

**PROVINCIAL DISASTER RISK REDUCTION AND  
MANAGEMENT PLAN OF DAVAO DEL NORTE  
CY 2024 -2028**

# RESOLUTION ADOPTING THE PROVINCIAL DISASTER RISK REDUCTION AND MANAGEMENT PLAN



Republic of the Philippines  
Provincial Government of Davao del Norte



## PROVINCIAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL

EXCERPTS FROM THE MINUTES OF THE FOURTH QUARTER PROVINCIAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL MEETING ON DECEMBER 27, 2023 AT THE VIP CLUBHOUSE, DNSTC, MANKILAM, TAGUM CITY, DAVAO DEL NORTE

### PRESENT:

MS. GLENDA O. DELIDELI, MMPA  
MS. WINONA J. AVENIDO, CPA, MPA  
MS. ROSALINDA O. RAPISTA, RSW  
MS. MILDRED B. FUNTILON, EnP

MR. AMADOR AQUINO  
DR. DENNIS A. SUMAOY  
MR. DENNIS B. DEVILLERES, LIB  
MS. TERESITA R. MACHETE, RN, RND  
ENGR. JUDY DONNA NUEVA ECIJA  
ENGR. ARAYA A. MAHILUM  
MS. AURORA A. LOZADA  
MS. LYNLEE J. LANAJA, MBA  
MR. FERNANDO V. AUMENTADO, SR.  
MS. RHEA P. MAZO  
MR. ROMEO CABUNILAS  
MS. JEADEL JOY A. SALOMON  
CG INS JHETRO M PASTORFIDE  
MS. MERCIDITA O. BINANUA  
MR. FELIX SAYON, JR.  
ENGR. CHRISTOPHER S. DALISAY  
ENGR. EDWIN MISA  
FOR. REIL DELOSA  
ATTY. CYREL I. CONDOR - MIGUEL  
MR. NESTOR H. MATA, JR.  
SFO2 JOE ALLAN FERNANDEZ  
ENGR. ELISER B. ARMIDILLA  
2LT ROI VINCENT O ONA  
LTC RODRIGO G LATONIO JR  
ENGR. ABDUL - AZIZ B. SAHIBIL  
MS. ELAINE B. CAYACAY  
PLT MARISSA PERALTA  
MS. ROWENA M. TAOJO

LDRRMO IV, PADO-DRRMD  
Provincial Accountant  
Provincial Social Welfare and Development Officer  
Acting Assistant Provincial Planning and  
Development Coordinator, PPDO  
Assistant Provincial General Services Officer, PGSO  
Assistant Provincial Veterinarian/Officer In-Charge, PVO  
Provincial Economic Enterprise and Development Officer  
Chapter Administrator, PRC  
Provincial Director, DOST-Davao del Norte  
Weather Specialist DOST-PAGASA (TLRBFFWC)  
Consultant, DXDN  
Acting Branch Manager, NFA  
Chairman, PAFC  
Council Scout Executive, GSP  
President, DACMUPCEO  
President, DNKMayK  
Station Commander, PCG  
President, Davao Gulf Bantay Dagat Volunteers, Inc.  
SP Committee on Peace and Order and Public Safety  
Engineer IV, PAGRO  
Acting Assistant Provincial Engineer, PEO  
SEMS, PENRO  
Administrative Assistant VI, PLO  
AA IV, PICKMO  
Bureau of Fire Protection  
DPWH  
1003RD Brigade, PA  
1001ST Brigade, PA  
Tagum Water District  
BSP  
DNPPPO  
DICT

### ON OFFICIAL BUSINESS:

HON. EDWIN I. JUBAHIB  
HON. DE CARLO L. UY  
HON. ALAN R. DUJALI  
HON. PANTALEON D. ALVAREZ  
HON. DENISE MARIANNE A. LU, MD  
HON. DINDO C. PARANGAN  
ENGR. JOSIE JEAN R. RABANOZ, MPA, EnP  
DR. ALFREDO A. LACERONA  
MS. EMELIA C. PALERO, CPA, MSLRG  
MS. EVELYN G. ESPRA, MPA  
MS. GALE GUADALUPE G. MORTILLERO, MSLRG, MHRM  
ENGR. LARRY A. ABLEN  
DIR. JONATHAN J. LEYBAG, MPA  
MR. REYNALDO MELLORIDA, CESO V  
MS. ELEVERA S. ALNGOG

Governor  
Vice Governor  
2ND District Congressional Office  
1ST District Congressional Office  
Chairman, Committee on Health and Social Services  
Chairman, FABC  
Provincial Administrator  
Provincial Health Officer  
Provincial Budget Officer  
Provincial Treasurer  
Asst. Provincial Administrator and GAD Coordinator  
DAO IV, PDAO  
Provincial Director, DILG  
Schools Division Schools Superintendent, DepEd  
OIC General Manager, NORDECO

Page 1 of 3



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09178103526



PROVINCIAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL

ATTY. ZERLINE T. BALLEQUE  
MR. JANUS D. RAFAILES  
ATTY. ANA ALVAREZ  
MS. HADJA NOREHA GLORIA D. AMER  
MR. AEROL CONDE  
REV. FR. JOSEPH ARMAMENTO  
ENGR. ENRICZAR T. TIA

OIC Provincial Director, DTI  
President, PADIRRMO  
Vice President, ODAW  
Provincial Chairperson, NSCCAA  
President, Chamber of Commerce and Industry, Inc.  
Director, CARITAS Philippines, Davao del Norte Chapter  
Branch Manager, DLPC - Panabo City

**RESOLUTION NO. 17**  
Series of 2023

**A RESOLUTION APPROVING THE UPDATED PROVINCIAL DISASTER RISK REDUCTION AND MANAGEMENT PLAN OF DAVAO DEL NORTE CY 2024-2028 AND ENDORSING TO THE PROVINCIAL DEVELOPMENT COUNCIL FOR CONSIDERATION AND APPROPRIATE ACTION**

**WHEREAS**, Section 12, (4) of Republic Act 10121 states that the PDRRMC shall formulate and implement a comprehensive and integrated LDRRMP in accordance with the national, regional and provincial framework, and policies on disaster risk reduction in close coordination with the Local Development Councils (LDCs);

**WHEREAS**, NDRRMC Memorandum Circular No. 147, s. 2017 prescribe the guidelines in the conduct and evaluation of the Local Disaster Risk Reduction and Management Plans (LDRRMPs) pursuant to Section 9 (e) of RA 10121 and paragraph 2.2.11 of the Local Budget Memorandum No. 75, s. 2017;

**WHEREAS**, the National Disaster Risk Reduction and Management Council – through the Office of Civil Defense, and in partnership with the Japan International Cooperation Agency (JICA) has launched the Enhanced Local Disaster Risk Reduction and Management Plan (LDRRMP) Formulation Guidebook to serve as a guidepost for promoting sustainable, long-term, and efficient DRRM practices among all local government units, national government agencies, private sectors, academe and other stakeholders;

**WHEREAS**, Local Government Units (LGUs) are encouraged to refer to the above guidebook to baseline on the Government's DRRM work across all thematic areas for integration during the periodic updating of DRRM Plans;

**WHEREAS**, in adherence to the direction set by the foregoing policies and guidelines, the Provincial Disaster Risk Reduction and Management Council Technical Working Group with the Civil Society Organizations and Local Government Units updated the Provincial DRRM Plan using the Enhanced LDRRMP Formulation Guidebook;

**NOW THEREFORE, BE IT RESOLVED**, as it is hereby resolved on the motion of Mr. Fernando Aumentado, Sr. and was duly seconded by Ms. Lynlee J. Lanaja, MBA, Acting Branch Manager of NFA, the Provincial Disaster Risk Reduction and Management Plan of Davao del Norte CY 2024-2028 is hereby approved.

