among response organizations;
 - b. Decision-making through timely access to critical information;
 - c. Common operational areas for disaster response;
 - d. Common system standards and operating procedures;
 - e. Standards based architecture for HADR Operations; and
 - f. System architectures for compliance and interoperability.





CHAPTER 3

RESPONSE ARRANGEMENTS

CHAPTER III – RESPONSE ARRANGEMENTS

A. COORDINATION

To facilitate coordination for immediate response, the CDRRMC will use the application of Section 15 of RA 10121 (Coordination during Emergencies), which states that “... the LDRRMCs shall take the lead in preparing for, responding to, and recovering from the effects of any disaster based on the following criteria:

- a) The Barangay Development Council (BDC), if a barangay is affected
- b) The City/Municipal DRRMC, if two (2) or more barangays are affected
- c) The Provincial DRRMC, if two (2) or more cities/municipalities are affected
- d) The Regional DRRMC, if two (2) or more provinces/HUCs are affected
- e) The National DRRMC, if two (2) or more regions are affected

The CDRRMC shall always act as support to barangays which have the primary responsibilities as first disaster responders. The barangays will only seek assistance from the CDRRMCs if their resources at hand are not enough to support their requirements to provide for an effective response in their respective AOR. The CDRRMC will not deploy their resources not unless coordination from the BDRRMC is received indicating unavailability or insufficient amount of resources for response and their need for assistance. Private sector and civil society groups shall work in accordance with the coordination mechanisms and policies set by the CDRRMC.

To facilitate coordination for earthquake response, the following are the identified CDRRMC:

Table 15. Cluster Identification

Cluster	Agencies / Offices Involved	Lead Agency / Office
1. Food and Non-Food	CGSO, CEO, PNP, PRC	CSWDO
2. Health	PRC, CSWDO, Hospitals, BMC, CEO, Phil. Army, DILG, DepEd, PNP, PRC, NGOs	CHO
3. Protection / Law and Order	CGSO, BFP, Phil. Army, CEO, DILG, NGOs	PNP
4. Camp Coordination and Management	CDRRMO, CVO, CHO, DepEd, CAgo, PNP, CEO, CGSO, CLO, PRC, CIO	CSWDO
5. Logistics	CGSO, CEO, Phil. Army, BFP, PNP, NGOs	CGSO
6. Education	CSWDO, CEO, CGSO, CHO	DepEd
7. Emergency Tele.	CDRRMO, CITO, BDRRMC, BFP, PNP, CSWDO, NGOs of CDRRMC	CIO
8. Search / Rescue and Retrieval	PRC, PNP, Phil. Army, BFP, DILG, BDRRMC Rescue Teams, CEO	CDRRMO
9. Management of the Dead and the Missing	CDRRMO, PRC, PNP, BFP, Phil. Army, CHO, CSWDO, BDRRMC Response Teams, DepEd	DILG
10. Internally Displaced Persons (IDPs)	CDRRMO, CSWDO, DILG, CEO, CGSO, Phil. Army, CHO, CENRO, PNP	CPDO
11. Economy, Livelihood and Employment	CTECO, CPDO, CMO-ACTS, CAgo, CVO, CSWDO	CEEDO
12. International Humanitarian Assistance	CPDO, DILG, CMO, NGOs, CIO, CSWDO	CAo



The CDRRMC will activate and mobilize its Response Clusters consistent with the National Disaster Response Plan for Hydrometeorological Hazard. The Response Clusters of the CDRRMC will have their respective operational objectives and responsibilities as provided for in the RDRP. Furthermore, they will have their own inventory of resources and needs projection. The following response clusters, with the corresponding lead and member agencies are shown.

Response Cluster shall be established to provide resources needed to support response operation of affected LGUs. All Response Clusters need not be activated. Use of clusters depends on the local situation. New clusters can be created based on the actual needs.

1. IMPLEMENTATION PLAN FOR EACH CLUSTER

Each Response Cluster shall formulate a separate and detailed Implementation Plan containing the following details:

- a. Lead and Members – lead and members of the Response Cluster shall be enumerated based on their field of specialization
- b. Scenario – specific scenario that will be faced by the Response Cluster which will be consistent with the identified worst-case scenario
- c. Objectives – each cluster shall develop specific objectives in accordance with the Contingency Plan goal and general objectives
- d. Roles and Responsibilities – roles and responsibilities of cluster leads and members. Protocols may be included
- e. Response Activities – detailed activities to be undertaken with corresponding timeframes
- f. Resource Inventory – all existing resources of the Response Cluster
- g. Resource Projection – indicates all resources needed to respond effectively to consider the duration of the operation. This will identify the gaps in resources and possible activities to fill-in the said gaps
- h. Resource Gap Summary – list of all identified resources to be sourced-out in order to address the needs until the situation stabilizes.

For this Contingency Plan, the Implementation Plan per Cluster is attached as *Annex B*, each with cluster objectives, responsibilities, timelines and needs and activities.

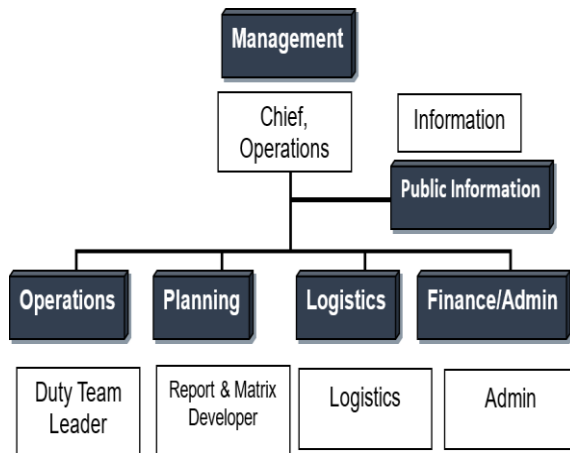
2. COMMAND AND CONTROL EMERGENCY OPERATIONS CENTER

An Emergency Operations Center (EOC) will be the center for coordination between the Response Cluster and the Incident Management Team. The EOC is in-charge of mobilizing and tracking resources. Collection, analysis and dissemination of situational reports/information takes place at the EOC. Acting as the Responsible Official, the Local Chief Executive, shall fill the organization from within or from other Response Cluster Member Agencies.

The city adopts and implements infection prevention and control strategies based on the guidelines set by the Department of Health. This health and safety protocols are set using appropriate combinations of



administrative controls, safe work practices, and personal protective equipment (PPE) to prevent worker exposures with Corona Virus Disease 2019 (CoViD-19) and other related infectious disease.



POSITION - ROLES AND RESPONSIBILITIES

EOC Manager	Takes guidance from Responsible Official Provide 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 financial and administrative concerns of the EOC

Note: as provided for in item 9.3.2 of the NDRRMC Memo No. 131, s. 2018, all EOCs shall have designated units or positions to perform the five (5) management functions, as appropriate, consistent with the mandates and authorities of the concerned agency or organization.

For this Contingency Plan for Hydromet, the names and position/designation per agency who will compose the Emergency Operations Center Management is found below.

Figure 1: CP Form 10: Emergency Operations Center

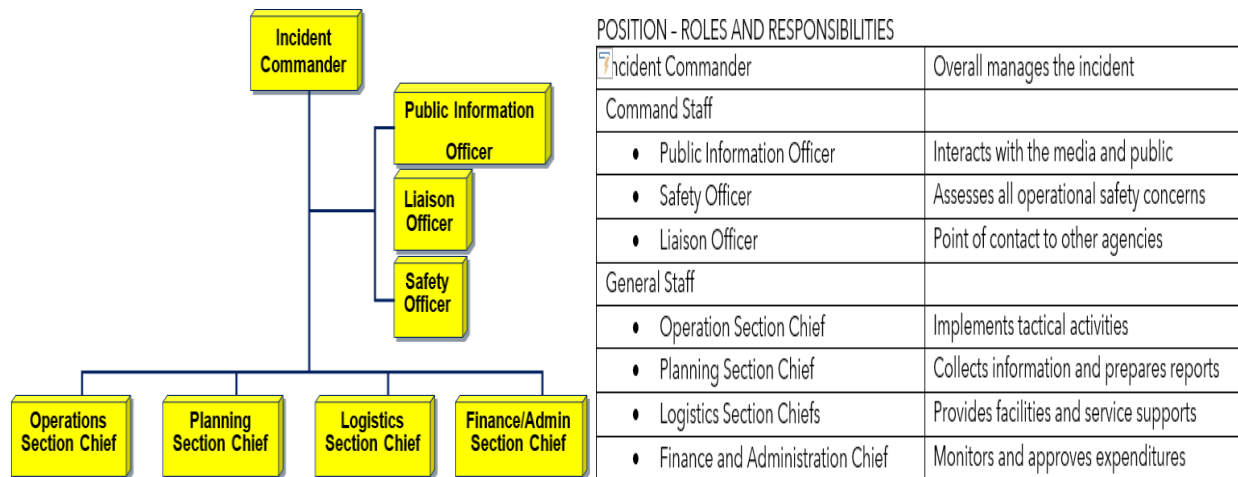
LOCATION	CDRRMO, Government Center, Mac Arthur Hiway, Brgy. Bulihan, City of Malolos, Bulacan	
CONTACT INFORMATION		
	Primary	Alternate
	Landline: (044)760-5160; 931-8888 (local 2106) Mobile: 0977-640-5828; 0928-226-9801 0931-003-5758 (office) Email Address: cityofmalolos.drrmo@gmail.com Social Media: FB Page: Malolos City DRRM Office Others:	Satellite Phone: Radio Frequency: Others:
EOC MANAGEMENT TEAM		
POSITION	NAMES AND AGENCY/ OFFICE/ ORGANIZATION (PRIMARY AND ALTERNATE)	CONTACT INFORMATION (PRIMARY AND ALTERNATE)
EOC Manager	Kathrina Pia Pedro (CDRRMO)	
Operations Coordinator	Louie Albert Dela Cruz (CDRRMO)	
Planning Coordinator	Kathrina Pia Pedro (CDRRMO)	
Logistics Coordinator	Glenda Garcia (CDRRMO)	
Finance/ Admin Coordinator	Michelle Pata (CDRRMO)	
Others		
Others		



INCIDENT COMMAND SYSTEM

The CDRRMC will employ the Incident Command System – a standard, on-scene, all-hazard incident management system that can be used by all DRRMCs at all level. It is a standard response mechanism providing common terminologies that is internationally accepted and recognized for a more effective and efficient movement of resources during disaster operations.

To execute tactical response, the CDRRMC will organize its incident Management Team. In the event that the local IMTs will be overwhelmed and will require augmentation, the IMT from the PDRRMC can provide support. Following the principle of ICS, proper transfer of command will take place. The CDRRMC will establish Area Command Team, if needed.



For this Contingency Plan for Hydromet, the composition of the Regional Incident Management Team is found in the table below.

Figure 2: CP Form 11: Incident Command System

ICS FACILITIES		
FACILITIES (CUSTOMIZE AS APPROPRIATE)	LOCATIONS	
Incident Command Post	Republika Park (In front of New City Hall)	
Staging Area	MSCC Gorunds (Near Incident Command Post)	
Base	City Government Center Compound	
Camp	City Government Center Compound	
Helispot	Bulacan Sports Complex	
INCIDENT MANAGEMENT TEAM		
POSITION (CUSTOMIZE AS APPROPRIATE)	NAMES AND AGENCY/ OFFICE/ ORGANIZATION (PRIMARY AND ALTERNATE)	CONTACT INFORMATION (PRIMARY AND ALTERNATE)
Incident Commander	Atty Christian D. Natividad (City Mayor) Joel S. Eugenio (CAo)	
Public Information Officer	Regemrei Bernardo (CIO)	
Liaison Officer	Fernando Durupa (CMO)	

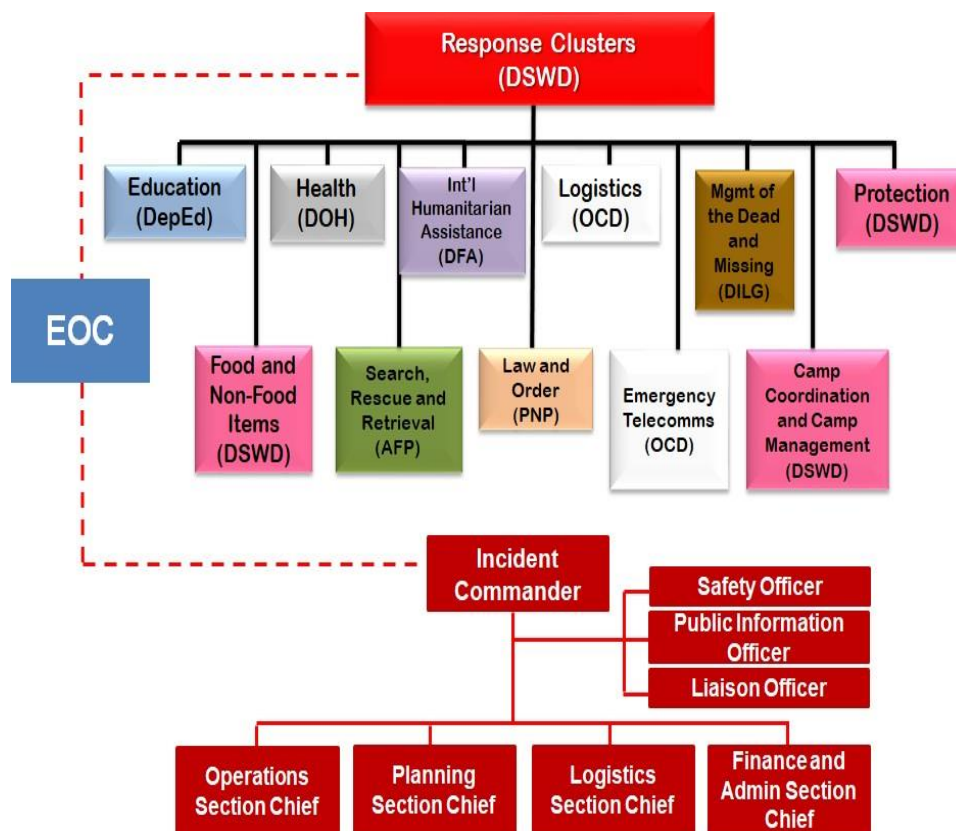


Safety Officer	City Fire Marshall (BFP)	
Operations Section Chief	Louie Albert Dela Cruz (CDRRMO)	
Planning Section Chief	Kathrina Pia D. Pedro (CDRRMO)	
Logistics Section Chief	Engr. Reynaldo Garcia (CGSO)	
Finance/Admin Section Chief	Michelle Pata (CDRRMO)	

INTER-OPERABILITY

The EOC plays a vital role, together with the Response Cluster and the IMT. An EOC is essential to be established as the repository of information and main hub for coordination. It serves as the link between the ICS (Resource Employer or Implementer) and the Clusters (Resource Provider). Clusters shall ensure availability of the resources and bring them down to the ICS operations on the ground for execution. The Responsible Official (RO), the head of agency or person vested with decision-making authority, usually stays at the EOC or their respective agencies to make decisions.

Figure 3: Flow of Coordination – EOC



COORDINATING INSTRUCTIONS

All CDRRMC member agencies, including the lead and member agencies of the Response Clusters, EOC personnel, and IMT members are hereby directed to adhere to the following coordinating instructions:

1. Establish Operational Structures & Systems (Response Clusters, EOC & PIMT)
2. Prepare to Implement Evacuation Plan (Mass/Pre-Emptive/Forced/Foreigner Evacuation), when necessary.
3. All CDRRMC members of the Response Clusters shall formulate their respective implementation plans as annexes to the Provincial Contingency Plan.
4. All CDRRMC members shall complete their respective inventory of resources that will specifically be committed for augmentation to affected barangays.
5. All response activities shall be organized according to Cluster Approach. Action shall be coordinated by the EOCs.
6. All tactical resources deployed at the affected sites shall be required to check-in under the command and control of the IMTs in charge.
7. At the instance that the affected barangays be able to recover, they shall reassume the management of response. Proper transfer of command shall take place.
8. All activities pertaining to response operations shall observe established protocols and guidelines on health and safety, specifically infection prevention and control, following the risk-based public health standards for COVID-19 mitigation of the Department of Health. Personnel who does not adhere with said guidelines shall not be allowed to take part in the response activities.