**RESOLVED FURTHER**, that copies of the Provincial Disaster Risk Reduction and Management Plan of Davao del Norte CY 2024-2028 be endorsed to the Provincial Development Council for consideration and appropriate action.





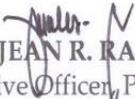
Republic of the Philippines  
Provincial Government of Davao del Norte



PROVINCIAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL

**CARRIED.**

I HEREBY CERTIFY to the correctness of the above-quoted resolution.

  
JOSIE JEAN R. RABANOZ, CE, MPA, EnP,  
Executive Officer, PDRRMC  
Provincial Administrator

Approved by:

  
EDWIN T. TUBAHIB,  
Chairman, PDRRMC  
Governor

DEC 27 2023  
Date Signed



Republika ng Pilipinas  
 Lalawigan ng Davao del Norte

**Sangguniang Panlalawigan**

New Legislative Building, Mankilam, Tagum City, Davao del Norte



**EXCERPTS FROM THE MINUTES OF THE 35<sup>TH</sup> REGULAR SESSION OF THE SANGGUNIANG PANLALAWIGAN OF DAVAO DEL NORTE (TERM 2022-2025) HELD AT THE SESSION HALL, NEW LEGISLATIVE BUILDING, PROVINCIAL GOVERNMENT CENTER, MANKILAM, TAGUM CITY, ON TUESDAY, AUGUST 27, 2024**

**Present:**

Hon. De Carlo L. Uy, MBA	Vice Governor (Regular Presiding Officer)
Hon. Flopone Royle A. Catalan	Senior Board Member
Hon. Jannet N. Tanong-Maboloc	Member
Hon. Nicandro T. Suaybaguio, Jr., UAP	Member
Hon. Prospero E. Estabillo, Jr.	Member
Hon. Orly A. Amit	Member
Hon. Denise Marianne A. Lu, MD	Member
Hon. Robert L. So	Member
Hon. Emmanuel G. Pamisaran	Member
Hon. Shirley Belen R. Aala	Member
Hon. Francisco C. Remitar, MDMG	Member
Hon. Norman P. Librero	Member/FABC
Hon. Devona H. Jumamil	Member/PCL
Hon. Ariel S. Macla	Member/IPMR

**CERTIFIED COPY:**

LYN P. BEBENG, MPA  
 Local Legislative Staff Officer V  
 (Records and Archives Division)

Date: 14 OCT 2024

**On Official Business:**

Hon. Helen Mae I. Discaya	Member/SKPPF (Kapalong)
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**Absent:** None

*Sponsors: Hon. Devona H. Jumamil, Hon. Orly A. Amit, Hon. Emmanuel G. Pamisaran, Hon. Flopone Royle A. Catalan, Hon. Nicandro T. Suaybaguio, Jr., UAP, Hon. Robert L. So and Hon. Norman P. Librero*

**RESOLUTION NO. 643**

**APPROVING THE PROVINCIAL DISASTER RISK REDUCTION AND MANAGEMENT PLAN (PDRRMP) CY 2024-2028 OF THE PROVINCE OF DAVAO DEL NORTE**

**WHEREAS**, a letter dated June 21, 2024 of Hon. De Carlo L. Uy, MBA, Acting Governor, this Province, duly received by the Office of the Secretary to the Sangguniang Panlalawigan on July 25, 2024, endorsed to this August Body, Provincial Development Council (PDC) Resolution No. 5, Series of 2024, was presented for appropriate legislative action;

**WHEREAS**, the aforesaid measure was referred to the Committee on Human Settlements, Planning and Development and the Committee on Peace and Order/Public Safety, for review and recommendation;

**WHEREAS**, Section 12 of the Republic Act No. 10121 provides that the Provincial Disaster Risk Reduction and Management Council (PDRRMC) shall formulate and implement a comprehensive and integrated Local Disaster Risk Reduction and Management Plan (LDRRMP) in accordance with the National, Regional and Provincial framework, as well as policies on Disaster Risk Reduction in close coordination with the Local Development Councils (LDCs);

**WHEREAS**, the National Disaster Risk Reduction and Management Council (NDRRMC) Memorandum Circular No. 147, Series of 2017 prescribed the guidelines on the conduct and evaluation of the Local Disaster Risk Reduction and Management Plans (LDRRMPs) pursuant to Section 9(e) of Republic Act No. 10121 and paragraph 2.2.11 of the Department of Budget and Management (DBM) Local Budget Memorandum No. 75, series of 2017;

**WHEREAS**, the National Disaster Risk Reduction and Management Council through the Office of the Civil Defense and in partnership with the Japan International Cooperation Agency (JICA) launched the Enhanced Local Disaster Risk Reduction and Management Plan (LDRRMP) Formulation Guidebook to serve as a guidepost for promoting sustainable, long-term, and efficient Disaster Risk Reduction and Management (DRRM) practices among all government units, national government agencies, private sectors, academe and other stakeholders;

**WHEREAS**, in adherence to the direction set by the foregoing policies and guidelines, the Provincial Disaster Risk Reduction and Management Council – Technical Working Group (PDRRMC-TWG) with the Civil Society Organizations and Local Government Units, updated the Provincial DRRM Plan using the Enhanced LDRRMP Formulation Guidebook;

**WHEREAS**, the Local Government Units (LGUs) are encouraged to refer to the guidebook as baseline of the government's DRRM work across all thematic areas for integration during the periodic updating of DRRM Plans;

**WHEREAS**, the Provincial Development Council finds it supportive and significant to the attainment of the development agenda of the Province;

**WHEREAS**, the Committees thoroughly discussed and deliberated on the merits of the said measure and per Joint Committee Report No. 09 dated August 21, 2024 finally recommended to approve the same for being in order and within the bounds of law;

**WHEREFORE, BE IT RESOLVED**, by the Sangguniang Panlalawigan in Session Assembled, to approve, as it is hereby approved the Provincial Disaster Risk Reduction and Management Plan (PDRRMP) CY 2024-2028 of the Province of Davao del Norte;

**RESOLVED, FURTHER**, that copy of this resolution be forwarded to Hon. Edwin I. Jubahib, MMPA, Governor, this Province, for appropriate action; let copy of the same be furnished Engr. Maria Hazel C. Zafra, CE, EnP, MMPA, Acting Provincial Planning and Development Coordinator/ PDC Secretary, Provincial Planning and Development Office, this Province for her information and record.

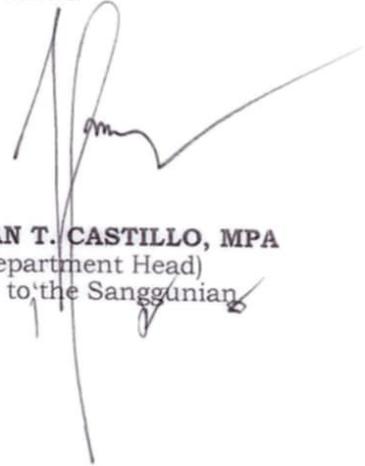
**CARRIED.**

**CERTIFIED COPY:**

LYN P. BEBEÑO, MMPA  
Local Legislative Staff Officer V  
(Records and Archives Division)  
Date: \_\_\_\_\_

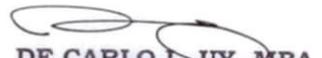
14 OCT 2024

I hereby certify to the correctness of this resolution.



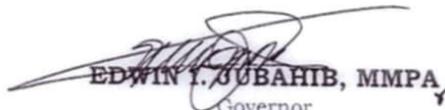
**DENNIS DEAN T. CASTILLO, MPA**  
(PG Department Head)  
Secretary to the Sanggunian

**ATTESTED:**



**DE CARLO L. UY, MBA**  
(Vice Governor)  
Regular Presiding Officer

**APPROVED:**



**EDWIN I. SUBAHIB, MMPA**  
Governor  
10 OCT 2024  
Date Signed

**CERTIFIED COPY:**

**LYN P. BEBERO, MPA**  
Local Legislative Staff Officer V  
(Records and Archives Division)  
Date: \_\_\_\_\_

14 OCT 2024



## PROVINCIAL GOVERNOR'S OFFICE

### MESSAGE

To promote resiliency among communities, it is essential that we are well directed in our actions. The Provincial Disaster Risk Reduction and Management Plan of Davao del Norte CY 2024-2028 will provide guidance in discharging our duties as public servants in safeguarding the welfare of our constituents from the impacts of disasters.

We are committed to support the implementation of this 5-year plan by utilizing our resources in the fulfillment of our goals and objectives to reduce disaster risks and losses in our beloved province. Together with all the stakeholders from the various sectors of the academe, civil society organization, private organization, church organization, the national and local government, our focus will carry out projects for disaster prevention and mitigation, preparedness, response and building back better.

One DavNor, One People!



**EDWIN I. JUBAHIB**  
Governor



## EXISTING DRRM-CCA RELATED POLICIES/GUIDELINES/RESOLUTION/ DESCRIPTION

### RA 10121

**Section 12. Local Disaster Risk Reduction and Management Office (LDRRMO).** - (a) There shall be established an LDRRMO in every province, city and municipality, and a Barangay Disaster Risk Reduction and Management Committee (BDRRMC) in every barangay which shall be responsible for setting the direction, development, implementation and coordination of disaster risk management programs within their territorial jurisdiction

(7) Prepare and submit to the local sanggunian through the LDRRMC and the LDC the annual LDRRMO Plan and budget, the proposed programming of the LDRRMF, other dedicated disaster risk reduction and management resources, and other regular funding source/s and budgetary support of the LDRRMO/BDRRMC;

### RA 9729

**Section 14. Local Climate Change Action Plan.** – The LGUs shall be the frontline agencies in the formulation, planning and implementation of climate change action plans in their respective areas, consistent with the provisions of the Local Government Code, the Framework, and the National Climate Change Action Plan.

Barangays shall be directly involved with municipal and city governments in prioritizing climate change issues and in identifying and implementing best practices and other solutions. Municipal and city governments shall consider climate change adaptation, as one of their regular functions. Provincial governments shall provide technical assistance, enforcement and information management in support of municipal and city climate change action plans. Inter-local government unit collaboration shall be maximized in the conduct of climate-related activities.

LGUs shall regularly update their respective action plans to reflect changing social, economic, and environmental conditions and emerging issues. The LGUs shall furnish the Commission with copies of their action plans and all subsequent amendments, modifications and revisions thereof, within one (1) month from their adoption. The LGUs shall mobilize and allocate necessary personnel, resources and logistics to effectively implement their respective action plans.

The local chief executive shall appoint the person responsible for the formulation and implementation of the local action plan.

It shall be the responsibility of the national government to extend technical and financial assistance to LGUs for the accomplishment of their Local Climate Change Action Plans.

The LGU is hereby expressly authorized to appropriate and use the amount from its Internal Revenue Allotment necessary to implement said local plan effectively, any provision in the Local Government Code to the contrary notwithstanding.

### RA 7160

**ARTICLE 3. Declaration of Policy.** — (a) It is hereby declared the policy of the State that the territorial and political subdivisions of the State shall enjoy genuine and meaningful local autonomy to enable them to attain their fullest development as self-reliant communities and make them more effective partners in the attainment of national goals. Toward this end, the State shall provide for a more responsive and accountable local government structure instituted through a system of decentralization whereby local government units (LGUs) shall be given more powers, authority, responsibilities, and resources. The process of decentralization shall proceed from the National Government to the LGUs.

(b) It is also the policy of the State to ensure the accountability of LGUs through the institution of effective mechanisms of recall, initiative and referendum.

(c) It is likewise the policy of the State to require all national government agencies and offices (NGOs) to conduct periodic consultations with appropriate LGUs, nongovernmental organizations (NGOs) and people's organizations, and other concerned sectors of the community before any project or program is implemented in their respective jurisdictions.

(d) Every LGU shall exercise the powers expressly granted, those necessarily implied therefrom, as well as powers necessary, appropriate, or incidental for its efficient and effective governance, and those which are essential to the promotion of the general welfare. Within their respective territorial jurisdictions, LGUs shall ensure and support, among other things, the preservation and enrichment of culture, promote health and safety, enhance the right of the people to a balanced ecology, encourage and support the development of appropriate and self-reliant scientific and technological capabilities, improve public morals, enhance economic prosperity and social justice, promote full employment among their residents, maintain peace and order, and preserve the comfort and convenience of their inhabitant.

**Provincial Ordinance No. 2014-004**

Section 3. Training Center: For the purpose of carrying out the policy, there is hereby created a training center in the province to be known as the PDRRM Training Center in the Province to be known as the PDRRM Training Center which shall be established within the PDRRM premises.

**Provincial Ordinance No. 2016-009**

Institutionalizing the Alliance of Grassroots Responders (AGR) for Disasters and Emergencies in all Barangays of the Province of Davao del Norte, Appropriating Funds Therefore, and for Other Purposes

Section 5. Composition. The province-wide Alliance of Grassroots Responders for Disaster and Emergencies shall be composed of at least (10) physically-abled residents of each barangay who shall be duly appointed by the Provincial Governor as Responders. The composition shall be representative of all sectors in the community.