CHAPTER 4

ACTIVATION, DEACTIVATION & NON-ACTIVATION

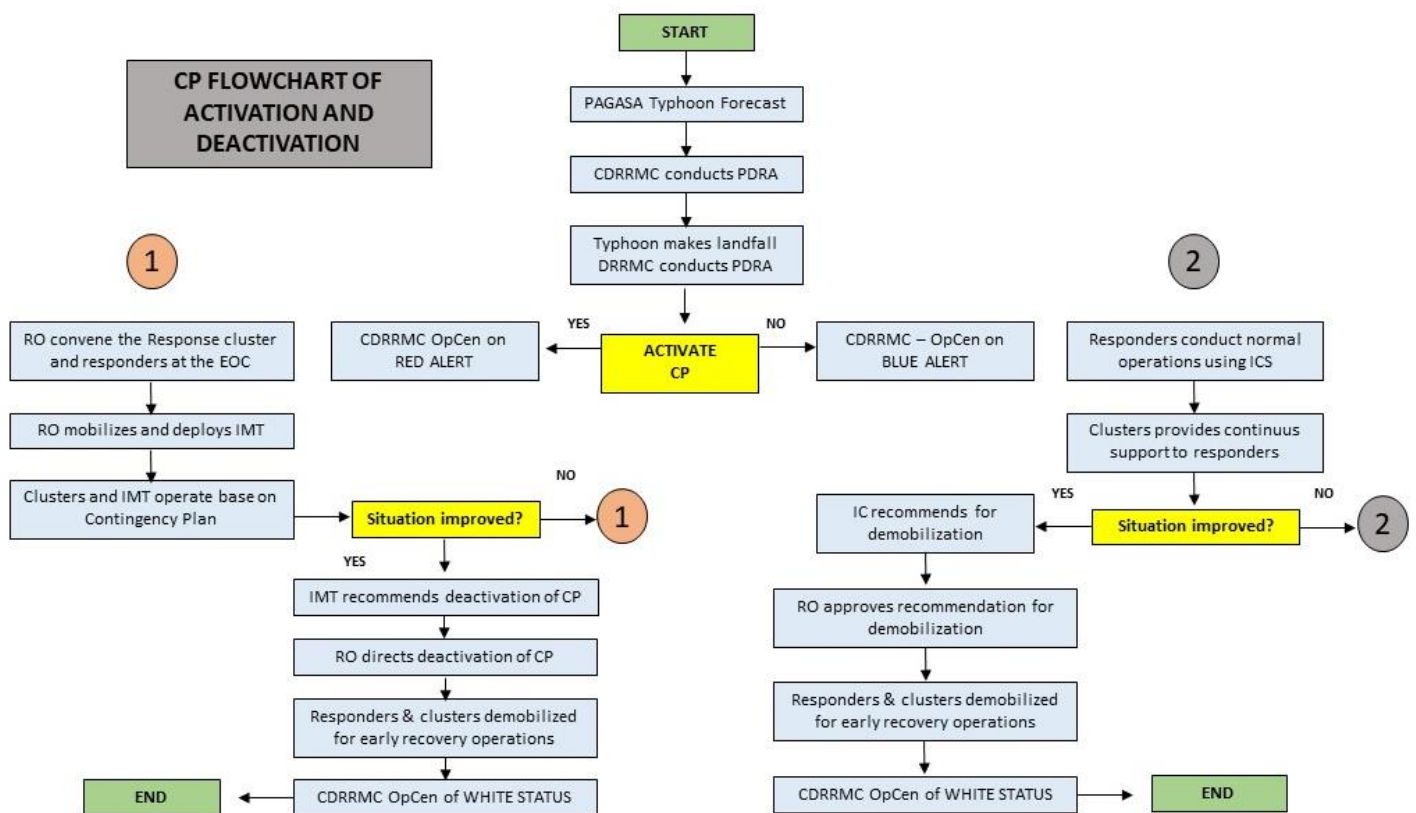
CHAPTER IV – ACTIVATION, DEACTIVATION AND NON-ACTIVATION

4.1 ACTIVATION

In the presence of early warning signs related to an impending hazard, Pre-Disaster Risk Assessment (PDRA) shall be conducted. PDRA presents possible impacts of any Tropical Cyclone (such as a Super Typhoon) and flooding to the populace to determine the appropriate level of response actions. The said assessment provides basis for the activation of the CP. However, in the absence of early warning signs as well as non-communication from the affected area, the CP may be activated upon recommendation of the Rapid Damage Assessment and Needs Analysis (RDANA) Team working on the ground based on their actual findings.

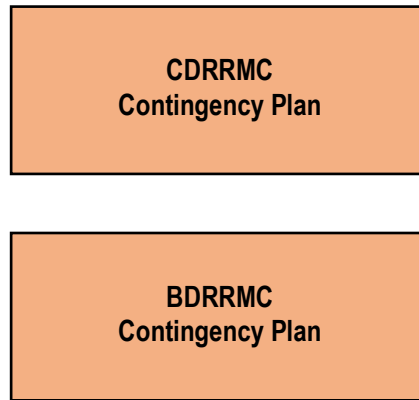
Below is the diagram illustrating the activation and deactivation of this City of Malolos Contingency Plan

Figure 4: Flow Chart of Activation and Deactivation



4.2 NON-ACTIVATION

In the event of non-activation of the City Contingency Plan, the mechanisms stipulated herein can still be relevant for any Tropical Cyclone/ flooding events/incidents as it is incorporated in the existing plans of the CDRRMC/CDRRMO.



Specifically, as seen in the diagram, the response for flooding will always begin at the local levels in accordance with the respective contingency plans of the CDRRMC. In the event of incident escalation, the response will be elevated at the provincial level in accordance with the City Contingency Plan of the CDRRMC/CDRRMO.

An essential component of harmonization of response is the conduct of RDANA. The City will have its respective RDANA operations to know the extent of damage and their needs. The results of the RDANA will determine the need to elevate the response to a higher level DRRMC. Should the city be able to manage the response using its own resources, then there is no need to involve the higher DRRMCs. However, the higher DRRMCs shall always remain on standby for possible augmentation.





ANNEX A

TECHNICAL
WORKING GROUP



Name	Designation	Action Officer	Functions
Mayor's Office			
Atty. Christian D. Natividad	City Mayor CDRRMC Chairperson		<ul style="list-style-type: none"> • Exercise general supervision and control over all programs, projects, services, and activities of the provincial government; • Enforce all laws and ordinances relative to the governance of the province and the exercise of the appropriate corporate powers, implement all approved policies, programs, projects, services and activities of the city; • Initiate and maximize the generation of resources and revenues, and apply the same to the implementation of development plans, program objectives and priorities, particularly those resources and revenues programmed for agro-industrial development and country-wide growth and progress; • Ensure the delivery of basic services and the provision of adequate facilities.
City Environmental and Natural Resources			
Amiel S. Cruz	Division Head (Member)		<ul style="list-style-type: none"> • Formulate measures for the consideration of the Sanggunian and provide technical assistance and support to the Governor in carrying out measures to ensure the delivery of basic services and provision of adequate facilities relative to environment and natural resources services as provided for under Section 17 of the 1991 Local Government Code; • Develop plans and strategies on environment and natural resources programs and projects and implement the same upon approval thereof by the LCE; • Be in the frontline of the delivery of services concerning the environment and natural resources, particularly in the renewal and rehabilitation of the environment during and in the aftermath of man- made and natural calamities and disasters; • Recommend to the Sanggunian and advise the LCE on all matters relative to the protection, conservation, maximum utilization, application of appropriate technology and other matters related to the environment and natural resources; and • Exercise such other powers and perform such other duties and functions as maybe prescribed by law or ordinance.
City Health Office			
Dr. Minerva Santos	City Health Officer		<ul style="list-style-type: none"> • Organizes the health sector for more responsive and integrated health response to disasters and emergencies • Assists the barangays during emergencies through direct



Name	Designation	Action Officer	Functions
	Vice Chairman on Response		<p>assistance or technical expertise on sanitation, public health concerns and other health hazards</p> <ul style="list-style-type: none"> • Undertakes necessary measures to prevent the occurrence of communicable diseases and epidemics • Develops policies and protocols on the health response to disaster and skills training • Issues warning and advisories to the public on epidemics and other health hazards • Maintains data on health status including vulnerable populations to facilitate assessment of health needs and furnish these data to the CDRRMC • Organizes assessment teams and medical response teams to assist the LGU and barangays during emergencies • Provide health services during emergencies as necessary • Ensure and monitor continuous micro-nutrient supplementation and vaccination among high-risk population • Publishes general information in handling/transferring of corpses and sanitary requirements
City Administrator's Office			
Joel S. Eugenio	City Administrator Vice Chairman on Preparedness, Prevention and Mitigation		<ul style="list-style-type: none"> • Ensures effective and efficient implementation of city government's governance and development policies, programs, and projects • Develops, installs and sustains a system-wide internal and external mechanisms for effective decision making and implementation processes • Develops, installs and sustains a system-wide efficient and effective performance-driven organization, development policies, programs, projects, relief and assistance provision during and in the aftermath of man-made and natural disaster and calamities • Develops, installs and implements a system of monitoring and evaluating the quality and performance of all city government offices for judging system-level efficiency and effectiveness • Develops, installs and causes the implementation of a system's audit and control • Develops, manages and supervises special executive concerns including special programs and projects • Develops, updates and issues city government's manuals of operations and procedures • Exercises inter-office coordination, facilitation and assistance • Develops and implements a comprehensive provincial program for disaster preparedness • Conducts or causes the conduct of citizen's disaster



Name	Designation	Action Officer	Functions
			<p>preparedness training</p> <ul style="list-style-type: none"> • Coordinates and links with the government agencies and non- government organizations on all matters pertaining to making the province attain an environment conducive to investments and business
City Agriculture Office			
Dr. Romeo S. Bartolo	City Agriculturist (Member)		<ul style="list-style-type: none"> • Prepares plans and programs for the disaster risk reduction and response for the agriculture and fisheries sector; • Conducts damage assessment and submits reports during times of disaster and similar events; • Prepares rehabilitation plans after disaster and similar events; • Coordinates/Works with the CDRRMC for the management of pests and diseases outbreaks in crops and aquaculture/fisheries; • Renders technical assistance in the preparation of disaster risk reduction and management plans, efforts and intervention for the field of agriculture and fisheries
City General Service Office			
Engr. Reynaldo S. Garcia	Department Head (Member)		<ul style="list-style-type: none"> • Develops and maintains an effective and efficient management system for all physical resources, facilities, properties, and supplies of the City Government; • Develops, installs and maintains efficient, effective, and transparent mechanisms for physical resources (including supplies and other government properties), acquisition, utilization and mobilization, maintenance, upkeep preservation and protection, and disposal • Develops and maintains an effective and efficient records management
City Budget Office/ Local Finance Cluster			
Ms. Leilani O. Maclang	City Budget Officer (Member)		<ul style="list-style-type: none"> • Assist the LCE in the preparation, review, and utilization of CDRRMC Fund to be integrated to the Annual Budget consistent with the policies and guidelines under Republic Act No. 10121 dated 27 July 2009 and NDRRMC, DBM, and DILG Joint Memorandum Circular No. 2013-1 dated 25 March 2013 • Releases funds intended for disaster prevention and mitigation activities to lessen adverse impacts of hazards • Releases funds for Quick Response Activities during or after a disaster for immediate relief and assistance to the victims
City Veterinary Office			



Name	Designation	Action Officer	Functions
Dr. Jorge V. Crisostomo	City Veterinarian (Member)		<ul style="list-style-type: none"> • Coordinate with CDRRMC thru Crisis Management Team for the management of disease outbreaks • Provides technical animal health management and logistics support for the prevention and control of animal disease • Damage assessment of farm facilities/animals • Rehabilitation plan during/ after damage/outbreak • Formulate plans/programs for the prevention of animal diseases of economic and public health importance
City Engineer's Office			
Engr. Ricasol P. Millan	City Engineer		<ul style="list-style-type: none"> • Organizes reaction teams in the office • Assists in providing transportation facilities for relief supplies, personnel, and disaster victims • Provides heavy equipment for rescue and recovery operations • Regular assessment of city public buildings, roads, and bridges <p>Assessment and restoration of damaged public works, offices, and other buildings</p>
Department of Education			
Dr. Norma P. Esteban, CESO V	Schools Division Supervisor		<ul style="list-style-type: none"> • Act as resource and recommending body in support of the functions of the CDRRMC • Organizes School Disaster Risk Reduction and Management Groups (SDRRMG) and engages boy scouts, girl scouts, and CMT students in the activities of said disaster control groups • Assist in public education, campaigns, and advocacies through the integration of DRR-CCA topics in the school curricula • Gather reports from school affected by calamities, verifies such reports, and submits the same to the PDRRMC • Disseminates weather information to the general public, through the school population and reiterates compliance to prevailing guidelines on suspension of classes during inclement weather • Makes available schools in disaster-affected areas as evacuation centers where and when necessary <p>Facilitates access of school to instructional materials on DRR-CCA through proper coordination with the other member agencies</p>
Liga ng mga Barangay			
Hon. Dionisio C. Mendoza	ABC President (Member)		<ul style="list-style-type: none"> • Give priority to programs designed for the total development of the barangays and in consonance with the policies, programs, and projects of the City Government of Malolos/ CDRRMC • To inform public with different activities and events that



Name	Designation	Action Officer	Functions
			<p>may benefit the welfare of every community in the barangay especially in times of calamities, etc.</p> <ul style="list-style-type: none"> • To personally perceive the fundamental needs of every subsequently, escalates the issues to concern government agencies as necessary. Moreover, initiate considerable scheme towards resolution of concerns • To increase awareness, access, and participation of the community towards shared goal
Department of Interior and Local Government			
Ms. Digna A. Enriquez, CLGOO VI	Local Government Operations Officer (Member)		<ul style="list-style-type: none"> • Ensure that every barangay has an organized BDRRMC • Strengthen/ensure the functionality of the BDRRMC • Provision of the Early Warning thru text and other medium (Disaster Protocol) • Provision of Technical Assistance in crafting the BDRRM Plan in partnership with OCD and CDRRMC • Coordinate with the Chairperson of the CDRRMC and heads of the PNP, BFP for a timely and coordinated response to emergency situations • Activates the BDRRMC • Submit real time report in coordination with the DRRMC • Activates the Local Price Monitoring Teams in coordination with DTI to ensure stable prices of basic commodities • Submit post disaster reports in coordination with DRRMC • Monitors the utilization of 5% DRRM Fund and submit reports to the higher level
City Information Office			



Name	Designation	Action Officer	Functions
Mr. Regemrei Bernardo	Division Head (Member)		<ul style="list-style-type: none"> • As member of the command staff in the Incident Command System, CIO provides support to the CDRRMO's activities <ul style="list-style-type: none"> ▪ Fire/Earthquake Drill ▪ Disaster Consciousness Month ▪ Planning/Workshop/ Meetings, etc. ▪ During a major emergency or disaster in Incident Command Post ▪ Audio/Video documentation ▪ News Coverage • Assists CDRRMO in creating public awareness and education campaign in Disaster Risk Reduction and Management via multiple channels (radio, television, text messages, website, print, etc.) <ul style="list-style-type: none"> ▪ Provides technical assistance in the production of IEC materials like tarpaulin, fliers, and brochures ▪ Prepares press release/ written statement/media kit/media advisory/ organizes press conference/interviews when necessary and must be approved by the Chief Executive ▪ Ensures that all sources of information being received are authenticated and verified for accuracy and approved by concerned officials ▪ Assists national and local media during coverage • Disseminates essential emergency information about public health and safety, disaster assistance, and credible facts or public warnings including the appropriate protective actions to be taken • Establishes and prepares Standard Operation Guidelines of the flow of information during emergencies or disaster for the coordination, supervision, and monitoring of disaster response, recovery, and rehabilitation • Maintains and keep databank regarding current inventories of public information, resources, and media contact list
City Social Welfare And Development Office			
Ms. Lolita S.P. Santos, RSW	Department Head Vice-Chairperson for Disaster Response		<ul style="list-style-type: none"> • Prepares an update of the Relief and Rehabilitation Master Plan in coordination with other partners NGAs • Provide supports to LGUs adversely affected by disasters for relief and rehabilitation • Provides technical guidance in the conduct of post-disaster evaluation to identify strengths and gaps in disaster management • Undertakes linkage and coordination with multi-donors for disaster management programs
City Planning And Development Office			



Name	Designation	Action Officer	Functions
Engr. Eugene P. Cruz, EnP	Department Head Vice-Chairperson for Rehabilitation and Recovery		<ul style="list-style-type: none"> • Ensures that disaster concerns are integrated both in the national and local development plans • Provides inputs in the development of national, regional, and inter-regional rehabilitation and reconstruction plans within the context of development planning • Develops damage assessment schemes for partner-agencies surveying post-disaster damages • Determines and analyzes the effect of disasters and calamities in the socio-economic plans and programs of the province • Assists in mobilizing resources through technical assistance in the formulation of projects for OD funding or programming • Monitors through the CDMC the situation and progress of activities in disaster-affected and disaster-prone areas and implements appropriate policy programs interventions
Bureau of Fire Protection			
CInsp. Antonio De Jesus	City Fire Marshall (Member)		<ul style="list-style-type: none"> • Responsible for the prevention and suppression of all destructive fires on buildings, houses and other structures, forest, land transportation vehicles and equipment, ships or vessels docked at piers or wharves or anchored in major seaports, petroleum industry installations, plane crashes and other similar incidents, as well as the enforcement of the Fire Code and other related laws.
Philippine National Police			
	Chief of Police (Member)		<ul style="list-style-type: none"> • The principal policy-making and coordinating body, shall conduct disaster risk reduction and management activities through a three-stage approach, namely, Pro-active Assessment Stage, Disaster Incident Management and Support to Recovery and Rehabilitation efforts. • Provide safety to such persons by active patrolling during disasters • The police will ensure that the fire and ambulance services can do their job. They will cordon off the disaster area, direct traffic and sometimes set up a safety zone around the disaster area. If victims are difficult to identify, the police will deploy the disaster identification team, consisting of experts convened on an ad hoc basis. This team of specialists perform their work in consultation with one another. • Augments in propagating information and warning of threatening disaster.





ANNEX B

CLUSTER IMPLEMENTATION PLAN



A. COORDINATION

1. IMPLEMENTATION PLAN FOR SEARCH, RESCUE, AND RETRIEVAL CLUSTER

I. SCENARIO

Affected families on top of their houses in 41 barangays, others trapped in their homes, while a number of casualties reported drowned, missing and injured.

II. OBJECTIVE

The Search, rescue and Retrieval Cluster shall provide support for an effective, efficient, organized and systematic search, rescue, and retrieval operations to disaster effected areas upon order to minimize loss of lives and casualties.

III. CONCEPT OF OPERATIONS

The SRR Cluster will coordinate SRR operations in response to Hydro-Meteorological and Geological Disaster to the affected areas when directed by the CDRRMO to minimize the loss of lives and casualties.

The SRR will have two (2) components:

- a. Coordination of all SRR teams deployed at the affected areas; and
- b. Retrieval of the dead.

The casualties shall be handed-over to the Health Cluster for proper treatment and management while the dead will be handed-over to the Management of the Dead and the Missing Cluster. Upon requests submitted or given to the CDRRMC which will be communicated to the Cluster Lead, the SRR Teams will proceed to the affected area and report to the local SRR Cluster Lead who will in turn report to the established EOC in the affected area for proper deployment. All SRR Teams will submit status reports to the EOC and the Cluster Lead. Demobilization will be done upon orders.

i. **Lead Cluster Agency: City Disaster Risk Reduction and Management Office (CDRRMO)**

a. *Pre-Disaster Phase*

- Lead the coordination among SRR Cluster CDRRMC-members;
- Conduct Crisis action planning;
- Alert SRR teams for possible deployment for SRR operations;

b. *During Disaster Phase*

- Convene the SRR Cluster;
- Provide SRR Teams for deployment to the affected areas.
- Provide aerial assessment in support of CDRRMC Rapid Damage and Needs Assessment (RDANA) to determine the operational status of air and seaports and the accessibility of main supply routes; and



c. *Post Disaster Phase*

- Collects status reports and requests of the deployed SRR Teams on ground;
- Submits status, requests and proposed actions to the CDRRMC to integrate all activities at the Operation Center;
- Coordinate with other response cluster for their SRR requirements;
- Coordinate the hand-over responsibility to barangays;
- Consolidate reports and lessons learned on SRR operations;
- Prepare and submit a report of all SRR operations to the R/PDRRMC; and
- Support other tasks as requested by the Chairperson/Vice-Chairperson for Disaster Operations

ii. Cluster Member Agencies

1. Department of the Interior and Local Government (DILG)

a. *Pre-Disaster Phase*

- Alert SRR Teams for possible deployment in the affected areas; and
- Submit to the Cluster Lead a list of available government SRR Teams for immediate possible deployment

b. *During Disaster Phase*

- Provide assistance in the deployment of SRR Teams in the affected areas;
- Provide SRR teams to be deployed to the affected areas in coordination with the Regional SRR Cluster Lead; and
- Establish command posts at the Provincial office and at the affected areas for multi- SRR teams including those from international agencies and INGOs, if any.

c. *Post Disaster Phase*

- Coordinate the turn-over of all retrieval operations to the LGU/s; and
- Support other tasks as required by the Chairperson/Vice-Chairperson for Disaster Response

2. Bureau of Fire Protection (BFP)

a. *Pre-Disaster Phase*

- Alert SRR teams for possible deployment for SRR operations: and
- Submit to the Cluster Lead a list of available government SRR Teams for immediate possible deployment

b. *During Disaster Phase*

- Provide Special Rescue Unit (SRU) for deployment in the affected areas in coordination with the Regional SRR Cluster Lead

c. *Post Disaster Phase*

- Assist in the collapsed structure operations; and
- Support other tasks as required by the Chairperson/Vice-Chairperson for Disaster Response



3. Philippine Red Cross (PRC)

a. Pre-Disaster Phase

- Alert SRR teams for possible deployment for SRR operations in all its branches/chapters
- Coordinate with the CDRRMC through the response cluster group its initial deployment plan that includes the list of available SRR Teams and logistical equipment

b. During Disaster Phase

- Provide required teams in disaster operations such as Emergency Response Unit (ERU), dead body management, Water Search and Rescue (WaSAR), DSP, etc for deployment in the affected areas in coordination with the SRR cluster

c. Post Disaster Phase

- Conduct post disaster needs assessment.

4. Philippine National Police

a. Pre-Disaster Phase

- Alert SRR teams for possible deployment for SRR operations: and
- Submit to the Cluster Lead a list of available government SRR Teams for immediate possible deployment

b. During Disaster Phase

- Provide SRR Teams available for deployment to the affected areas in coordination with the Regional SRR Cluster Lead

c. Post Disaster Phase

- Support other tasks as required by the Chairperson/Vice-Chairperson for Disaster Response

IV. CONCEPT OF SUSTAINMENT

1. All SRR Teams will provide their own logistical requirements;
2. The CDRRMO, as Cluster Lead will coordinate all support and requirements of response committee in the activities to augment the requirements at the affected areas during disasters; and
3. Concerned government agencies and their subordinate offices shall utilize their respective internal personnel. Additional personnel requirements shall be coordinated through the CDRRMO in collaboration with all Council members.

V. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
2. Command Center – CDRRMO Operation Center, Mac Arthur Highway Brgy. Bulihan City of Malolos Bulacan



- 2.1. Succession of Command
 - a. Chairperson (CDRRMO)
 - b. Vice-Chairperson for Disaster Response (CSWDO)
 - c. SRR Cluster Lead
 - d. SRR Cluster Members

- 2.2. Inter-agency Communication Support System

For the entire duration of the operations, the existing means of communication shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas

3. Coordination Instructions

- a. SRR Teams to coordinate with the Local SRR Cluster Lead of the affected areas for proper endorsement to the Incident Command Post on the ground;
- b. All member agencies are responsible for the continuous monitoring of the situation; and
- c. All SRR teams shall conduct after SRR operation de-briefing, prepare and submit operation report to the SRR Cluster Lead.

2. IMPLEMENTATION PLAN FOR CAMP COORDINATION AND CAMP MANAGEMENT (CCCM)

I. SCENARIO

A total of 1,014 affected families or 5,071 persons in fifty-one (51) barangays needed to be brought to evacuation centers for temporary shelter. Affected families Outside Evacuation Centers (OEC) tallies to 10,940 or a total of 54,702 individuals.

II. OBJECTIVES

General Objective:

The CCCM Cluster aims to provide timely and well-coordinated humanitarian assistance and augmentation support in the management of the evacuation center.

Specific Objectives:

1. To ensure the availability of identified safe, secure and accessible evacuation centers for emergencies and disasters;
2. To ensure that temporary refuge to individual and families potentially at risk or in actual danger are immediately provided;
3. To ensure establishment of sex and age disaggregated data e.g. listing and profiling of affected families and internally displaced persons (IDPs) in evacuation centers or temporary displacement sites;
4. To ensure that all IDPs in evacuation centers are provided with basic humanitarian needs complaint with SPHERE standards such as, but not limited to food with enough nutritional values, potable water, clothing, family items, hygiene kits and other essential non-food items;
5. To ensure that Basic Medical public health and protection services are available 24/7;
6. To ensure that energy source and communication facilities are in place;



7. Ensure that ECs are off limits and have designated areas for pet animals and livestock; and
8. Shall continue to seek opportunities for recovery, rehabilitation and developmental tasks as post response activities are undertaken, in case of prolonged stay.

III. CONCEPT OF OPERATIONS

On orders the CCCM Cluster aims to provide timely and well-coordinated humanitarian assistance and augmentation support in the management of the evacuation center, to ensure that needs of the disaster affected families are attended to appropriately.

The CSWDO as Cluster Lead, shall coordinate all support and requirements of the affected barangays for evacuation centers' sustained operations both those under the supervision of the LGU, DepEd and other privately-owned places utilized during disasters;

Concerned government agencies and subordinate offices shall utilize their respective internal personnel in support to CCCM operation. Additional personnel requirements shall be coordinated through the RDRRMC Response Pillar in collaboration with all other Response Clusters.

Alert Level and Level of Response

ALERT LEVEL	RESPONSE TRIGGERS		
	AGENCY	SPECIFIC CLUSTER	INTER-CLUSTER
	Level 1	Level 2	Level 3
WHITE			
BLUE	<ul style="list-style-type: none"> ✓ PDRA Result ✓ OCD Opcon activation ✓ Orders 	<ul style="list-style-type: none"> ✓ PDRA result ✓ Orders or directives from the Vice-Chair for Disaster Response 	<ul style="list-style-type: none"> ✓ PDRA-Action, Plan and Protocols ✓ Orders or directives from Vice-Chair for Disaster Response
RED	<ul style="list-style-type: none"> ✓ PDRA Result ✓ OCD OPCEN Activation ✓ Orders or Directives from the Vice-Chair for Disaster Response 	<ul style="list-style-type: none"> ✓ RDANA Result ✓ Report on the number of displaced population inside evacuation center 	<ul style="list-style-type: none"> ✓ RDANA Result ✓ Report on the number of displaced population inside evacuation center

The following are key players and actors in the implementation of this concept.

- i. **Lead Cluster Agency – City Social Welfare and Development Office (CSWDO)** through the Disaster Response Assistance and Management Bureau will head and lead the coordinating functions of the Cluster. Specifically, the CSWDO will do the following for each Disaster Phase.
 - a. *During Disaster Phase*
 - Shall alert all its QRTs, SWAD Team, PDOs at all levels;
 - Shall attend to the PDRA core group meeting;
 - Prepare Predictive Analytics on Humanitarian Assistance;



- Ensure that the regional stockpiles are ready for augmentation at the local level (inside evacuation center);
- Monitoring on the status of all ECs opened including its facilities;
- Coordinate with LGU on the number of families evacuated inside ECs;
- Ensure that the EC Manager uses DFAC as basis for mater-listing of evacuees;
- Coordination with the F/NFI Unit on the sufficient allocation of F/FNIs to evacuees inside ECs;
- Coordination with the EC Managers if there are protection issues inside ECs being reported;
- Coordinate the mobilization of rapid assessment teams from the field; and
- Ensure availability of timely and accurate data/reports for information of assistance.

b. Post Disaster Phase

- Assessment of evacuees on their movement to the transitional site;
- Listing of evacuees who will be prioritized for moving out to transitional site;
- Provision of TA to the barangays on the construction of transitional site or bunk houses;
- Monitor the number of evacuees transferred to transitional site returned to places of origin and provided transportation assistance and
- Conduct PDNA together with concerned agencies.

ii. Cluster Members

1. Department of Education (DepEd)

a. During Disaster Phase

- Prepare evacuation center (as to room assignment e.g. lactating mothers, PWDs, male, female);
- Coordinate with LGUs on the use of schools as evacuation centers;
- Identify temporary learning areas;
- Prepare learning activities for school-age children;
- Provide safety emergency shelter to affected population (3 days for short-term up to 15 days for medium-to long-term);
- Asst LGUs/CSWDO to get the detailed profile of evacuees/IDPs including the needs of vulnerable groups especially children (with special needs);
- Orient evacuees on schools' rules and regulations as evacuation center;
- Monitor evacuation centers;
- Conduct learning sessions for school-age children;
- Provide psychosocial support activities for affected children; and
- Prepare and submit report to DepEd Management.

b. Post Disaster Phase

- Inspection of facilities (Education Facilities Division);
- Assess damages to properties;
- Coordinate with LGUs in the repair and rehabilitation of schools; and
- Oversee the repair and rehabilitation of damaged properties.



2. City Health Office (CHO)

a. *During Response Operations Phase*

- Alert all Response Teams – WASH Teams, MHPSS Team, Rapid Nutrition Assessment Team and Infant Feeding/Breast feeding support groups;
- Monitor and coordinate status/needs through Center for Health and Development (CHD) by DOH national;
- Ensure stockpiles of key health-related supplies are ready for augmentation;
- Ensure inter-operability with the cluster members in the Response Operation Center;
- Monitor the status of all affected families at the ECs;
- Provide potable water (bottled water, water rationing/trucking, water treatment);
- Install/construct of toilet facilities (in case of gaps);
- Provide hygiene kits and conduct hygiene promotion;
- Monitor and coordinate with CHD regarding status/needs; and
- Deploy MHPSS teams to communities and evacuation centers to provide Psychological First Aid (PFA).

b. *Post-Disaster: Early Recovery Phase*

- Continues assistance in camp management activities to optimize provision of health (public health and medical), nutrition, WASH and MHPSS services.

3. Philippine Red Cross (PRC)

a. *During Disaster Phase*

- Develop PRC operational action plan based on the needs and gaps identified related to CCCM;
- Contribute to the cluster in the provision, setup, and management of camp that can accommodate 2,000 families with necessary equipment such as tents, wilkhalls (rub halls), emergency health & WASH facilities, and food & non-food items as required;
- Provision of assistance to target beneficiaries based on needs analysis and available resources> food, non-food (including sleeping kits, hygiene kit and tarpaulin), welfare (PSP, tracing, & restoration family link), soup kitchen (hot meals on wheels), water/sanitation (water treatment and distribution), emergency health station;
- Provision of pre-hospital care for injured and ill persons, ambulance for patient transport in.

b. *Post Disaster Phase*

- Conduct Post-disaster and needs assessment in coordination with the CCCM Cluster and its members;
- Develop operational action plan for Early Recovery Program;
- Conduct of inventory of existing resources;
- Prepare and submit end-emergency operation activities, narrative on progress and accomplishment, finance, and statistics data.



IV. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
2. Command Center – CDRRMO Operation Center, Mac Arthur Highway Brgy. Bulihan City of Malolos Bulacan
 - 2.1. Succession of Command
 - a. Chairperson (CSWDO)
 - b. Vice-Chairperson for Disaster Response
 - c. Health Cluster (CHO)
 - d. Health Cluster Members
 - 2.2. Interagency Communication Support System

For the entire duration of the operations, the existing means of communication shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas

3. IMPLEMENTATION PLAN FOR FOOD AND NON-FOOD ITEMS CLUSTER

I. SCENARIO

Total No. of Population affected: 59,773
No. of persons Outside evacuation centers (OEC): 54,702
No. of persons Inside evacuation centers (IEC): 5,071

II. OBJECTIVE

The Food and Non-Food Items Cluster aims to provide food that is nutritious, age-appropriate and are socially and culturally acceptable to the affected population and non-food items to the affected population during the emergency response phase in the short-term, and to restore at least the pre-disaster level of food security in the affected area in long-term.