**Provincial Ordinance No. 2021 – 008**

Institutionalizing the One DavNor Responders for Disasters and Emergencies in all the Barangays of the Province of Davao del Norte, Appropriating Funds therefor, and for Other Purposes

**Provincial Ordinance No. 2023-003**

Establishing the Provincial Disaster Risk Reduction and Management Office

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## ACRONYMS AND ABBREVIATION

AFMA	Agriculture and Fishery Modernization Act
ARG	Automatic Rain Gauge
AWS	Automatic Weather Station
CBRMC	Community Based Road Maintenance Contracting
CCA	Climate Change Adaptation
CCCM	Camp Coordination and Camp Management
CDRA	Climate Disaster Risk Assessment
CISD	Critical Incident Stress Debriefing
DepEd	Department of Education
DILG	Department of the Interior and Local Government
DOH	Department of Health
DOST	Department of Science and Technology
DRR	Disaster Risk Reduction
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
GAD	Gender and Development
GIS	Geographic Information System
HEMS	Health Emergency Management System
ICS	Incident Command System
LCE	Local Chief Executive
LDRRMO	Local Disaster Risk Reduction and Management Office
LGU	Local Government Unit
MGB	Mines and Geosciences Bureau
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NBI	National Bureau of Investigation
NIPAS	National Integrated Protected Area System
NPAAD	Network of Protected Areas for Agricultural Development
OPLAN ANDAM	Operation Plan Advocacy on Natural Disaster Awareness and Management
PADRRMO	Provincial Alliance of Disaster Risk Reduction and Management Officers
PAGASA	Philippine Atmospheric Geophysical and Astronomical Services
PAGRO	Provincial Agriculture's Office

PDNA	Post Damage and Needs Assessment
PDRA	Pre-Disaster Risk Assessment
PDRRM	Provincial Disaster Risk Reduction Management
PDRRMC	Provincial Disaster Risk Reduction and Management Council
PDRRMD	Provincial Disaster Risk Reduction and Management Division
PDPFP	Provincial Development Physical Framework Plan
PENRO	Provincial Environment and Natural Resources Office
PEO	Provincial Engineers Office
PGSO	Provincial General Services Office
PGO	Provincial Governors Office
PHILVOLCS	Philippine Institute of Volcanology and Seismology
PPDO	Provincial Planning and Development Office
PSWDO	Provincial Social Welfare and Development Office
PVO	Provincial Veterinary Office
RDANA	Rapid Damage Assessment and Needs Analysis
SAFDZ	Strategic Agricultural and Fisheries Development Zone
SEC	Securities and Exchange Commission
SEEP	Socio-Economic and Ecological Profile
TEA	Tools Equipment Accessories
TWG	Technical Working Group
WASH	Water Sanitation and Hygiene
WLMS	Water Level Monitoring System
COVID 19	Corona Virus Disease 2019
ASF	African Swine Fever
EREID	Emerging and Re-emerging Infectious Disease

#### **DEFINITION OF TERMS**

(a) "*Adaptation*" - the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

(b) "*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.

(c) "*Civil Society Organizations*" Or "*CSOs*" - non-state actors whose aims are neither to generate profits nor to seek governing power. CSOs unite people to advance shared goals and interests. They have a presence in public life, expressing the interests and values of their members or others, and are based on ethical, cultural, scientific, religious or philanthropic considerations. CSOs include nongovernment organizations (NGOs), professional associations, foundations, independent research institutes, community-based organizations (CBOs), faith-based organizations, people's organizations, social movements, and labor unions.

(d) "*Climate Change*" - a change in climate that can't be identified by changes in the mean and/or variability of its properties and that persists for an extended period typically decades or longer, whether due to natural variability or as a result of human activity.

(e) "*Community-Based Disaster Risk Reduction and Management*" or "*CBDRRM*" - a process of disaster risk reduction and management in which at risk communities are actively engaged in the identification, analysis, treatment, monitoring and evaluation of disaster risks in order to reduce their vulnerabilities and enhance their capacities, and where the people are at the heart of decision-making and implementation of disaster risk reduction and management activities.

(f) "*Complex Emergency*" - a form of human-induced emergency in which the cause of the emergency as well as the assistance to the afflicted IS complicated by intense level of political considerations.

(g) "*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.

(h) "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.

(i) "*Disaster Mitigation*" - the lessening or limitation of the adverse impacts of hazards and related disasters. Mitigation measures encompass engineering techniques and hazard-resistant construction as well as improved environmental policies and public awareness.

(j) "*Disaster Preparedness*" - the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the Impacts of likely, imminent or current hazard events or conditions. Preparedness action is carried out within the context of disaster risk reduction and management and aims to build the capacities needed to efficiently manage all types of emergencies and achieve orderly transitions from response to sustained recovery. Preparedness is

based on a sound analysis of disaster risk and good linkages with early warning systems, and includes such activities as contingency planning, stockpiling of equipment and supplies, the development of arrangements for coordination, evacuation and public information, and associated training and field exercises. These must be supported by formal institutional, legal and budgetary capacities.

(k) "*Disaster Prevention*" - the outright avoidance of adverse impacts of hazards and related disasters. It expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance such as construction of dams or embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high-risk zones, and seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake.

(l) "*Disaster Response*" - the provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. Disaster response is predominantly focused on immediate and short-term needs and is sometimes called "disaster relief".

(m) "*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.

(n) "*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.

(o) "*Disaster Risk Reduction and Management*" - 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.

(p) "*Disaster Risk Reduction and Management Information System*" - a specialized database which contains, among others, information on disasters and their human material, economic and environmental impact, risk assessment and mapping and vulnerable groups.

(q) "*Early Warning System*" - the set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss. A people-centered early warning system necessarily comprises four (4) key elements: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received. The expression "end-to-end warning system" is also used to emphasize that warning systems need to span all steps from hazard detection to community response.

(r) "*Emergency*" - unforeseen or sudden occurrence, especially danger, demanding immediate action.

(s) "*Emergency Management*" - the organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.

(t) "*Exposure*" - the degree to which the elements at risk are likely to experience hazard events of different magnitudes.

(u) "*Geographic Information System*" - a database which contains, among others, geo-hazard assessments, information on climate change, and climate risk reduction and management.

(v) "*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.

(w) "*Land-Use Planning*" - the process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long-term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses.

(x) "*Mitigation*" - structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation, and technological hazards and to ensure the ability of at-risk communities to address vulnerabilities aimed at minimizing the impact of disasters. Such measures include, but are not limited to, hazard-resistant construction and engineering works, the formulation and implementation of plans, programs, projects and activities, awareness raising, knowledge management, policies on land-use and resource management, as well as the enforcement of comprehensive land-use planning, building and safety standards, and legislation.

(y) "*National Disaster Risk Reduction and Management Framework*" or "*NDRRMF*" - provides for comprehensive, all hazards, multi-sectoral, inter-agency and community-based approach to disaster risk reduction and management.

(z) "*National Disaster Risk Reduction and Management Plan*" or "*NDRRMP*" - the document to be formulated and implemented by the Office of Civil Defense (OCD) that sets out goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives.

The NDRRMP shall provide for the identification of hazards, vulnerabilities and risks to 'be managed at the national level; disaster risk reduction and management approaches and strategies to be applied in managing said hazards and risks; agency roles, responsibilities and lines of authority at all government levels; and vertical and horizontal coordination of disaster risk reduction and management in the pre-disaster and post-disaster phases. It shall be in conformity with the NDRRMF.

(aa) *"Post-Disaster Recovery"* - the restoration and improvement where appropriate, of facilities, livelihood and living conditions. of disaster-affected communities, including efforts to reduce disaster risk factors, in accordance with the principles of "build back better".

(bb) *"Preparedness"* - pre-disaster actions and measures being undertaken within the context of disaster risk reduction and management and are based on sound risk analysis as well as pre-disaster activities to avert or minimize loss of life and property such as, but not limited to, community organizing, training, planning, equipping, stockpiling, hazard mapping, insuring of assets, and public information and education initiatives. This also includes the development/enhancement of an overall preparedness strategy, policy, institutional structure, warning and forecasting capabilities, and plans that define measures geared to help at-risk communities safeguard their lives and assets by being alert to hazards and taking appropriate action in the face of an Imminent threat or an actual disaster.