Specifically, the Cluster aims:

- a. To ensure availability of family food packs, ready-to-eat food, and bottled drinking water and also non-food items such as sleeping gears, family packs, dignity kits kitchen kits, and shelter kits stockpiled at all levels;
- b. To undertake the coordinated provision of food and non-food assistance to the affected families; and
- c. Regularly monitor, in coordination with Nutrition Cluster as part of Health Cluster, the nutritional status (include nutritional content, social and cultural acceptability anywhere in the food/non-food items) of the affected population, identify gaps in the provision of food assistance, and formulate strategic interventions to address the gaps.



III. CONCEPT OF OPERATIONS

On orders, the FNI Cluster shall augment the resources of the affected barangays during the pre-disaster, during a disaster, and post-disaster phases. Barangays must have prepositioned resources that will be distributed first to the affected population to ensure that the IDPs are provided with the needed food and non-food items.

The Cluster lead shall coordinate, allocate, orchestrate, and monitor the delivery of food and non-food items to the affected families and communities.

All members of the FNI Cluster shall coordinate their relief distribution/ augmentation with the Cluster Lead.

The FNI Cluster will follow the cluster approach taking into account that the direction of the operations will be guided on the information provided at the Local DRRMCs.

The LDRRMCs should also establish a system of reporting for the inventory of available resources at their disposal and will only submit and request to the next higher level of government for augmentation of required resources.

All Clusters will conduct post-disaster assessment of luster operations to identify good practices and areas for improvement.

Alert Level and Response Level

Alert Level	Response Level		
	Level 1	Level 2	Level 3
White	-	-	-
Blue	Agency Directives	-PDRA -Directives from the Cluster Lead	PDRA-APP
Red	Agency Directives	-PDRA Results -Activation of ECs -Report on the displacement of population	-PDRA result -RDANA result -Massive displacement of population -Escalation in the number of ECs- opened -Number of casualties arises

The following are the key players and actors in the implementation of these concepts:

- i. Lead Cluster Agency: City Social Welfare and Development Office**
- ii. Cluster Members**
 - 1. City General Services Office
 - 2. City Engineering Office
 - 3. Philippine National Police



Role and Responsibilities:

a. Pre-Disaster Phase

The CSWDO through the Disaster Response Assistance and Management Unit will head and lead the coordinating functions of the cluster. Specifically, the CSWDO will do the following for each disaster phase:

- Check the level of standby funds and the stockpile of food and non-food commodities to ensure sufficient funds and stockpile are available at any given time;
- Submit a status report on all prepositioned resources to CDRRMO
- Conduct an Inter-Agency Pre-Disaster Risk Assessment (PDRA) in anticipation of a disaster occurrence; and
- Conduct a predictive analytic on humanitarian assistance based on the PDRA recommendation regarding the range of affected areas and population.

b. During Disaster Phase

- Activate and deploy Quick Response Teams;
- Activate and deploy a pool of volunteers for repacking, delivery of goods management of donations, and monitoring and distribution of food and non-food items;
- Activate the 24/7 operations of Disaster Response Operations and Information Center (DROMIC)
- Continue disaster response monitoring and coordination to mobilize instrumentalities and entities of the LGUs, CSOs, and private groups and organize volunteers for the response;
- Provide emergency relief (food and non-food items) inside and outside the evacuation center;
- Determine logistical requirements for F and NFI (warehouse and transport), coordinate with Logistics Cluster and other Humanitarian and commercial partners;
- Establish the One-Stop-Shop (OSS) in coordination with BOC and DOF
- Coordinate with internal and external donor/donation agencies for their capacities taking into consideration occurring disaster situations;
- Participate in the conduct of Rapid Damage Assessment and Needs Analysis, specifically on the need for food requirements as the basis for the response; and
- Provision of Disaster Assistance Family Access Card (DAFAC) to be facilitated by the LGUs on-time, frequency, and type of assistance provided to disaster victims

c. Post Disaster phase

- Participate in the conduct of PDNA with other partner agencies
- Develop a post-distribution monitoring system. Evaluation of the quality, sufficiency, effectiveness, and timelines of distributions that help to improve the overall distribution system and approach;
- Establish complaints mechanisms, so camp residents can ensure a way to verify entitlements and services. In case of fraud, theft, or abuse, camp residents/families must be able to voice their complaints and know that lead and coordinating agencies including service providers will take actions;



- Shall provide food packs to those who want to go back to their respective places of origin; and
- Shall provide continuing relief assistance when needed.

2. City General Services Office

a. Pre-Disaster Phase

- Ensure availability and sufficient stocks at warehouses
- Position/transfer rice stocks to areas particularly with the deficit and those identified as calamity prone areas;
- Coordinates with CDRRMC and encourage the council to enter into a Memorandum of Agreement (MOA) on credit sales prior to calamities; and
- Shall alert available personnel and resources for activities for the supply of rice

b. During Disaster

- Continue OPCEN operations;
- Closely coordinate/facilitate the request of the CSWDO and other relief and concerned government and private entities on the rice requirements; and
- Issues/delivers rice stocks as requested by CSWDO on payment/submission of necessary documents.

c. Post Disaster Phase

- Monitors the supply and demand, and prices of rice and extent of damages;
- Deploys rolling stores and tap/accredit rice retailers in the affected areas to sustain/stabilize the supplies and prices of rice; and
- Coordinates/ facilitates the request of CSWDO on their rice requirements.

3. Philippine National Police (PNP)

a. Pre-Disaster Phase

- Shall coordinate with the CSWDO on the volunteers needed for the repacking of family food packs at the CSWDO warehouse and other identified repacking centers

b. During Disaster

- Continue OPCEN operations;
- Closely coordinate/facilitate the request of the CSWDO and other relief and concerned government and private entities on the rice requirements; and
- Issues/delivers rice stocks as requested by CSWDO on payment/submission of necessary documents.

c. Post Disaster Phase

- Monitors the supply and demand, and prices of rice and extent of damages;
- Deploys rolling stores and tap/accredit rice retailers in the affected areas to sustain/stabilize the supplies.



4. Philippine Red Cross (PRC)

a. Pre-Disaster Phase

- Assess chapter preparedness and status of all assets and resources including manpower, supplies, equipment and tool and funds from chapters in preparation for resource prepositioning;
- Mobilization and deployment of assessment teams to assist in the information gathering of status in the filed through the rapid damage assessment and needed analysis;
- Develop an overall emergency response action plan of PRC

b. During Disaster

- Assist in the provision of relief supplies such as food (relief goods, hot meals, etc.) and non-food items (hygiene kits, dignity kits, emergency shelter kits, et.) to augment in the relief operation activities in coordination with the lead cluster and all its members
- Mobilize logistical support required to augment response capacity and/or field-based operations managed by the PRC through its chapters.
- Assist in the information gathering of the affected population through its chapter setup of welfare desks and conduct tracing through restoring family link (RFL) in evacuation centers in coordination with LGU
- Support CDRRMO Operation Center in the gathering and collation of disaster reports and statistics
- Ensure coordination of activities of PRC of its disaster operation at chapters and other filed operations level to the cluster

c. Post Disaster Phase

- Provide updates and/ or situational report to CDRRMO thru F/NFI Cluster
- Continuous monitoring and coordination on the needs and gaps along with the members of the cluster

IV. CONCEPT OF SUSTAINMENT

- a. The CSWDO as the Cluster Lead will coordinate all movement of Food and Non-Food Items Cluster including those coming from other public and private organizations using the support of the Logistics Cluster; and
- b. Concerned government agencies and their subordinate offices shall utilize their respective internal personnel. Additional personnel requirements shall be coordinated through the CDRRMO in collaboration with all council members.

V. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
2. Command Center – CDRRMO Operation Center, Mac Arthur Highway Brgy. Bulihan City of Malolos Bulacan
 - 2.1 Succession of Command



- a. Chairperson, CSWDO
 - b. Vice Chairperson for Disaster Response
 - c. F/NFI Cluster Lead (PNP)
 - d. F/NFI Cluster Members
- 2.2 Interagency Communication Support System

For the entire duration of the operations, the existing means of communication shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas.

4. IMPLEMENTATION PLAN FOR INTERNALLY DISPLACED PERSONS PROTECTION (IDP) CLUSTER

I. SCENARIO

IDPs inside evacuation centers (IECs) Total No. of Families: 1,014 or 5,071 persons: Outside Evacuation Centers (OECs); Total No. of Families: 10,940, No. of Persons: 54,702: Sixteen (16) evacuation centers occupied by displaced families composed of infants, elderly, sick, elderly and persons with disability (PWD).

II. OBJECTIVE

General Objective. The Internally Displaced Persons (IDP) Protection Cluster aims to support and enhance the Government’s capacity to ensure that protection issues do not arise in emergency situations and to respond and mitigate the effect of any protection issues that do arise.

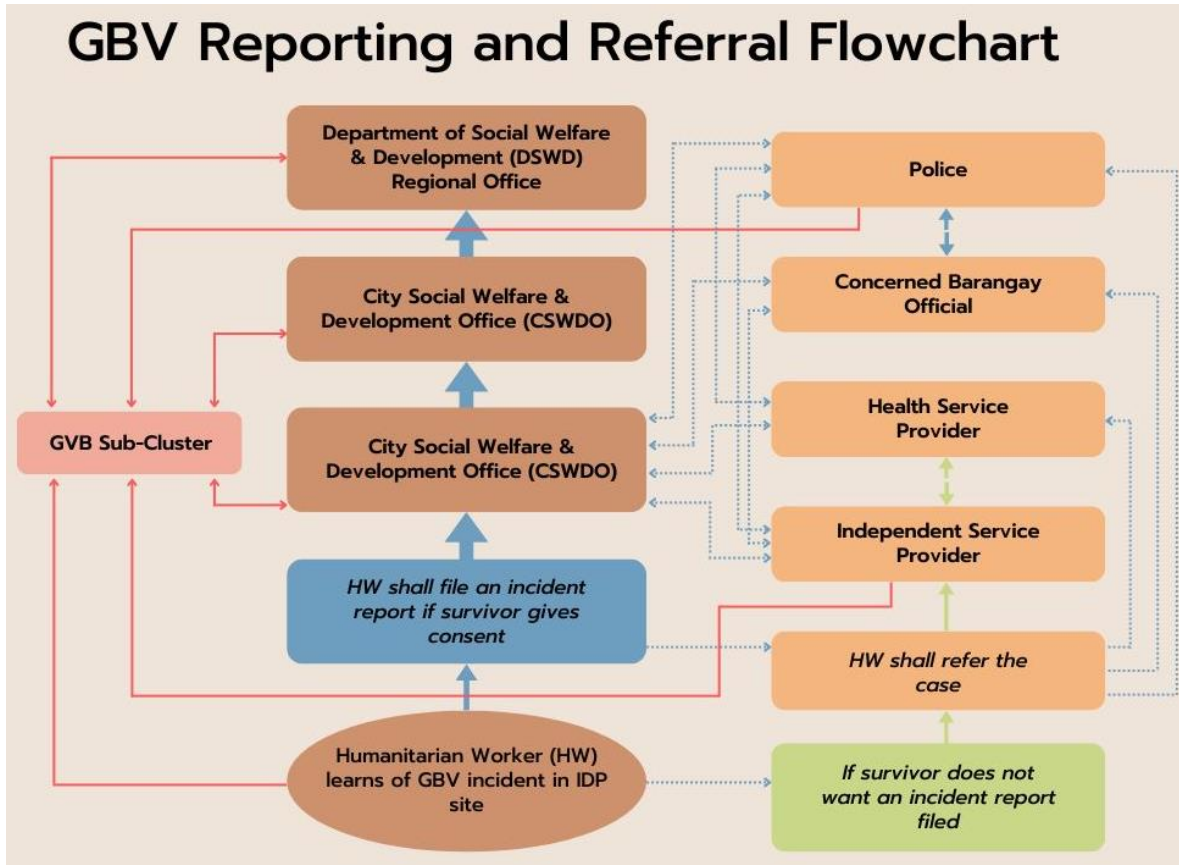
Specific. The following are the specific objectives of this Cluster:

1. To ensure timely, appropriate & quality provision of multi-sectoral and survivor-centered child protection and gender-based violence services in accordance with local, national and international guidelines/standards on child protection and gender-based violence;
2. Established and maintain appropriate coordination mechanism among all humanitarian actors, including coordination of protection inputs, reports, and humanitarian plan, and generation of resources;
3. Ensure that the protection response adequately takes into account the primary responsibility of the government to ensure protection of affected persons, by among others establishing adequate response mechanism and coordination in programs, policies, and plans;
4. To advocate to all humanitarian clusters, protection, child protection and gender-based violence duty bearers, government, private sector, and civil society organization to mainstream child protection and gender-based violence response programs, policies, and plans;
5. To strengthen partnerships for complementation and coordinated child protection and gender-based violence response through the Provincial and Local Inter-Agency Committees on Anti-Trafficking and Violence Against Women and their Children (IACAT-VAWC) and the Local Council for the Protection of Children (IDPPC); and
6. The establish a common information, monitoring & reporting systems on child protection and gender- based violence, linked to the IDP Protection Cluster (IDPPC)

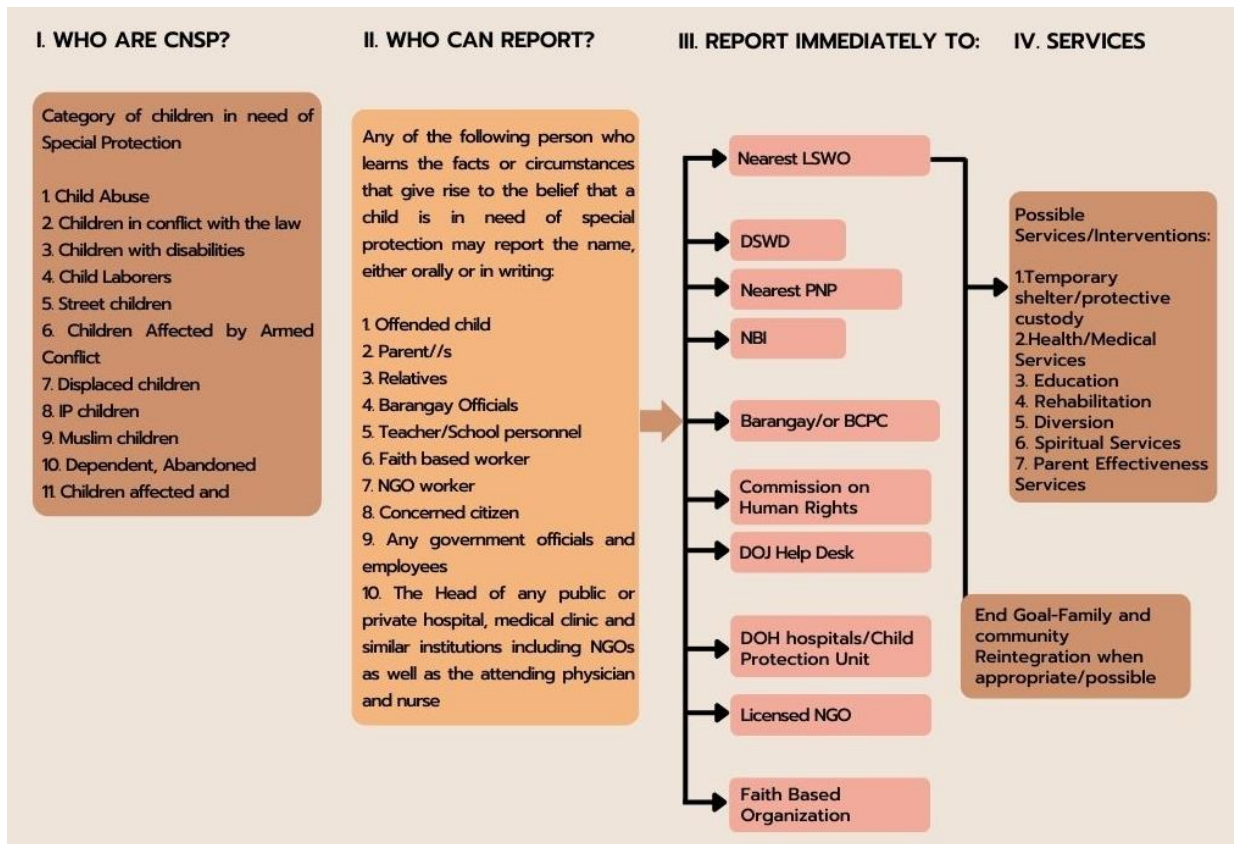


III. CONCEPT OF OPERATIONS

On order, the IDP Protection Cluster operations to support and enhance the government's capacity to ensure that protection issues do not arise in emergency situations and to respond and mitigate the effect of any protection issues that do arise inside and outside evacuation center. This will be accomplished in coordination with the two sub-cluster of the IDP Protection and member-agencies.