(cc) *"Private Sector"* - the key actor in the realm of the economy where the central social concern and process are the mutually beneficial production and distribution of goods and services to meet the physical needs of human beings. The private sector comprises private corporations, households and nonprofit institutions serving households.

(dd) *"Public Sector Employees"* - all persons in the civil service.

(ee) *"Rehabilitation"* - measures that ensure the ability of affected communities/areas to restore their normal level of functioning by rebuilding livelihood and damaged infrastructures and increasing the communities' organizational capacity.

(ff) *"Resilience"* - the ability of a system, community or society exposed to hazards to resist, absorb, accommodate and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

(gg) *"Response"* - any concerted effort by two (2) or more agencies, public or private, to provide assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected and in the restoration of essential public activities and facilities.

(hh) *"Risk"* - the combination of the probability of an event and its negative consequences.

(ii) *"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. Risk assessments with associated risk mapping include: a review of the technical characteristics of hazards such as their location, intensity, frequency and probability; the analysis of exposure and vulnerability including the physical, social, health, economic and environmental dimensions; and the evaluation of the effectiveness of prevailing and alternative coping capacities in respect to likely risk scenarios.

(jj) *"Risk Management"* - the systematic approach and practice of managing uncertainty to minimize potential harm and loss. It comprises risk assessment and analysis, and the implementation of strategies and specific actions to control, reduce and transfer risks. It is widely practiced by organizations to minimize risk in investment decisions and to address operational risks such as those of business disruption, production failure, environmental damage, social impacts and damage from fire and natural hazard

(kk) *"Risk Transfer"* - the process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party.

(ll) *"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.

(mm) *"Sustainable Development"* - development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two (2) key concepts: (1) the concept of "needs", in particular, the essential needs of the world's poor, to which overriding priority should be given; and (2) the idea of limitations imposed by the state of technology and social organizations on the environment's ability to meet present and future needs. It is the harmonious integration of a sound and viable economy, responsible governance, social cohesion and harmony, and ecological integrity to ensure that human development now and through future generations is a life-enhancing process.

(nn) *"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.

(oo) *"Vulnerable and Marginalized Groups"* - those that face higher exposure to disaster risk and poverty including, but not limited to, women, children, elderly, differently-abled people, and ethnic minorities.

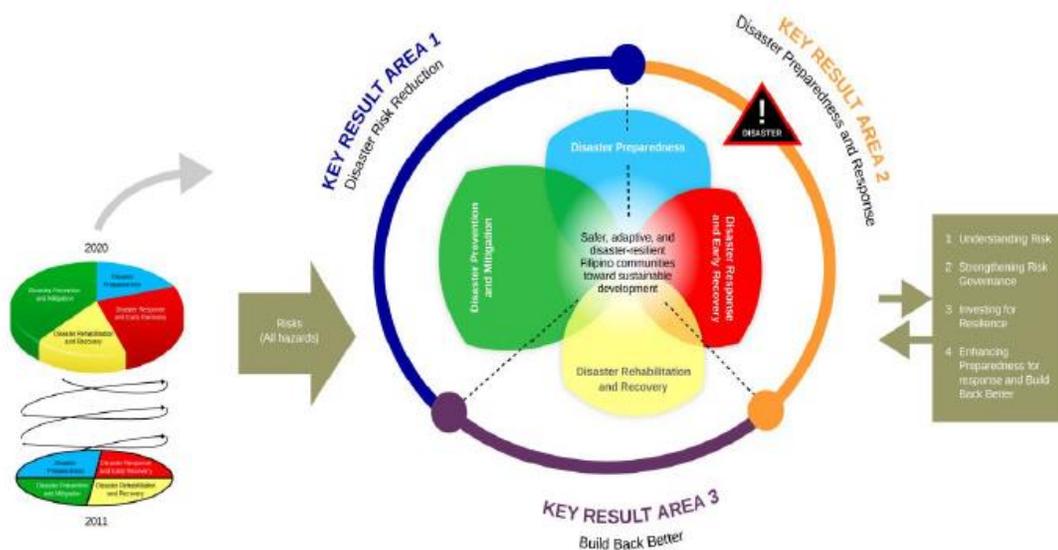
## **OVERVIEW OF THE PLAN**

The historical occurrence of natural and human induced hazards and the possibility of its reoccurrence exposed several populations to the adverse impacts. To strengthen resiliency in all sectors, the Provincial Government of Davao del Norte updated the Disaster Risk Reduction and Management Plan for 2024 - 2028.

Guided by the Sendai Framework for Disaster Risk Reduction the plan upholds the four (4) priorities of action, namely: Understanding disaster risk; strengthening disaster risk governance to manage disaster risk; Investing in disaster risk reduction for resilience; and Enhancing disaster preparedness for effective response, and to Build Back Better in recovery, rehabilitation and reconstruction.

Consistent with the Republic Act 10121 of 2010 the Plan also focuses on four thematic areas namely 1) Disaster Prevention and Mitigation, 2) Disaster Preparedness, 3) Disaster Response and 4) Disaster Rehabilitation and Recovery.

Conforming to the updated DRRM Plan of the Regional Disaster Risk Reduction and Management Council XI, the Provincial DRRM Plan was updated and aimed to achieve twenty-three (23) outcomes utilizing the Enhance Local DRRM Planning Guidebook. It also adopts the updated NDRRM Framework to align with the DRRM interventions of the regional and national DRRMCs.



The Ecological Profile provides information about the Provincial Situation with clear description of the geographic profile, demographic profile, weather, environmental, and economic information.

Information on the hazard, risks, vulnerability and capacity was gathered using the Climate and Disaster Risk Assessment tool based on the HLURB Guidebook (2015) to determine the level of exposure to disaster of exposed elements particularly population, urban use areas, natural resources, lifeline utilities and critical point facilities.

#### Target Setting

The PDRRM Plan envisions Davao del Norte communities are safer, adaptive, and resilient towards equitable, inclusive, and sustainable development. The plan sets down 4 impacts and 23 outcomes.

#### Disaster Mitigation and Prevention

To minimize potential disaster impacts & decreased hazard risks the efforts are focused on decreasing vulnerability and exposure of the population to all hazards and enhanced capacities of the institution to reduce the risks from all hazards.

#### Disaster Preparedness

Efforts are geared towards strengthened capacities of communities in anticipating, coping, & recovering from the negative impacts of emergency occurrences & disasters thus resulting to increase the level of awareness, skills, & attitudes of the communities to manage with the effects of disaster, enhanced the DRRM & CCA capacity of municipal, city, and barangay council members, offices and operating centers at all levels with best practices appreciated, as well as strengthened partnership and coordination among DRRM key players and stakeholders.

#### Disaster Response

To attain preservation of life and properties, ensure basic subsistence needs are met, and restoration of basic social services in affected areas, measures and coordination including basic services, as well as CCCM and relief operations are enhanced; search, rescue, and retrieval operations are made efficient; and monitoring on the prevention and control of overpricing/ profiteering and hoarding of prime commodities, medicines, and petroleum products is strengthened.

### **Disaster Rehabilitation and Recovery**

Communities and environment hit by disaster are able to fully recover with the building back-better approach, specifically through enhanced system of doing post damage assessment & needs analysis, planning, monitoring and evaluation, upgraded DRR-CCA resilient Infrastructure, agricultural and social facilities & utilities; strengthened/Improved DRR-CCA of human sensitivity on settlements, environment, livelihood opportunities; and strengthened the PLGU team that conducted psychological assessment to the Dabaonon after the disaster to restore them to normal condition physically/ spiritual & morally.

### **Timeline and Implementation of the PDRRMP**

The plan shall be implemented in CY 2024 to 2028 by the various agencies of the provincial government of Davao del Norte.

### **Local DRRM Fund Investment Program**

The Local Disaster Risk Reduction and Management Fund Investment Program was prepared to support the outlined Programs, Projects and Activities in addressing DRRM issues and concerns on the ground. In this section the funding requirements of the PPAs indicated in the short- and medium-term targets were identified along with mapping out the fund sources and supplemental investment program for the Special Trust Fund.

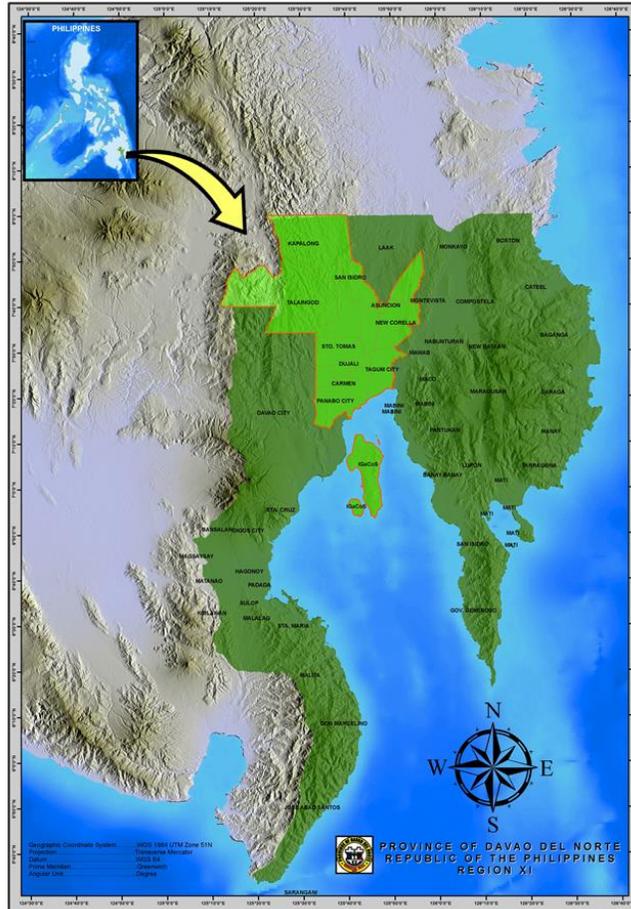
### **Monitoring and evaluation**

In the last part of the plan the monitoring and evaluation strategy were laid to keep track of the progress of the implementation of the PDRRM Plan. To monitor and evaluate, the indicators will be used against targets and activities identified in each of the four (4) thematic areas of the PDRRM Plan.

## ECOLOGICAL PROFILE

### Geographic Profile

Davao del Norte is strategically located at the southeastern part of Region XI, bounded by Agusan del Sur on the North, Bukidnon on the Northwest, Davao City on the West, Davao Gulf on the South and the Province of Davao de Oro on the East. It has a total land area of 360,851.61 hectares. Davao del Norte had an initial composition of 13 municipalities when it was created on May 8, 1967. On May 6, 1970, six additional municipalities were created, and another three additional municipalities were also created between 1979 and 1990. In 1996, Davao del Norte had a total of twenty-two municipalities. Later on January 31, 1998, President Fidel V. Ramos signed Republic Act No. 8470 creating the Province of Compostela Valley to separate from Davao del Norte. Along with the creation of Compostela Valley, were: the enactment of Republic Act No. 8471, creating the Island Garden City of Samal comprises the former municipalities of Babak, Samal and Kaputian; Republic Act 8472 converting Tagum Municipality into Tagum City, the seat of the provincial government center of Davao



del Norte; and Republic Act 8473 creating the municipality of Braulio E. Dujali out of some barangays from Carmen and Panabo municipalities. Subsequently, on March 31, 2001 by virtue of Republic Act 1015 the Municipality of Panabo was also converted into a city. And lately, the Municipality of San Isidro was created on March 15, 2004 pursuant to Republic Act 9265. It was taken from six barangays of the Municipality of Asuncion and seven barangays from the Municipality of Kapitalong. At present, Davao del Norte comprises eight (8) municipalities and three (3) cities with 223 barangays, sub-divided into two congressional districts. (Table No.3-1)

Kapalong is the biggest municipality in terms of land area with 83,808.97 hectares. Talaingod comes second with 62,040.62 hectares. There is 30,634.21 hectares of land in Talaingod, the management and jurisdiction of which cannot be authoritatively determined as the boundary is in conflict with the province of Bukidnon. On the other hand, the smallest municipality is Tagum City in District I and Carmen in District II with 18,668.11 and 15,436.54 respectively.

**Table No. 1: Land area of cities/municipalities, by district, Province of Davao del Norte**

City/Municipality	Total Area (has.)
<i>District I</i>	
Asuncion	28,734.36
Kapalong	83,808.97
New Corella	24,981.17
San Isidro	16,066.50
Tagum City	18,668.11
Talaingod	62,040.62

Talaingod vs Bukidnon	30,634.21
<i>District II</i>	
B. E Dujali	8,560.89
Carmen	15,436.54
IGACOS	28,125.16
Panabo City	24,849.71
Santo Tomas	18,945.39
<b>Total</b>	<b>360,851.61</b>

## Demographic Profile

Davao del Norte has a total population of 1,125,057 based on the 2020 Census of Population and Housing in May 2020 conducted by the Philippine Statistics Authority. Its population density of 329 persons per square kilometer is the highest in Region XI. The population growth rate (PGR) of 2.16 percent (2015-2020 intercensal years) is the fastest among all of the five provinces in the region. The province is a melting pot of people originating from various ethnic groups who migrated to Davao del Norte to seek better economic opportunities.

City/ Municipality	Total Population
Asuncion	61,893
Carmen	82,018
Kapalong	81,068
New Corella	57,913
City Of Panabo	209,230
Island Garden City of Samal	116,771
Santo Tomas	128,667
City Of Tagum	296,202
Talaingod	28,333
Braulio E. Dujali	35, 729
San Isidro	27, 233
Davao Del Norte	1,125,057

Tagum City has the greatest population with 296,202 individuals and Panabo City comes second with 209,230 individuals. San Isidro Municipality has the least population with 27,233.