Flowchart of reporting for children in need of special protection



i. Lead Cluster Agency: CITY PLANNING AND DEVELOPMENT OFFICE (CPDO) / CITY SOCIAL WELFARE AND DEVELOPMENT OFFICE (CSWDO)

- Coordinate with member agencies for activation of response operation;
- Establish information systems for measuring emergency Child Protection and Gender Base Violence needs in coordination with member agency;
- Ensuring availability of age/sex disaggregated data of all children, women, lactating mothers, PWD and elderly inside and outside evacuation centers in coordination with member agencies;
- Ensure availability of timely and accurate data/reports for information dissemination to cluster partners and as basis in provision of augmentation of assistance;
- Shall coordinate for proper referral to LCAT Desks and /or VAWC desk or other existing women and child protection structures;
- Provide capacity-building on Child Protection and Gender Based Violence in Emergencies, including coordination; and
- Developing appropriate programmers, strategies, as necessary, to address protection and psychosocial needs of affected children and women.



ii. Cluster Members

1. City Health Office (CHO)

- Shall provide health, medical and nutritional needs of IDP in the evacuation center including psychosocial interventions especially for children in different stages of development, women, person with disability and elderly;
- Shall assist and coordinate with other member agency through the Gender Based Violence/Child Protection sub-cluster in reporting sexual violence cases; and
- Operationalization of Minimum Initial Services Package for sexual Reproductive Health in affected areas.

2. Department of the Interior and Local Government (DILG)

- Shall ensure the organization and functionality of the Local Council for the Protection of Children (LCPC)

3. Philippine National Police (PNP) – Women and Children Protection Center

- Shall monitor and ensure safety, security and protect the affected IDPs to all forms of violence, abuse, neglect and exploitation in-coordination with the member agencies

4. Other NGOs working for the Protection of Women and Children

- Participate in Internally Displace Persons Protection Cluster meetings, assessments, and provision of services

IV. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
2. Command Center – CDRRMO Operation Center, Mac Arthur Highway Brgy. Bulihan City of Malolos Bulacan
 - 2.1 Succession of Command
 - a. Chairperson (CDRRMO)
 - b. Vice-Chairperson for Disaster Response (CSWDO)
 - 2.2 Interagency Communication Support System
For the entire duration of the operations, the existing means of communication shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas

5. IMPLEMENTATION PLAN FOR HEALTH CLUSTER [Health (Public Health and Medical), Nutrition, Mental Health and Psychosocial Support (MHPSS)]

I. SCENARIO

Diseases and outbreaks that came in the form of waterborne diseases, which are those that come from drinking or coming into contact with contaminated water. These include diarrhea, cholera, typhoid fever



and leptospirosis. RHUs and hospitals cannot accommodate the number of patients with acute and chronic diseases due to damages in healthcare facilities and infrastructure.

II. OBJECTIVES

General Objective. The Health Cluster aims to ensure access to quality, appropriate and timely health services to the effected population.

Specific Objectives:

- a. Health
 - To manage injuries and acute conditions;
 - To provide Maternal and Child Health services;
 - To provide Minimum Initial Service Package for Sexual and Reproductive Health;
 - To prevent and control spread of communicable and non-communicable diseases; and
 - To ensure functionality of the Health Referral System.
- b. WASH
 - To assess WASH conditions in the evacuation centers;
 - To identify possible sources of water;
 - To conduct water quality surveillance, disinfection and treatment; and
 - To ensure provision of sanitation facilities, excreta disposal and solid waste management.
- c. Nutrition
 - To conduct Rapid Nutrition Assessment;
 - To support infant and child feeding;
 - To manage acute malnutrition cases; and
 - To promote proper nutrition in emergencies and disaster.
- d. Mental Health and Psychosocial Support
 - To provide Psychological First Aid to the general public;
 - To refer Psychiatric cases to appropriate Mental Health Facilities;
 - To protect and promote well-being of responders; and
 - To provide psychological interventions to survivors of sexual violence and vulnerable groups (Ops, PDWs, PWSNs, etc.)

III. CONCEPT OF OPERATIONS

1. The City Health Office, as mandated, shall provide and ensure the provision of health services of Malolenyos at all times. And as lead agency of the Health Cluster, together with the members of the cluster will respond with all available resources to preserve and protect the lives of our countrymen during disasters and incident that threaten their well-being.
2. The Health Cluster will observe three (3) different phases of operation: pre-incident, during incident and post-incident. At each distinct phase, specific activities and interventions will be carried out;



3. During pre-incident phase, intra-cluster coordination and information sharing will be strengthened. These will be accomplished through positive joint capacity resource sharing that will be initiated by the CHO.
4. The incident phase shall commence upon activation of the Response Cluster of the CDRRMO. The Health Cluster will readily convene and initiate appropriate and necessary interventions. The CHO will notify its attached agencies, RHUs to provide needed health services as part of consequence management. Health Cluster members will be provided with updated situational reports and will be consulted accordingly in the implementation of their assigned task;
5. In response to hydro-meteorological hazard that affects health, the CHO shall be the office of primary responsibility. As such, it shall establish an Emergency Operation Center 4Cs (Command, control, coordination and communication). Moreover, the Health Cluster will deliver the broad spectrum of health interventions aligned with the QUAD cluster service (Medical and Public Health, WASH, Nutrition and MHPSS). Such will be completed by mobilization or response teams and provision of logistics. During operation, teams deployed by the Health Cluster will be placed under the supervision of the Operation Section Chief of existing Incident Management Team in-charge of the incident or disaster. Currently, the CHO will represent the Health Cluster at the Emergency Operation Center to provide additional support, if necessary; and
6. Termination of operation will be upon the instruction of the CDRRMC Chairperson or of the Responsible Pillar, Health Cluster Response Teams under the IMT will be demobilized as stated in their deployment mission order and responsible office specific requirements.

The following are the key players and actors:

- i. Lead Cluster Agency: **CITY HEALTH OFFICE (CHO)**
 - a. *Pre-Disaster Phase (Health-Public Health and Medical), Nutrition, Mental Health and Psychosocial Support (MHPSS)*
 - Release alert memo to all RHUs;
 - Activate InfoText;
 - Activate command system in affected areas;
 - Activate Operation Centers;
 - Activate the health emergency response plan;
 - Raise code alert in RHUs and hospitals as appropriate;
 - Develop RDANA standards;
 - Conduct inventory of logistics;
 - Preposition logistics in RHUs;
 - Organized Stand-by Response Teams;
 - Conduct continuous monitoring and dissemination of information updates; and
 - Organized, attend and send representative to cluster and other coordination meetings (e.g. PDRA).
 - b. *During Disaster Phase (Health-Public Health and Medical)*
 - Deploy teams to conduct Rapid Health Assessment (RHA);
 - Deploy teams to evacuation centers and priority communities in affected areas;
 - Augment logistics;



- Provide field treatment, first-aid and pre-hospital care;
- Provide health services (e.g. general consultation and treatment, immunization, reproductive health services, chemoprophylaxis, health education, promotion and advocacy including basic sanitation, nutrition and psychosocial support, etc.);
- Activate referral system;
- Perform patient referral/conduction to health facilities;
- Provide hospital services;
- Activate surveillance and reporting systems;
- Conduct health facility assessment, immediate cleaning/clearing activities and repair to restore functionality;
- Provide continuous monitoring; and
- Organize, attend and send representatives to cluster and other coordination meetings (e.g. PDNA/DANA/DALA, etc)

c. *During Disaster Phase (WASH)*

- Conduct Rapid WASH Assessment;
- Augment WASH logistics (e.g. water containers, water disinfectants, hygiene kits, water testing reagents fund/supplies for toilet construction, and other WASH commodities);
- Augment provision of safe drinking water through, the mobilization of water treatment units, water distribution tasks, and water storage tanks;
- Provide technical assistance in the installation and construction of toilet facilities; waste management; and vector control;
- Assist in continuous water quality monitoring;
- Continuous monitoring and reporting of WASH activities and services; and
- Organize, attend and send representatives to cluster and other coordination meetings (e.g. PDNA/DANA/DALA, etc.)

d. *During Disaster Phase (Nutrition)*

- Conduct Rapid Nutrition Assessment;
- Augment nutrition logistics (e.g. Vitamin A, multiple micro-nutrient packs, ferrous sulfate and folic acid, MUAC tapes, weighing scale, weight-for-height reference table, height board, breast-feeding kit);
- Coordinate the following with cluster members/partners: provision of ready-to-use supplementary and therapeutic food (RUTF/RUSF); human milk banking;
- Assist in the conduct of general and blanket supplementary feeding;
- Coordinate the mobilization of mobilization of nutrition assessment teams, infant feeding, and breast-feeding support groups;
- Assist in the referral of severely malnourished patients to appropriate facilities;
- Continuous monitoring and reporting of malnutrition cases and interventions; and
- Organize, attend and send representatives to cluster and other coordination meetings (e.g. PDNA/DANA/DALA, etc.)

e. *During Disaster Phase (MHPSS)*

- Conduct Rapid MHPSS Assessment;
- Conduct psychotropic medications;



- Coordinate the mobilization of MHPSS teams;
- Assist in the following: provision of psychological first-aid; activation of community and family support systems; and provision of other specialized MHPSS services;
- Assist in the referral of cases to higher level of care;
- Continuous monitoring and reporting of MHPSS cases and interventional and
- Organize, attend and send representatives to cluster and other coordination meetings (e.g. PDNA/DANA/DALA, etc.)

f. *Post Disaster Phase (Health-Public Health and Medical), Nutrition, Mental Health and Psychosocial Support (MHPSS)*

- Continue deployment of teams as necessary;
- Continue logistics provision as necessary;
- Continue provision of health, WASH, nutrition and MHPSS services;
- Continue monitoring of health conditions;
- Repair and rehabilitate damaged health facilities;
- Conduct post-incident evaluation;
- Document lessons learned and good practices; and
- Generate necessary reports

ii. Cluster Member Agencies

1. City Social Welfare and Development Office (CSWDO)

- Assist in the provision of medical and health emergency services to the affected population in coordination with the Health Cluster Lead or the head of the deployed emergency health teams;
- Ensure the provision of facilities within the evacuation centers that would be conducive to good health outcomes (e.g. breastfeeding corner, space for pregnant and lactating mothers, gender sensitive toilet and bathing facilities, medical consultation area, priority lane for vulnerable population, etc.)
- Take the lead in the provision of MHPSS services in evacuation centers and refer to the Health Cluster patients needing specialized care; and
- Coordinate with the Health Cluster regarding milk donations.

2. City Engineering Office (CEO)

- Assist Health Cluster in the transport of medical teams and health logistics;
- Provide space at CEO logistics hubs for prepositioning of health logistics;
- Refer health related donations to the Health Cluster for clearance prior to acceptance;
- Refer other health teams to the Health Cluster for registration, coordination and deployment except for foreign military teams;

3. Phil. Army

- Be prepared to provide Ambu-Medical Teams in support of the CHO for Health Emergency and Management Service mission;
- Be prepared to provide transportation support for the CHO-led medical teams during deployment;



- Be prepared to provide security personnel for the CHO-led medical teams deployed in disaster- affected areas;
- Participate in Health Cluster meetings;
- Coordinate with the CHO medical team for the hand-over of rescued victims;
- Be prepared to provide MHPSS team and trauma team in support of CHO;
- Take the lead in the provision of MHPSS services for military personnel and families and refer to the Health Cluster access to the use of military health facilities/station hospitals;
- Provide Health Cluster reports on medical missions conducted; and
- As disaster first responders, provide/share rapid medical/health assessment information to the Health Cluster hierarchy.

4. Department of the Interior and Local Government (DILG)

- Facilitate coordination of CHO with LCE for Health Cluster Operations; and
- Assist the Health Response Teams in coordinating with LCEs

5. Philippine National Police (PNP) through the Health service and Women and Children Protection Center

- Provide security for health teams and logistics in disaster areas;
- Provide transport for Health Cluster personnel and logistics, if available;
- Coordinate with Health Cluster on the movement and activities of their health personnel;
- Refer to the Health Cluster victims of violence and patients needing specialized care;
- Provide Health Cluster access to use of police health facilities; and
- Provide Health Cluster reports on the medical missions conducted

6. Philippine Red Cross (PRC)

- Assist the lead cluster agency in the provision of its available resources related to health responses that can contribute to addressing the medical and psychological needs of community affected population through the deployment of first aid teams in evacuation centers, mobilization of logistical assets such as equipment and medical personnel in the possible setup of an emergency field hospital based on the gaps in medical infrastructure;
- Assist in the provision of safe and potable water through the deployment of available water filtration units and storage containers (jerry can) as well as personnel such as hygiene promoters to conduct hygiene promotion sessions in the communities upon its conduct of assessment;
- Ensure access to sufficient blood and blood products in times of emergencies and disaster through its network of blood service facilities nationwide;
- Assist in the conduct of community based psychosocial support activities and setup of welfare desks in evacuation centers targeting beneficiaries in the community affected population.

7. Department of Education (DepEd)

- Ensure the provision of facilities within schools used as evacuation centers that would be conducive to good health outcomes (e.g. breastfeeding corner, space for pregnant and lactating mothers, gender sensitive toilet and bathing facilities, medical consultation area, etc)



- Take the lead in the provision of MHPSS services in schools and refer to the Health Cluster patients needing specialized care; and
- Assist in school-based surveillance and immunization activities upon Health Cluster request

8. Bureau of Fire Protection (BFP)

- Coordinate with Health Cluster in the augmentation and mobilization of their health personnel;
- Assist in the distribution of water supply; and cleaning/clearing of health facilities; and
- Provide Health Cluster reports on medical missions conducted

9. Volunteers/Civil Society Organizations/and other Health Sector Partners

- Coordinate with the Health Cluster in the conduct of Health Cluster Operation activities (e.g. registration, deployment, assignment, etc) and
- Provide Health Cluster reports on Health Cluster Operations activities conducted

IV. CONCEPT OF SUSTAINMENT

- a. The CHO as Cluster Lead will coordinate all support and requirements of the Health Cluster in their activities to augment the requirements at the affected areas during disasters;
- b. Concerned government agencies and their subordinate offices shall utilize their respective internal personnel. Additional personnel requirements shall be coordinated through the CDRRMC in collaboration with all Council members.

V. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
2. Command Center – CDRRMO Operation Center, Mac Arthur Highway Brgy. Bulihan City of Malolos Bulacan
 - 2.1 Succession of Command
 - a. Chairperson (CDRRMO)
 - b. Vice-Chairperson for Disaster Response (CSWDO)
 - c. Health Cluster (CHO)
 - d. Health Cluster Members
 - 2.2 Interagency Communication Support System

For the entire duration of the operations, the existing means of communication shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas

6. IMPLEMENTATION PLAN FOR LAW AND ORDER CLUSTER

I. SCENARIO

Displaced population everywhere enroute to safe; areas; Piled personal belongings along roads and highways waiting for transport; Fallen electric post along roads, pathways causing traffic; casualties



scattered due to high water, electrocution, hit by fallen debris; Screaming mothers, person with disability (PWD), children and elderly in panic; Public and private vehicles stranded along roads, highways and bridges; Abandoned structures raided by looters, among others.

II. OBJECTIVE

The Law and Order Cluster will assist the Response Operations and provide assistance to the affected areas through the;

- a. Provision of security to the Clusters operating in the affected areas;
- b. Provision of traffic management that will facilitate the speedy movement of the people, goods, equipment to the affected population and responding agencies; and
- c. Enforce law and order in the community through the provision of information on the disaster response operations and the maintenance of community policing to reduce or arrest criminality in the area.