## Local Economy

The economy of the province is primarily agricultural-based. Vast tracts of land are devoted to agricultural production of staple and industrial crops. About 63.41% of the total income generated by the province comes from agricultural production, while 22.98% is contributed by the industries sector followed by the 5.86% from the services sector. In terms of contributions to the income of the province from the agriculture sector, cavendish banana contributed the most among the major crops. This is followed by coconut production and rice. (*Executive Legislative Agenda 2022 -2025*)

Davao Region's economic performance in 2021 as measured by the Gross Regional Domestic Product (GRDP) and Gross Regional Domestic Expenditure (GRDE), has recorded a significant increase of 5.9 percent from the negative 7.5 percent in 2020. (PDPFP 2023)

All 16 industries of GRDP posted positive growths in 2021. Among the industries, Mining and Quarrying had the fastest growth with 21.9 percent, followed by Human health and social work activities with 14.6 percent; Construction with 12.5 percent; and Accommodation and food service activities with 10.8 percent. Overall, the 5.9 percent economic performance of the region is accounted for Services of 3.3 percentage points, and 2.5 percentage points, 0.1 percentage points contributed by Industry and Agriculture, forestry and fishing, respectively. (PDPFP 2023)

## **Infrastructure and Physical Base**

### **Water**

Water services in component cities and even in some municipalities are provided by the Local Water Districts which are operating under the technical and financial assistance of the Local Water Utility Administration (LWUA). Government constructed water systems are also catering the water needs of the other areas which are operated and managed either by the Rural Waterworks and Sanitation Associations (RWSAs), municipal and barangay government, water committees or merely association. [Socio Economic and Ecological Profile (SEEP) 2020]

### **Sanitation**

Adequate sanitation and toilets are basic necessities that ensure and promote the health of people. The importance of sanitation and toilets lies in helping reduce the spread of diseases. There are no sewerage facilities with treatment plant in the province. Domestic wastewater is disposed through septic tanks, storm drainage, canals and other disposal system without treatment. Excreta are commonly disposed by households through septic tanks and closed pits. As of 2018, 90% of the total households are using sanitary toilets. Tagum City, New Corella, Panabo City and Isidro have the highest number of households using sanitary toilets, while Talaingod has the least number of households using sanitary toilets. (SEEP 2020)

### **Power/Electricity**

Panabo City and municipalities of Carmen, Sto. Tomas and B.E. Dujali, the electricity are being provided by Davao Light and Power Company (DLPC), while Tagum City, Island Garden City of Samal, municipalities of Asuncion, Kapalong, Talaingod, San Isidro and New Corella are covered with Davao del Norte Electric Cooperative (DANECO). Both distributors obtained their electric power from Mindanao's power grid of the National Power Corporation (NPC). DANECO has a power capacity of 98.66 MW comprising eleven (11) substations of its entire coverage including Compostela Valley Province. There are four (4) sub-stations located in Tagum City with a total capacity of 60 MVA and one (1) in Asuncion with 20 MVA in 2017. The DLPC has four (4) sub-stations with a total capacity of 80 MVA. (SEEP 2020)

### **Drainage System**

The existing drainage network in the province is not sufficient to contain floods especially in the lowland areas. Several measures were already taken such as improvement of the drainage facilities, re-channeling and de-silting of creeks and rivers and watershed management which were long term schemes.

However, as urban areas are expanding due to development and rapid increase in population, urban drainage systems remain constant and under sub-standard conditions. Some are of inadequate designs to cater the discharge/volume of water, which aggravated the drainage problem of the area. (SEEP 2020)

### **Flood Control**

Major flood control projects and structures had been constructed by the Department of Public Works and Highways, such as: Libuganon Flood Control, Carmen Flood Control, Tuganay Flood Control, Lasang Flood Control and Tagum Drainage.

Disaster preparedness and management has always been the main concern of the Provincial Disaster Risk Reduction and Management Council. Massive advocacy and capability building programs had been undertaken which were actively participated by the local officials, rescue teams and the general public. Civic and non-government organizations also provided support and active involvement during floods.

To prepare for the increasing need to rehabilitate the province’s major tributaries, the formulation of the integrated master plan and the creation of a management council to rehabilitate the Tagum Libuganon River Basin (TLRB) become an important priority. The river basin covers 306,400 hectares covering 14 municipalities and 1 city in the provinces of Davao del Norte, Compostela Valley and Agusan del Sur. TLRB plays a central role in the economic and ecological viability of Davao del Norte since most of its LGUs are affected by flashfloods when the Libuganon River and its tributaries swell during the onslaught of typhoons and low-pressure areas, namely: Asuncion, Carmen, Dujali, Kapalong, New Corella, San Isidro, Sto. Tomas, Tagum City and Talaingod.

Davao del Norte has a total of 407.26 hectares identified as flood prone areas, and represents 45% share in the whole region. The municipality of Carmen has the largest area of 100.93 hectares or 11% share in the flood prone areas of the province.

Flooding problems need both the short term and long-term control measures. Provision of flood control measures such as construction of protection dikes, cutoff channels, cross drainage along highways, de-siltation of rivers are among the immediate solutions. Since denudation of the vegetative cover has been identified as the main cause of floods, reforestation and watershed rehabilitation programs is also undertaken as long-term activities. Agricultural and other economic activities in the upland should also consider the aspect of maintaining a healthy ecological balance in sustaining the ecosystems and preventing environmental hazards.

#### Solid Waste Management

The R.A 9003 known as Ecological Solid Waste Management Act of 2000 Solid waste disposal in the province is a vital component in environmental protection. However less attention has been afforded by most LGU’s. The passage of R.A. 9003 otherwise known as Ecological Solid Waste Management Act of 2000 mandated each LGU’s Barangays, Municipality/City for the mandatory implementation. (SEEP 2020)

#### Environmental Management and Natural Resources

##### Existing Landuse

Existing land use is defined as the way in which an area of land is actually being put to use, e.g. to grow rice, to build houses on, to put up industry; this is the impact of people and structure upon the land. The existing land use pattern is a basis for planning for the future.

Existing land uses in the province in 2020 are categorized into the following:

1. Settlement areas
2. Production areas
3. Protection areas
4. Infrastructure and Utilities

Existing Land Use, 2020	Area (has)	% Total
Settlements/Built-up	12,331.78	3.40
Protection	123,594.77	34.25
Production	213,229.69	59.09
Infrastructure	11,753.50	3.25
TOTAL	360,851.76	100%

##### Settlement Areas

Urban residential areas are concentrated in the poblacion or town/city center, while rural residential areas are concentrated within the barangay site. The province has an existing settlement of 12,331.78 ha. Large concentrations of residential areas and built-up areas are mainly in the urban centers of Tagum City and Panabo City, Island Garden City of Samal and Sto. Tomas. The built-up environment is composed of the following:

- ✓ Tourism
- ✓ Residential
- ✓ Socialized Housing
- ✓ Commercial
- ✓ Agri-Industrial
- ✓ Industrial
- ✓ Institutional
- ✓ Cemeteries/Memorial Parks
- ✓ Parks and Recreation

#### Protection Areas

Protection land is a portion of land and water set aside for its unique physical and biological diversity and protected against destructive human influences or impacts.

Protection refers to the rehabilitation, conservation and sustainable development and management of certain categories of land and water resources known as protection lands.

Protection land use involves a concept of protection that enhances not only those that have to be protected from human occupation because of the destructive effect, such occupation, will have on the resource but also due to the hazard posed by the area to the human occupants. Hence, dual objective of maintaining protection land is to protect sensitive and critical ecosystem from human intrusion so as to preserve their integrity, and at the same time allow degraded areas to regenerate as well as to protect human population from environmental hazards.