III. CONCEPT OF OPERATIONS

On orders, the PNP as the lead in the law and order and security operations together with the members of Law and Order Cluster; BFP, Phil.Army, CGSO, CEO, DILG and such agencies as may be called upon by the PNP Lead Cluster, will assist the Response Operations by providing security and other law and order measures. Other agencies may be included based on their law enforcement functions, as the situation warrants

Cluster members shall maintain interoperability through their established Operations Center (OpCen). At the city levels down to the barangays, the leadership in the conduct of law and order shall be determined by the Local DRRMCs depending on which component of the government (Phil. Army, PNP, BFP, LGU-CSO) is necessary.

The Law and Order Cluster shall perform its task in coordination with the designated Incident Commander through the Incident Management Team (IMT), security operations will be conducted through collaborative efforts with cluster member agencies and other agencies to ensure that safety and security are being maintained in the area.

The condition/s that will trigger the deployment of security personnel on law and order operations will depend on:

- a. Orders from CDRRMC Chairperson, and Vice Chair-person; and
- b. The result of the Rapid Damage Assessment and Needs Analysis (RDANA) conducted by CDRRMC concerned in the affected area/s. Results of the RDANA shall be provided immediately to CDRRMO Operations Center to determine what security response is needed.

The Law and Order shall consider the immediate establishment of communications through the Emergency Telecommunication Cluster and advance command post from the possible affected areas by the nearest territorial forces to stabilize security situations.



i. Lead Cluster Agency: Philippine National Police

a. Pre-Disaster Phase

- May establish Command Post and Sub-Command Post in the possible affected area; Situational/regular conduct of police presence (Mobile, Motorcycle and foot patrol) at the possible area that may be affected;
- Review Crime Environment in the possible affected area;
- Participate in the conduct of PDRA (City and/or Barangay level);
- Prepare appropriate number of security personnel to identified evacuation areas in coordination with LGUs;
- Recommend to OCD to conduct training to improve interoperability among member agencies; and
- Perform other tasks as directed.

b. During Disaster Phase

- Activate the Law and Order Security Response Unit (SRU) with the established PNP Critical Incident Management Operational Procedures (CIMOP) in collaboration with member support agencies;
- Prioritize strategic support (land, air, sea transport with consideration of other response agencies);
- Prepare SRU based on the immediate requirements on the ground;
- Participate in the conduct of RDANA (City and/or Barangay level);
- Establish coordination with local DRRMCs; and
- Perform other tasks as directed.

c. Post Disaster phase

- Submit reports on damage assessment and needs analysis of affected areas
- Provide security to evacuation areas in collaboration with other agencies and force multipliers;
- Assist in the relief and recovery operations and maintain Law and Order in affected areas
- Conduct debriefing and post-assessment review; and
- Perform other tasks as directed.

ii. Cluster Member Agencies

1 Phil. Army

a. During Disaster Phase

- Be prepared to provide security augmentation (infantry unit/s; K9 team/s; EOD team/s; CDM unit) in support of the PNP's law enforcement operations;
- Be prepared to provided security augmentations at the designated evacuation centers in support of the PNP



- Be prepared to provide security augmentations in securing the repacking, transport, and distribution of relief goods at the evacuation and/or distribution areas in support of the PNP, LGU, and CSWDO; and
- Perform other tasks as directed.

b. *Post Disaster Phase*

- Coordinate with PNP for the release of security augmentation
- Consolidate security units for redeployment
- Be prepared to participate in Law and Order Cluster planning meeting/s;
- Coordinate with PNP for the capability enhancement program/inter-agency training; and
- Perform other tasks as directed.

2. Bureau of Fire Protection (BFP)

a. *During Disaster Phase*

- Mobilize and deploy personnel in the identified affected area in coordination with their respective DRRMC
- Assist in the security requirements of evacuation centers; and
- Perform other tasks as directed.

b. *Post Disaster Phase*

- Assist in the security; and
- Perform other tasks as directed.

3. Volunteer/ Civil Society Organizations

- All volunteer force multipliers will coordinate with the Local Cluster Head for briefing and deployment to the affected areas.

IV. CONCEPT OF SUSTAINMENT

1. The PNP as Cluster Lead will coordinate all movement of incoming products, personnel, and equipment from the point of embarkment prior to turnover to the Response Clusters activated for any disaster; and
2. Concerned government agencies and their subordinate offices shall utilize their respective personnel. Additional personnel requirements shall be coordinated through the CDRRMO in collaboration with all Council members.

V. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
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 - 2.1 Succession of Command
 - a. Chairperson, CDRRMO
 - b. Vice Chairperson for Disaster Response



- c. LAO Cluster Leas (PNP)
- d. LAO Cluster Members

2.2 Interagency Communication Support System

For the entire duration of the operations, the existing means of communication shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas

7. IMPLEMENTATION PLAN FOR EMERGENCY TELECOMMUNICATIONS CLUSTER

I. SCENARIO

Majority of the barangays of the City were submerged in flood water and the need to activate all response sectors to address the situation at hand. Major telecommunications are down with minimal source of communication.

II. OBJECTIVE

The broad objective for the Emergency Telecommunication Cluster (ETC) is to strengthen ICT capacities at the City Cluster Level down to the barangay level to prepare for, respond to and recover from the impacts of disasters thru provision of a timely, resilient and predictable Information and Communications Technology (ICT) support to improve:

- a. Response and coordination among response organizations;
- b. Decision-making through timely access to critical information;
- c. Common operational area for disaster response;
- d. Common system standards and operating procedures;
- e. Standards based architecture for HADR operations; and
- f. System architectures for compliance and interoperability

III. CONCEPT OF OPERATIONS

The Emergency Telecommunications Cluster (ETC) to provide an effective and timely emergency telecommunications services and ICT capacities at the City Cluster level down to disaster stricken area.

This will be accomplished through the deployment of Rapid Emergency Telecommunication Team (RETT) which will provide timely, resilient and predictable Information and Communications Technology (ICT) support in carrying out their respective mandates safely and efficiently as they prepare for, respond to and help in the recovery from the impacts of disasters.

At the end of the operations, RETT will be deactivated when fully normalcy of the telecommunication system services of the affected areas is attained. RETT will follow formal hand-over of the ICT responsibility to concerned government unit.

The following are the key players and actors:



i. Lead Cluster Agency: CITY INFORMATION OFFICE (CIO)

a. Pre-Disaster Phase

- Act as a single focal point of local government authorities on behalf of the humanitarian community for all radio, voice and data communications-related capabilities including frequent allocation, communications network diagrams, and mobilization of ICT resources;
- Alert and organized the Rapid Emergency telecommunications Teams (RETT) and conduct immediate inventory of their ICT equipment on-hand;
- Pre-program all radios to the assigned disaster frequencies and ensure communication interoperability;
- Provide radio nets, call signs and manage the frequencies allocated by the NTC;
- Provide a platform directory services containing the contact information of the different ICT key players;
- In coordination with Logistics Cluster, make available mobility assets, protective suits/gears, shelters/tents, basic provision and other essential needs of the RETT for the establishment of on-site EOCs;
- Provide standards for common ICT equipment and procedures;
- Provide ICT services support for other clusters as needed;
- Support by sending warning advisories to CDRRMC and barangays;
- Collect information regarding the impending disaster and corresponding situations of preparedness by the LGU and related agencies and inform/report them to the CDRRMO
- Conduct scenario-based pre-deployment planning meeting in a predefined location/s; and
- Collect and record all activities of the RETT members for review and documentations

b. During Disaster Phase

- Provide basic telecommunication coverage around the main operational area for the Command Center and other responders;
- Establish and maintain on-site Command System Operations Coordinating Center (OSOCC) in disaster area/s through the deployment of RETT;
- Programming of radios or other equipment belonging to individual responders, organizations and other key players in disaster areas for interoperability;
- Install and maintain internal ICT systems between clusters and individuals independent from national or local public service;
- Establish a dedicated GSM/LTE mobile network to be used by the cluster workers in the operational area in partnership with TELCO(s);
- Publish and maintain a list of GSM providers and availability of 2G/3G/4G/LTE and data services and its availability and reliability on partnership with TELCO(s);
- Provide and update a directory service containing the contact information of the different key players in disaster areas implied in a specific humanitarian mission;
- Conduct repair and maintenance activities as needed;
- Receive and consolidate reports related to ICT resources;
- Dispatch the RETT as per instruction from the CDRRMO; and
- Coordinate with RETT on ground for updates and operational requirements.



c. *Post Disaster Phase*

- Coordinate the preparation of documentation for ETC requirements, lessons learned, and best practices;
- ETC and RETT to deactivate all emergency telecommunication systems as soon as full resumption of the LGU's communication system is achieved;
- Coordinate PDNA in case it will be conducted by the city level;
- Receive and consolidate reports;
- Consolidate records of all events and activity conducted by each member of RETT; and
- Conduct debriefing to all ETC-RETT members.

ii. Cluster Members

1. City Social Welfare and Development Office (CSWDO)

a. *Pre-Disaster Phase*

- Alert all DRTs, SWAD team, 4Ds and KCC personnel at the local level on the impending disaster;
- Operate 24/7 the Disaster Response Operational Monitoring and Information Center that will receive reports from the barangays;
- Make available the Online CSWDO Disaster Response Situation Map showing all existing Evacuation Centers and population at risk; and
- Ensure multimodal voice and data communication for all CSWD offices and warehouses.

b. *During Disaster Phase*

- Activate and deploy DRTs, SWAD teams, NPS and KCC personnel in the affected areas to conduct rapid assessment and provide TARA in DRRM programs and projects;
- Deploy RETT to hardest hit barangays;
- Regularly convene the CSWD-led Cluster response through ETC;
- Deployed 24/7 CSWDO representative at the DRRMC OpCen for RETT-ETC;
- Collaborate with DRRMCs at all levels for cross-cutting concerns;
- Update the Online CSWDO Disaster Response Situation Map showing all activated Evacuation Centers, donation drop-off points and affected population at risk; and
- Utilize social media in communicating updates, volunteer mobilization and request for augmentation.

c. *Post Disaster Phase*

- Participate to the post RETT-ETC evaluation;
- Conduct Project Implementation Review (PIR) After disaster operations – Clusters, Sub-Committee on Response;
- Conduct hand-over of RETT-ETC duties during Early Recovery and Rehabilitation Planning; and
- Submit Terminal Report to CDRRMO.

2. Bureau of Fire Protection (BFP) through Management Information Service, Fire Control Operation Center, and COMMEL Section, BFP



a. *Pre-Disaster Phase*

- Shall alert the designated/detailed first responders “on call”;
- Shall equip the first responders with communication equipment capable of off-grid sustenance of at least seven days;
- Shall ensure operational readiness of Operation Center facilities; and
- Perform other tasks as directed.

b. *During Disaster Phase*

- Shall provide personnel/technical and equipment assistance for communications between disaster site and DRRMCs, consistent with defense priorities;
- Shall coordinate with the DRRMCs on the optimum employment of communications assets, both manpower and equipment;
- Shall establish operations procedures consistent with the communication flow of the DRRMCs;
- Shall assist the DRRMCs in managing the spectrum by discouraging employment of unauthorized communications equipment; and
- Perform other tasks as directed

c. *Post Disaster Phase*

- Shall provide DRRMCs the good practices employed during the disaster phase to serve as “lessons learned” documents;
- Shall be prepared to provide debriefing as part of communications education; and
- Shall conduct retraining of technical personnel and refurbish ICT equipment to ensure operational readiness status.

3. Philippine National Police (PNP)

a. *Pre-Disaster Phase*

- Maintain communications connectivity (voice and data) between CDRRMC and PNP RTOC;
- Provide equipment support to SAR teams; and
- Deploy communication team to provide technical assistance to radio users and to maintain serviceability of all issued communication equipment & system

b. *During Disaster Phase*

- Shall provide assistance in communication between disaster site and DRRMCs;
- Maintain communications connectivity (voice and data) between CDRRMC and PNP RTOC;
- Provide equipment support;
- Provide technical assistance to radio users and to maintain serviceability of all issued communication equipment & system for PNP units deployed in disaster area; and
- Ensure availability & operational readiness of all issued equipment.

c. *Post Disaster Phase*

- Shall provide DRRMCs the good practices employed during the disaster phase to serve as “lessons learned” documents;



- Shall be prepared to provide debriefing as part of communications education; and
- Shall conduct retraining of technical personnel and refurbish ICT equipment to ensure operational readiness status.

4. NGOs, CSOs, Volunteer Groups and other Civilian and Private Organizations recognized and acknowledged by CDRRMC

a. Pre-Disaster Phase

- Identify and Preposition Key People and Resources for Disaster Response (work with ETC cluster members for easy transport and facilitation)
- Network Resiliency Check for both wired and wireless: and
- Ensure that all alert/monitoring systems running on network are available (Infoboard, Social Media assets, Weather Alerts)

b. During Disaster Phase

- Informing and alerting during the Disaster:
 - Cell Broadcast, in accordance with CDRRMC request;
 - Establish an Info Text;
 - Communications support to responders;
 - Libreng tawag/Cellphone charging stations/Internet;
 - Social media engagements;
 - Provision of reports for areas with no signals or communication networks; and
 - Act as courier/messenger using motorcycle/bikes if needs arise.
- Deployment of Quick Communications Solution
 - Satellite voice communications;
 - Satellite Internet;
 - Instant Network (in partnership with local service providers);
 - Cell site-On-Wheels (prepositioned with satellite); and
 - Connectivity augmentation in OpCen.
- Social Media and other Emerging Technologies
 - Crisis mapping;
 - Big data analysis; and
 - Mobile apps

c. Post Disaster Phase

- Network Audit for Fixed and Wireless to consider ‘adaptation’ strategies; and
- Ensure that all alert/monitoring systems running on network are available (Infoboard, Social Media assets, Weather Alerts)

IV. CONCEPT OF SUSTAINMENT

- a. The CIO as Cluster Lead will coordinate the dispatch of the RETT and will handle all its needs to support its operation at the affected area;



- b. All members of the cluster acting on request from the CIO will make available necessary and operational telecommunication equipment at the disposal of the RETT at the affected area; and
- c. Concerned government agencies and their subordinate offices shall utilized their respective personnel. Additional personnel requirement shall be coordinated through the CDRRMC in collaboration with all Council members.

V. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
2. Command Center – CDRRMO Operation Center, Mac Arthur Highway Brgy. Bulihan City of Malolos Bulacan
 - 2.1 Succession of Command
 - a. Emergency Telecommunication Cluster Lead (CIO)
 - b. Emergency Telecommunication Cluster Members
 - 2.2 Interagency Communication Support System

For the entire duration of the operations, the existing means of communication shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas.

8. IMPLEMENTATION PLAN FOR LOGISTICS CLUSTER

I. SCENARIO

Relief goods/NFIs for immediate delivery to EC and OEC; Lots of debris along roads and highways; temporary routes to be established/constructed; Flooded families to be transported to temporary shelters; medical supplies to be brought to the medical post; Manpower, supplies/materials, heavy equipment and other assets for repair, reconstruction of partially damaged structures, etc.

II. OBJECTIVES

To provide an efficient and effective strategic emergency logistics services all clusters deployed by the City Response Cluster and encourage regular info-sharing among stakeholders and other partners on emergency road network, status of critical infrastructures/lifelines, etc. The Cluster also formulates, updates, implements and monitors logistical policies, plans, programs and procedures that will harmonize the activities of each cluster.

III. CONCEPT OF OPERATIONS

On activation, the Logistics Cluster shall provide an efficient and effective strategic emergency logistics services for all clusters deployed by the City Response Cluster in disaster affected areas in terms of mobility, warehousing, and supplies and inventory management.

The cluster shall organize four (4) sub-clusters, namely:



- a. **Transportation** (land, sea and air) – provide mobility assets for all cluster operations;
- b. **Warehousing** – provide space for the storage and safekeeping of relief goods, supplies, materials and equipment of the different clusters;
- c. **Supplies and Inventory** – provide fuel, generators, and other emergency resources for cluster operations. Further, ensure the tracking of deployed items; and
- d. **Service** – provide road clearing operations including the restoration and maintenance of utilities such as electricity and water supplies.

The cluster will be activated by the Vice Chairperson for Response when necessary. Upon activation, all cluster member agencies and identified partners shall ensure their attendance in cluster meetings and provide the Cluster Lead with a list of available assets with its corresponding capacity that can be utilized by all the cluster to support the activities of the other clusters during disaster operations.

The Logistics Cluster takes into account that the direction of the operations will be based on the information and requests provided by the other clusters, Vice Chair of Response, and the Barangay Disaster Risk reduction and Management Committees of affected areas. The operation is divided into three phases: **Pre-Disaster, During Disaster and Post Disaster**.

The City Engineering Office (CEO) as the Cluster Lead shall head the cluster operations, undertake all major coordinating functions.

All cluster requesting for logistical support shall communicate their request to the Cluster Lead through the CDRRMO OpCen. The designated focal person of the Logistics Cluster shall:

- a. Determine the prioritization and identify assets to be used;
- b. Coordinate with cluster member agencies the availability and mobilization of appropriate logistics assets;
- c. Facilitate administrative requirements for the mobilization and transport of resources; provide feedback to requesting agency;
- d. Monitor/track deployed assets; and
- e. Prepare status reports on deployed resources.

For **Transportation** requests:

- a. Requesting agency shall submit to the Cluster Lead a written request indicating detailed items with corresponding specifications (weight, volume, dimension) including the name and contact numbers of the receiving party/ies;
- b. Prioritization shall be determined by the Cluster Lead based on the requirements in the affected areas until its transport to the area and endorsed to the receiving party; and
- c. The proposed use of assets that will be tapped for logistics operations are:
 1. Government
 2. Any non-government entity
 3. Commercial Services (with payment or without cost on the part of the government)



For Warehousing:

- a. The Cluster Members shall provide the Cluster Lead with a list of available warehouses and its load capacity for the use of the Cluster during disaster;
- b. The Cluster will coordinate all available warehouses for use of all DRRMC members for prepositioning and augmentation of needed resources during disaster

The following are the key players and actors:

i. Lead Cluster Agency: City Engineering Office (CEO)

a. Pre-Disaster Phase

- Attend PDRA Meetings;
- Convene cluster meetings;
- Inventory of resources (local and national) to identify gaps; and
- Pre-positioning of assets/resources.

b. During Disaster Phase

- Receive and facilitate request for logistical support;
- Coordinate the transport of assistance with concerned agencies;
- Provide feedback to requesting DRRMCs/organizations;
- Institute a tracking system of all HADR assistance provided, including international donations for equipment and coordination;
- Identify prioritization of aid cargo as “must load”;
- Orchestrate information sharing;
- Confirmation of traffic status: contact and confirm the following status of transport conditions:
 - DPWH: road, bridges conditions/road network;
- In coordination with member agencies, recommend the transport of food, equipment and personnel from supply points to destination mode;
- Ensure the constant gathering of official reports and significant data: and
- Update assessment of roads, warehouses stocks, transport capacities to, from and within the affected areas.

c. Post-Disaster Phase

- Coordinate and request relevant agencies to provide Transportation Support when it is considered necessary and/or requested by local governments of affected areas;
- Coordinate the usage of hauling and delivery means for transport of such goods to affected areas based on the direction of CDRRMC;
- Consolidate reports and prepare cluster report;
- Update assessment of roads, warehouses, transport capacities to and from, and available logistics services;
- Deploy additional food and non-food items in disaster affected areas in coordination with CSWDO;
- Coordinate with concerned agencies the return of deployed resources (equipment & human resource);



- Provide data to PDNA Team when necessary; and
- Engage private agencies for transport assistance.

ii. Cluster Member Agencies

1. City Social Welfare and Development Office (CSWDO)

a. Pre-Disaster Phase

- Inform the OpCen as head of Cluster the current inventory at CSWDO Warehouses; and
- Inform the OpCen of the transportation capabilities (number of trucks available) of CSWDO to transport Food and NFI as well as its manpower compliments.

b. During Disaster Phase

- Inform the Cluster Head for the requirement of additional transportation assets and manpower for the loading and unloading of supplies;
- Augment FNI and supplies of Camp Management to the affected areas;
- Employ tracking system for all food and non-food items sent and received by CSWDO;
- Identify needs for logistic support; and
- Coordinate logistical requirements/requests for transport to the Cluster Lead.

c. Post Disaster Phase

- Replenish FNI inventories; and
- Provide additional augmentation of FNI to the affected areas.

2. Philippine National Police (PNP) through the Logistics Support Service

a. Pre-Disaster Phase

- Preparation for dispatch of General Dispatch Vehicles (GDVs);
- Coordinate with concerned agencies for safe route GDVs;
- Identify fuel depot for safe re-fuelling of GDVs (efficient)
- During Disaster Phase
- Coordinate with line units and concerned agencies re passable route for General Dispatch Vehicles (GDV); and
- Coordinate with adjacent line units re availability of necessary equipment.

b. Post Disaster Phase

- Line units remove obstacles/debris from roads in coordination with LGUs, DPWH, Phil,Army

3. Phil. Army

a. Pre-Disaster Phase

- Participate in joint logistics cluster meetings;
- Conduct inventory of troops and organizational equipment supplies (firepower, mobility, quartermaster, POL, medical and other items)



- Prepare and submit inventory of mobility (air, land, sea) and other logistical assets (temporary shelter tents, engineering assets, etc)
- Strengthen camp/base facilities to improve disaster resilience; and
- Preposition respective assets and reserve requirements

b. During Disaster Phase

- Provide transportation assets (air, land, sea) in coordination with the Major Services (PA, PAF and PN) to deliver humanitarian assistance in disaster affected areas;
- Provide warehousing/storage of supplies and other HADR items as required in coordination with the CSWDO for the repacking of goods; and
- Coordinate adjacent line units re availability of necessary equipment

c. Post Disaster Phase

- Sustain logistics support to units conducting limited transportation, medical and manpower support to the early recovery activities as required by the national government;
- Provide engineering equipment to support DPWH in road-clearing operations if necessary; and
- Provide transportation support for the return of deployed assets.

4. Department of Public Works and Highways (DPWH)

a. Pre-Disaster Phase

- Submit all available assets and warehouse that can be tapped by the Logistics Cluster for utilization of the other Response Cluster during and Post disaster operations; and
- Pre-position all assets in hazard prone areas.

b. During Disaster Phase

- Assist in clearing of road and identification of alternate road network for response operations; and
- Tap partners in the use of assets for the provision of an alternate road network going to and from the affected areas to facilitate transportation of goods and personnel.

c. Post Disaster Phase

- Provide logistical support in hauling and delivery of goods/commodities of affected areas;
- Remove obstacle and urgently rehabilitate national roads;
- Exchange information on damage condition of infrastructure facilities to CDRRMC/O;
- Report national roads and bridges and other infrastructure facilities' damage condition and rehabilitation status to CDRRMC/O

5. Bureau of Fire Protection (BFP)

a. Pre-Disaster Phase

- Pre-alert stations prior to disaster – OPLAN PAGHALASA

b. During Disaster Phase



- Shall direct emergency transport activities to its lower offices based on needs and requests from CDRRMC and affected barangays.

c. Post Disaster Phase

- Provide assets for clearing operations.

6. Volunteers/ and Private Groups acknowledged by CDRRMC

- The CEO as Cluster Lead will coordinate all support and requirements or response committee in their activities to augment the requirements at the affected areas during disaster; and
- Concerned government agencies and their subordinate offices shall utilize their respective internal personnel. Additional personnel requirements shall be coordinated through the PDRRMC in collaboration with all Council members.

IV. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
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 - 2.1 Succession of Command
 - a. Chairperson (PDRRMO)
 - b. Vice-Chairperson for Disaster Response (PSWDO)
 - c. Health Cluster (PPHO)
 - d. Health Cluster Members
 - 2.2 Interagency Communication Support System

For the entire duration of the operations, the existing means of communication shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas

9. IMPLEMENTATION PLAN FOR MANAGEMENT OF THE DEAD AND MISSING CLUSTER

I. SCENARIO

Affected Population	59,773
Outside Evacuation Centers (OEC)	54,702
Inside Evacuation Centers (IEC)	5,071
Casualties :	
Dead : 5	Injured : 57
Missing : 12	

II. OBJECTIVE

The Management of the Dead and Missing Cluster aims to provide policies, standards, guidelines, systems, and procedures to institutionalize MDM in all concerned agencies and stakeholders at all levels during emergencies and disasters.



Specifically, the Cluster aims to:

- a. Provide assistance 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.
- b. Strengthen coordination, collaboration, and partnerships among agencies and stakeholders (non-government agencies, international humanitarian country teams, private sector) of MDM at all levels; and
- c. Establish a resource-sharing mechanism among key players in the MDM.

III. CONCEPT OF OPERATIONS

On orders, the MDM Cluster operations aim to enhance the government's capacity in ensuring the proper identification and disposition of human remains, guaranteeing that the dignity of the deceased and their families are respected in accordance with their cultural values and religious beliefs during emergencies and disasters.

The DILG, as the lead of the cluster, shall head the operations and coordinate all support and resource requirements among member-agencies and their activities in order to address/augment MDM needs in the affected areas.

The MDM Cluster will have four (4) major activities:

- a. Disaster victim identification
- b. Final arrangement for the dead
- c. Management of the missing person
- d. Management of the bereaved families

The recovery and retrieval of human remains shall be done through the different Search and Rescue Units (SARs) and shall be coordinated with the SRR Cluster. The SRR Cluster will ensure that the retrieved human remains underwent decontamination process before turn-over to the MDM Cluster.

Disaster Victim Identification

The National Bureau of Investigation (NBI) shall lead the activities needed for proper identification and accounting of all declared human remains, supported by experts from PNP, AFP, BFP, and CHO. The Medico-Legal Officer of NBI shall issue the Certificate of Identification of all processed/examined and identified bodies, while the Local health officer shall issue the Certificate of Death. The NBI will be guided by the current guidelines drafted for the proper management of the dead and the missing.



Final Arrangement for the Dead

The DILG, through the Local Government Units, shall lead the final arrangement for the dead. All identified human remains and body parts shall be turned over to the rightful. Legitimate claimant as identified by the LGU and will be responsible for the ultimate disposal. For identified dead foreigners, embassies shall be immediately informed, through the International Humanitarian Assistance Cluster (IHAC), and the repatriation of these bodies shall be their responsibility

The LGU shall be responsible for the disposition of the unidentified bodies to be buried in the collective or individual graves, marked with their unique case numbers and/or labels. Further, LGU shall consult the community and religious leaders regarding the final disposition of the unidentified bodies.

Management of the Missing Persons

The PNP shall lead the Management of the Missing Person, with the support from CSWDO, PRC, CHO and NBI.

A person can only be considered missing upon the report of the relatives or the other concerned persons to the local police station. The PNP shall verify the identity of the reported missing person/s from the records of its Warrant Section along with the verification of CSWDO from its records of Children in Conflict with the Law (CICL), and a certification from the Barangay Chairperson that the reported missing person is a resident of the affected community. In exceptional cases such as huge magnitude calamities, the latest Census shall be the basis for validating reports of missing persons. The PNP shall immediately inform the Incident Commander, who initiates active search and rescue/ retrieval and provides feedback.

The CSWDO shall establish Social Welfare Inquiry Desks for data generation and information management of missing persons presumed to be dead during the disaster, and their surviving families.

The Validated list of missing persons presumed to be dead shall be submitted to the DILG for endorsement to the CDRRMC and for issuance of Certificate of Missing Person Presumed to be dead.

Management of the Bereaved Families

The CSWDO is the lead agency in the overall management of the bereaved families. DepEd, CHO, and other development partners shall provide assistance and resource augmentation on the overall management of the bereaved families for the following:

- Physiological needs to the bereaved shall include: Food Assistance; Financial Assistance; Livelihood Assistance; Clothing Assistance; Shelter Assistance; Management of the Orphans; and Food/Cash for Work;
- Social needs of the bereaved in terms shall include: Family/peer support system; Social Welfare Inquiry Desk/ Information Center; Educational Assistance, and legal needs;
- Psychological needs of the bereaved shall include: Psychological First Aid and other Special Needs like Psychiatric or Mental health Services.



The CDRRMO shall coordinate with other agencies to facilitate the processing of requirements for the benefit claims of the bereaved families:

- Certification from the Barangay Chairperson that the claimant is the legal beneficiary and a resident of the barangay
- Incident Report from the local PNP or the CDRRMC
- Death certificate from the local civil registrar; and
- Endorsement from payment of benefits from CDRRMC

In the vent of incidents resulting in the identification of foreign national casualties or a rising need for international assistance to augment additional capacities and resources on MDM, coordination shall be done through the International Humanitarian Assistance Cluster (IHAC).

i. Lead Cluster Agency: DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT (DILG)

a. Pre-Disaster Phase

- Activate MDM Cluster at the city level
- Coordinate with the CDRRMO for the confirmation of all available MDM Teams of all regional agencies for possible deployment or pre-positioning;
- Submit to CDRRMC a list of available government MDM Teams for immediate possible deployment;
- Meet with Response Cluster to do scenario building activities to determine the projected areas for deployment of MDM Teams. This includes the system for receiving MDM Teams from international agencies and INGOs;
- Deploy pre-positioned MDM Teams to the projected affected areas and its adjacent LGU/s
- Establish MOA with funeral parlors/services for the provision of facilities and personnel.

b. During Disaster Phase

- Deploy pre-positioned MDM Teams to assist the affected areas, MDM Teams are to coordinate with the LCEs of the affected areas for proper endorsement to the Incident Command Posts on the ground;
- Collect status reports and request of the deployed MDM Teams on the ground;
- Submit status reports, requests, and proposed actions to CDRRMC to integrate all activities at the CDRRM Operations Center;
- Establish command posts at the affected areas for multi-MDM Teams including those CSOs and NGOs;
- Coordinate with other response clusters for their MDM requirements
- Deploy batches of MDM Teams for augmentation at the affected areas;
- Coordinates with the barangays to determine the areas for proper management of mass dead; and



- Submit the MDM Task Force status report of all operations to the CDRRMC

c. Post Disaster Phase

- Prepares and submits a report of all operations to the CDRRMC

ii. Cluster Member Agencies

1. City Disaster Risk Reduction and Management Office (CDRRMO)

a. Pre-Disaster Phase

- Monitor and collect situation report;
- Alert Municipal MDM groups for possible activation;
- Coordinate the repositioning of MDM groups in critical areas; and
- Issue and disseminate activation orders

b. During Disaster Phase

- Monitor the situation reports;
- Received request for MDM augmentation;
- Issue and disseminate deployment orders; and
- Deploy MDM augmentation groups in coordination with the CDRRMC and Cluster Head

c. Post Disaster Phase

- Consolidate and prepare a report for submission; and
- Conduct debriefing of MDM groups at the national level in coordination with CHO

2. City Health Office (CHO)

- Provide support for medical services/ MHPSS for responders and bereaved families;
- Provide technical assistance on health and safety concerns;
- Assist in validation and reporting of casualties; and
- Augment manpower for the DVI process

3. City Social Welfare and Development Office (CSWDO)

- Assist the DILG in providing resources and psychological assistance to the bereaved families.

4. Philippine Red Cross (PRC)

- Assist in the provision of resources both personnel and logistical equipment (cadaver bags) needed in the management of the dead through its deployed SRR teams as the need arises and the gap is identified
- Assist in establishing welfare desks to facilitate information gathering on the affected population as well as the missing person and mobilize its volunteers to conduct tracing in restoring family links (RFL)
- Assist in the management of bereaved families through the conduct of community based psychosocial support and referral



5. National Bureau of Investigation (NBI)

- Lead the identification of the declared human remains;
- Coordinate and manage the requirements identifying and burial of all dead victims with the MDM Task Force;
- Submit status reports to the cluster Lead including the request for additional manpower to hasten the process of identification and proper burial of the dead; and
- Coordinate with Interpol for the appropriate guidelines for identification and documentation of the dead victims/s.

6. Philippine National Police (PNP) – Crime Laboratory

- Assist the NBI in the identification of human remains

IV. CONCEPT OF SUSTAINMENT

1. The DILG as Cluster Lead will coordinate all support requirements of member agencies in their activities to augment the affected areas during disasters
2. Concerned government agencies and their subordinate offices shall utilize their respective personnel. Additional personnel requirements shall be coordinated through the CDRRMC.

V. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
2. Command Center – CDRRMO Operation Center, Mac Arthur Highway Brgy. Bulihan City of Malolos Bulacan
 - 2.1 Succession of Command
 - a. MDM Cluster Lead (DILG)
 - b. PNP-CL
 - c. NBI
 - 2.2 Interagency Communication Support System

The MDM Cluster must have its own effective and efficient internal telecommunication support system with high-speed data transmission capability in order to accurately transmit data and communicate with its support agencies/ units to facilitate the performance of its task and responsibilities.

10. IMPLEMENTATION PLAN FOR EDUCATION CLUSTER

I. SCENARIO

Upon assessment, sixty percent (60%) of school facilities were totally and partially damaged disrupting the class and learning activities.



II. OBJECTIVE

The Education Cluster aims to ensure the safety of learners and personnel. It also aims to provide continued access to quality education to all affected learners. Specifically, the cluster will:

- a. Prepare field offices and schools by issuing alerts and warning based on weather bulletin and/or local issuances;
- b. Conduct impact and needs assessment on affected teaching and non-teaching personnel, learners, and education resources;
- c. Provide the required temporary learning spaces, teaching, and learning materials to allow for the resumption of classes and education service delivery;
- d. Promote and activate the use of alternative delivery modes of learning in affected areas;
- e. Coordinate the provision of psychosocial support and services to both learners and personnel with concerned agencies; and
- f. Mobilize resources to facilitate the delivery of other relevant assistance to affected teaching and non-teaching personnel.

III. CONCEPT OF OPERATIONS

On orders, the Education Cluster will ensure immediate access of all children in the affected areas to quality education in a safe secure environment and ensure that all needs related to emergency education services are addressed as part of the overall response of the cluster.

This will be accomplished through coordination with cluster members such as Technical Education and Skills Development Authority (TESDA), Commission on Higher Education (CHED), Local and International Non- Government Organizations, Civil Society Organizations, Individual and Private Corporate Partners, and Inter-Cluster coordination and response operations. The cluster lead agency, DepEd will convene the member agencies to provide updates and discuss available resources of each member agency for prepositioning that will be used in providing such emergency education services. This includes the provision of technical support services to affected areas.

In the event of escalation and need for international assistance to national and regional capacities and resources, the coordination shall be done through IHA Cluster and Education Cluster co-leads.

Composition: The Education Cluster shall be composed of the following agencies:

i. Lead Cluster Agency: DEPARTMENT OF EDUCATION (DepEd)

Member Agencies:

1. Commission on Higher Education (CHED)
2. Technical Education and Skills Development Authority (TESDA)
3. Local and International Non-Government Organizations, and Civil Society Organizations
4. Individual and Corporate Private Partners

The roles and responsibilities of the Lead Agency shall be as follows:



Cluster Lead: Department of Education (DepEd) through the Disaster Risk Reduction and Management Service (DRRMS) will lead the coordinating functions of the Cluster. Specifically, DepEd will do the following for each Disaster Phase

a. *Pre-Disaster Phase*

- Issue initial alerts and warning as projected by relevant agencies (DOST-PAGASA, PDRRMC, RDRRMC) to Education Cluster Members;
- Attend Pre-Disaster Risk Assessment;
- Prepare baseline reports of projected affected families (e.g., enrollment, classrooms, and personnel)
- Reinforce alerts issued to field office and education cluster members as may be appropriate upon advice made CDRRMC;
- Enforce the strict implementation of schools' safety and preparedness protocols, such as ensuring the protection of education property;
- Provide advisory on preemptive evacuation, if necessary;
- Project the possible impact of the impending threat to the following: the safety of learners and personnel, destructions of properties, and disruption of educational services;
- Adhere to policies on the suspension of classes based on DO 37 (s.2022). If learners and personnel are already in school upon suspension, it should consider their safety before allowing them to leave the school premises;
- Prepare for the possible activation of Emergency Operations Center (EOC);
- Convene the Education Cluster for response planning and pre-positioning; and
- Perform other tasks as directed.

b. *During Disaster Phase*

- Activate EOC at all levels
- Convene the Education Cluster;
- Attend PDRA and response coordination meetings;
- Closely coordinate with relevant government agencies
- Track key official and personnel;
- Monitor the status of office operations in affected divisions and regions;
- Conduct a rapid assessment to gather data on the impact on education and generate reports;
- Monitor school operations such as class suspensions and schools used as Evacuation Center;
- Submit reports to Management for appropriate and immediate actions from concerned offices;
- Disseminate situational reports to CDRRMC, Inter-Cluster and Education Cluster affected;
- Monitor possible escalation of the situation that may aggravate impact on learners, personnel, and properties;
- Prepare for the deployment/provision of resources (i.e., personnel, learning materials, support for Temporary Learning Spaces (TLS), psychosocial support and services);
- Coordinate with Health Cluster for the Provision of Health Services and psychosocial support to affected learners and personnel;
- Coordinate with Camp Coordination and Camp Management (CCCM) for the schools used as evacuation center; and



- Coordinate with Search Rescue and Retrieval (SRR) Cluster for reports related to SRR of affected learners and personnel, if necessary;
- Coordinate with Law and Order (LAO) Cluster to provide necessary security to affected schools and local EOC, if necessary; and
- Perform other tasks as directed.

c. *Post Disaster Phase*

- Continuous tracking of key officials and personnel;
- Monitor school operations such as suspensions and resumption, and schools used as Evacuation Center and decampments;
- Establish temporary learning spaces in affected schools and school used as evacuation centers;
- Monitor the availability of areas for temporary learning spaces in affected schools;
- Mobilize appropriate educational interventions such as, but not limited to, the following:
 - Psycho-social support and services;
 - Teaching and learning materials;
 - Conduct of life skills education and alternative delivery modes;
 - School clean-up;
 - Emergency feeding programs;
 - Minor repairs of school facilities; and
 - Life-saving supplies for education (health, nutrition, protection)
- Mobilize and facilitate appropriate personnel assistance;
- Attend CDRRMC coordination meetings;
- Conduct education cluster meetings;
- Conduct Post-disaster Needs Assessment (PDNA) in coordination with other cluster members;
- Coordinate with Logistics Cluster to transport education and supplies and services;
- Coordinate with Health Cluster for the provision of health services and psychosocial support to affected learners and personnel;
- Coordinate with Camp Coordination and Camp Management (CCCM) for the schools used as evacuation center;
- Coordinate with law and order (LAO) Cluster to provide necessary security to affected schools and local EOC, if necessary; and
- Perform other tasks as directed.

ii. Cluster Member Agencies and Organizations

a. *Pre-Disaster Phase*

- Assist the Lead Agency in communication alerts and warnings to field offices and schools;
- Pre-positioned resources for the projected impact on schools; and
- Participate in Education Cluster meetings

b. *During Disaster Phase*

- Assist in tracking of key officials and personnel and monitoring of field office and school operations;



- Participate in Education Cluster meetings; and
- Share monitoring and assessment result at the cluster level

c. *Post Disaster Phase*

- Coordinate with Lead Agency on the conduct of PDNA;
- Participate in Education Cluster meeting;
- Assist in continuous tracking of personnel and students;
- Assist the establishment of temporary learning spaces;
- Mobilize and support appropriate educational interventions such as, but not limited to the following:
 - Psycho-social support and services;
 - Teaching and learning materials;
 - Conduct of life skills education and alternative delivery modes;
 - School clean-up;
 - Emergency feeding programs;
 - Minor repairs of school facilities; and
 - Life-saving supplies for education (health, nutrition, protection)
- Support the Lead agency’s appeal for assistance

IV. CONCEPT OF SUSTAINMENT

1. The Education Clusters lead agency will coordinate all requests and updating of reports for emergency education services in affected areas;
2. All cluster members will make available all necessary operational resources that will be used in providing such emergency education services; and
3. Concerned government agencies and their subordinate offices shall utilize their respective internal personnel during disaster response. Additional requirements shall be coordinated through the CDRRMC.

V. COMMAND AND CONTROL

1. Command Relationship – all DRRM actors and key players will refer and based their actions as prescribed in RA 10121, Rule 3, Section 2. Composition
2. Command Center – CDRRMO Operation Center, Mac Arthur Highway Brgy. Bulihan City of Malolos Bulacan
 - 2.1 Succession of Command
 - a. Education Clusters Lead (DEPED)
 - b. Education Cluster Members
 - 2.2 Interagency Communication Support System

For the entire duration of operations, the existing means of communications will be utilized. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from affected areas.





ANNEX C

REFERENCES/
POLICY ISSUANCES



References of Contingency Planning

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 programs..."

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 in accordance with the prescribed Contingency Planning Guidebook." Moreover, in item 6.1.2, "Other governance stakeholders, including civil society organizations and the private sector, are enjoined to adopt the Contingency Planning Guidebook for formulation of their respective contingency plans."

Further, under the NDRRM Plan 2011 – 2028, Thematic Area 2: Disaster Preparedness, Outcome 10, it is also indicated that there shall be "Developed and implemented comprehensive national and local preparedness and response policies, plans, and systems."

The formulation of CP is also embodied in various national issuances, policies, programs and guidelines:

- Executive Order No. 82, s 2012: Operationalizing the Practical Guide for National Crisis Managers and the National Crisis Management Core Manual; Establishing National and Local Crisis Management Core Manual; Establishing national and Local Crisis Management Organizations; and Providing Funds Therefor
- NDRRMC Memorandum No. 04, s 2012: Implementing Guidelines on the Use of Incident Command System as an On-Scene Disaster Response and Management Mechanism under the Philippine Disaster Risk Reduction and Management System
- NDRRMC Memorandum No. 23, s 2014: National Disaster Response Plan for Hydro-meteorological hazards
- NDRRMC Memorandum No. 43, s 2016: Guidelines on the Interoperability of the Incident Management Teams and Response Clusters
- NDRRMC Memorandum No. 44, s 2016: Guidelines on the Mobilization of Incident Management Teams
- NDRRMC Memorandum No. 22, s 2017: NDRRMC National Disaster Response Plan for Hydro-Meteorological, Earthquake, Tsunami, and Consequence Management for Terrorism Related Incidents
- NDRRMC Memorandum No. 50, s 2017: Checklist of Actions and Milestones for Earthquake Preparedness



- Department of Budget and Management (DBM)-NDRRMC-DILG JMC 2013-1: Allocation, Utilization of the Local Disaster Risk reduction and Management Fund
- NDRRMC-DILG-DBM-Civil Service Commission (CSC) JMC 2014-1: Implementing Guidelines for the Establishment of Local DRRM Officers (LDRRMOs) or Barangay DRRM Committees (BDRRMCs) in LGUS
- RA 11292: The Seal of Good Local Governance Act of 2019
- DILG Operation Listo





ANNEX D

DIRECTORY



EMERGENCY HOTLINE

Malolos Emergency Hotline CDRRMO	(044) 760-5160; 0928-226-9801; 0977-640-5828 (044) 931-8888 loc. 2106; 0931-003-5758
City Mayor's Office	(044) 931-8888 loc. 2201 / 2202
City Health Office	(044) 931-8888 loc. 2207
City Social Welfare and Development Office	(044) 931-8888 loc. 2104
City Engineering Office	(044) 931-8888 loc. 2301
City Agriculture Office	(044) 931-8888 loc. 2308
City Veterinary Office	(044) 931-8888 loc. 2309
Malolos Police Station	(044) 796-2483 0933-610-4327
Malolos City Fire Station	(044) 791-6129 0995-186-0370
Meralco	632-8416 / 632-8318 (044) 795-1445 0925-771-6211
Prime Water	0906-893-5141 0919-074-2083
Malolos Water District	(044) 791-3562
PLDT	028-16211
Department of Education	(044) 812-2006 (044) 812-2007
Bulacan Medical Center <i>Emergency Room</i> <i>Triage Area</i>	(044) 791-0630 0932-971-1336
Bulacan Infection Control Center	812-6750 0933-350-7791
Bulacan Rescue	(044) 791-0566 0905-333-3319 0918-331-8318 0942-367-1455



BDRRMC CONTACTS

No.	BARANGAY	BARANGAY CHAIRMAN	CONTACT NUMBER
1	Anilao	Ricardo S. Lorenzo	0965-922-8298
2	Atlag	Danilo A. Clavio	794-3245/0995-590-8674
3	Babatnin	Rustico P. Buluran	760-6597/0932-409-9841
4	Bagna	Inocencio DC. Villena, Jr.	896-2812/797-1059/ 0933-055-8910
5	Bagong Bayan	Feliz Ulric D. Caluag	662-1958/0906-508-5640
6	Balayong	Emmanuel C. Lazaro	0923-446-4526
7	Balite	Lolita R. Gatchalian	816-6092/0932-976-0722
8	Bangkal	Marvin S. Casim	0923-743-1775
9	Barihan	Christopher S. Bernardo	0905-641-1258
10	Bulihan	Crisanto DC. De Jesus	893-9529/0923-089-8251
11	Bungahan	Dionisio C. Mendoza	796-2503/09175080471
12	Caingin	Tomas D. Reyes	791-6513/0917-526-0487
13	Calero	Josefino M. Santiago	0908-310-6153
14	Caliligawan	Eduardo C. Cabigao	0965-475-6581
15	Canalate	Vicente G. Cruz, Jr.	796-4105/0905-220-4315
16	Caniogan	Pricilla S. Mateo	662-2437/0919-005-4790
17	Catmon	Ferdie A. Dimagiba	790-1386/0943-133-6220
18	Cofradia	Rodrigo L. Centeno	662-0278/0917-897-5105
19	Dakila	Librado C. De Robles	794-4569/0923-516-4990
20	Guinhawa	Eduardo T. Valenzuela	903-5628/0917-734-8115/ 0935-833-6969
21	Liang	Leoncia Z. De Belen	794-3589/0955-287-5065
22	Ligas	Anastacia E. Camacho	794-3966/0905-833-2177
23	Longos	Roberto L. Ganelo	760-6192/0943-133-7478
24	Look 1 st	Romeo M. Santiago	662-2464/0965-063-9925
25	Look 2 nd	Francisco I. Dela Cruz	0967-598-7424
26	Lugam	Virgilio B. San Pedro	796-7990/0917-825-1272
27	Mabolo	Melencio F. Tamayo	760-4456/0923-817-6728
28	Mambog	Bernardo P. Santiago, Jr.	0922-835-4769
29	Masile	Arnel T. Cabantog	0926-260-9452/0932-286-2040
30	Matimbo	Ruben R. Baltazar	796-1853/0955-287-8065
31	Mojon	Michael Adriano	816-7602/0926-485-8202
32	Namayan	Lawrence C. Pinto	0917-913-7010
33	Niugan	Virgilio B. Pingol	0956-784-7050
34	Pamarawan	Cesar S. Bartolome	0923-595-4908
35	Panasahan	Celerino F. Aniag	0923-473-9365/0905-339-4523
36	Pinagbakahan	Lorenzo F. Verzosa	790-6090/0932-217-9054
37	San Agustin	Domingo P. Castro, Sr.	0933-298-6907
38	San Gabriel	Antonio A. Mallari, Jr.	662-0936/796-1588/ 0922-278-7085
39	San Juan	Alfred T. Roque	662-4406/0966-688-7011



40	San Pablo	Ronaldo DC. Santos	769-7558/0932-890-1142
41	Santiago	Leonardo P. Ramos, Jr.	0955-372-0534
42	Stma. Trinidad	Rommel DC. Alenia	305-1715/0905-500-1065
43	Sto. Cristo	Denver T. Del Rosario	0965-896-0910
44	Sto. Niño	Miguel Alberto T. Bautista	0917-581-0555
45	Santor	Nelson M. Hernndez	760-3321/0933-645-1100/ 0955-318-661
46	Sto. Rosario	Carlito R. Cruz, Sr.	791-0235/0942-416-0478
47	San Vicente	Florante P. Bautista	0939-281-5569
48	Sumapang Bata	Prisco M. Hernandez	0965-475-6715
49	Sumapang Matanda	Fortunato C. Ramos	791-3136/0925-625-5152
50	Taal	Renato S. Abalos	0933-497-7619
51	Tikay	Celso M. Hernandez	662-4436/0977-776-8411