Davao del Norte's protection lands include the Network of Integrated Protected Area Systems (NIPAs) of the mangrove swamp forest reserve in Babak, and the Non-NIPAS which include the Network of Protected Areas for Agricultural Development/Strategic Agriculture and Fisheries Development Zone (NPAAD/SAFDZ).

- ✓ Protection Forest and Forestlands
- ✓ Protection Agriculture
- ✓ Protection Water
- ✓ Environmentally Critical Areas

#### Protection Forest and Forestlands

The National Integrated Protected Areas System (NIPAS) was established under Republic Act No. 7586. Protected areas categorized under NIPAs are: 1) strict nature reserve, 2) national park, 3) natural monument, 4) wildlife sanctuary, 5) protected landscape and seascape, 6) resource reserve, 7) natural biotic, and other categories established by law, conventions or international agreements which the Philippine Government is a signatory.

Non-NIPAS areas include the second growth forest (PD 705), mangrove and fish sanctuaries (RA 8435 & RA 8550), buffer strips and easements (PD 705 & PD 1067), salvage zones along foreshore lands (PP 2146), freshwater swamps and marshes (PP 2146), environmentally critical areas (PD 2146), protected agricultural areas (RA 8435 & RA 8048) and other protected areas.

In Davao del Norte, Non-NIPAS areas cover second growth forest above 1000 m. elevation or more than 50% slope, mangrove forest and buffer strips along rivers and escarpments. Approximately, 47,758.83 hectares are under this category of protection lands.

Primary (old) growth or protection forests of 54,771.84 hectares are found in all the municipalities and cities of the province. These areas have to be protected through implementation of efficient and sustainable forest management scheme. Primary growth forest which consists of old growth and mossy forest are located in areas with slope of above 50% and elevation of 1000 meters above sea level (masl) or more. Kapalong and Talaingod had the most of the old growth forests that need to be protected.

Davao Penal Colony (Dapecol) with an area of 28,816 hectares is the only military and civil reservation in the province. The area was declared as such through Proclamation No. 414 on October 7, 1931. Most of these areas, however, are now utilized for agricultural purposes, particularly banana plantation and only about 8,880 hectares are actually used by the penal colony.

Protection Agriculture

SAFDZ/NPAAD Areas

Strategic Agriculture and Fisheries Development Zones (SAFDZ)/ Network of Protected Areas for Agricultural Development (NPAAD) under RA 8435 (Agriculture and Fisheries Modernization Act) area in the province is accounted at 129,623.85 hectares. In SAFDZ classification, 123,067.91 hectares or 94.9 % are identified as Strategic Crop Sub-Development Zone, 3,103.11 hectares or 2.3 % as Strategic Fishery Sub-Development Zone, 3,542.83 hectares or 2.7 % as Strategic Livestock Sub-Development Zone.

Network of Protected Areas for Agricultural Development (NPAAD) classify some agricultural lands to be “protected” against any irreversible conversions such as into urban/non-agriculture use. The main purpose of such protection is to keep and preserve the highly suitable agricultural lands for long-term food security of the nation. In addition, these lands are usually supported by large investment in agri-infrastructures. Some NPAAD in Davao del Norte covers agricultural lands that are ecologically fragile.

Irrigated and irrigable lands

The irrigated and irrigable lands within the SAFDZ have been identified as protection agriculture. As defined by the Department of Agriculture, irrigated lands refer to lands serviced by natural irrigation or irrigation facilities. These include lands where water is not readily available as existing irrigation facilities need rehabilitation or upgrading or where irrigation water is not available year-round. Within Davao del Norte, irrigated lands is estimated at 12,667.19 ha.

Protection Waters

Protection waters include fishery refuge and sanctuary, fishery reserve, delta/estuary, lake, mangrove and marshes. The area of protection water in the province is estimated at 6,902.12 ha. It has a total mangrove area of 208.56 hectares. Among the coastal areas of the province, Panabo City has the largest area planted with mangrove with 109.87 hectares. Mangroves are found on the southern coastlines of Panabo, Carmen and Tagum down to the Island Garden City of Samal on the northern and western coastline.

Seagrass beds are confined to relatively small patches of shallow intertidal and sub-tidal areas. The seagrass area in Davao del Norte is at 1,402.4 hectares, understandably, most of which are in the Island Garden City of Samal. The coral reef area in Davao del Norte is also highly concentrated in the Island Garden City of Samal.

- ✓ Production Areas
- ✓ Production Forest
- ✓ Production Agriculture
- ✓ Production Water
- ✓ Mining/Quarrying

Production Forest

Forestlands are lands on which the vegetation is characterized by more or less dense and extensive tree cover. It includes those lands from which trees have been harvested with the intent to maintain the land

for tree production and others to set aside for the protection to preserve other valuable resource. In Davao del Norte, DENR-PENRO classified 135,718.21 hectares as forestland areas, composed of the production and protection forests. The production forest is at 68,208.52.

There have been efforts for the development and rehabilitation of production forests in the province. Both the Department of Environment and Natural Resources and Local Government Units have been in the forefront in the implementation of programs and projects on such concern, with the able participation of communities.

#### Production Agriculture

Agriculture lands as defined are those lands that are extensively used for crop production. They are intended for the production of cash crops, sustenance crops, medium term and long term crops. The province is basically an agriculture province endowed with rich and fertile soil, and favorable climate suited for agriculture production.

#### Production Waters

The total production water consists of mariculture, aquaculture, commercial and municipal fishing area is at 6,902.12 ha. Inland aquaculture/fishpond development occupies an area of 2,021.50 hectares. Large fishpond is found in the municipalities of Carmen and B.E Dujali and in the cities of Tagum and Panabo.

#### Mining/Quarrying

Davao del Norte have rich deposits of non-metallic minerals like limestone, sand and gravel and others. It has a total reserve of 44,845,283 M.T of non-metallic minerals. Of these non-metallic minerals, sand and gravel of high-quality grade, a major component material in construction is extracted in the province. Major producers of sand and gravel are the cities of Panabo and Tagum.

#### Infrastructure

The total area used for infrastructure and utilities in Davao del Norte is estimated at 11,753.50 hectares. This consists of Bus and railway depots and terminals, port facilities and all other types of transportation complexes, Pumping plants [water supply, storm drainage, sewerage, irrigation and waste treatment plants), Liquid and solid waste management facilities, Climate monitoring facilities and telecommunication facilities such as cell (mobile) phone towers.

#### Protection Landuse Policies

Davao del Norte shall rehabilitate at least 5 percent of its forest cover. This can be done by intensifying the existing forest management and rehabilitation programs and projects e.g. Upland Development Program, National Greening Program, Small Watershed Rehabilitation and the implementation of the Tagum-Libuganon River Basin Master Plan in the entire province. The declaration of Pantaron Mountain Range as a Local Conservation Area (LCA) and eventually as NIPAS shall be of utmost priority.

Environmental Impact Assessment of all proposed road sections traversing classified forestland shall be fully imposed by the DENR as a pre-requisite for the approval of such projects. The province shall expand its Social and Environmental Safeguards (SES) Assessments to local road projects. Existing roads and other infrastructure facilities and utilities within classified forestlands shall also be assessed as to their environmental impact.

Mining operations in the forestlands shall be strictly regulated and conducted with due regard to protection, development and utilization of other surface resources. Mining laws, rules and regulations of the DENR shall govern the location, prospecting, exploration, utilization or exploitation of mineral resources in forest reservations.

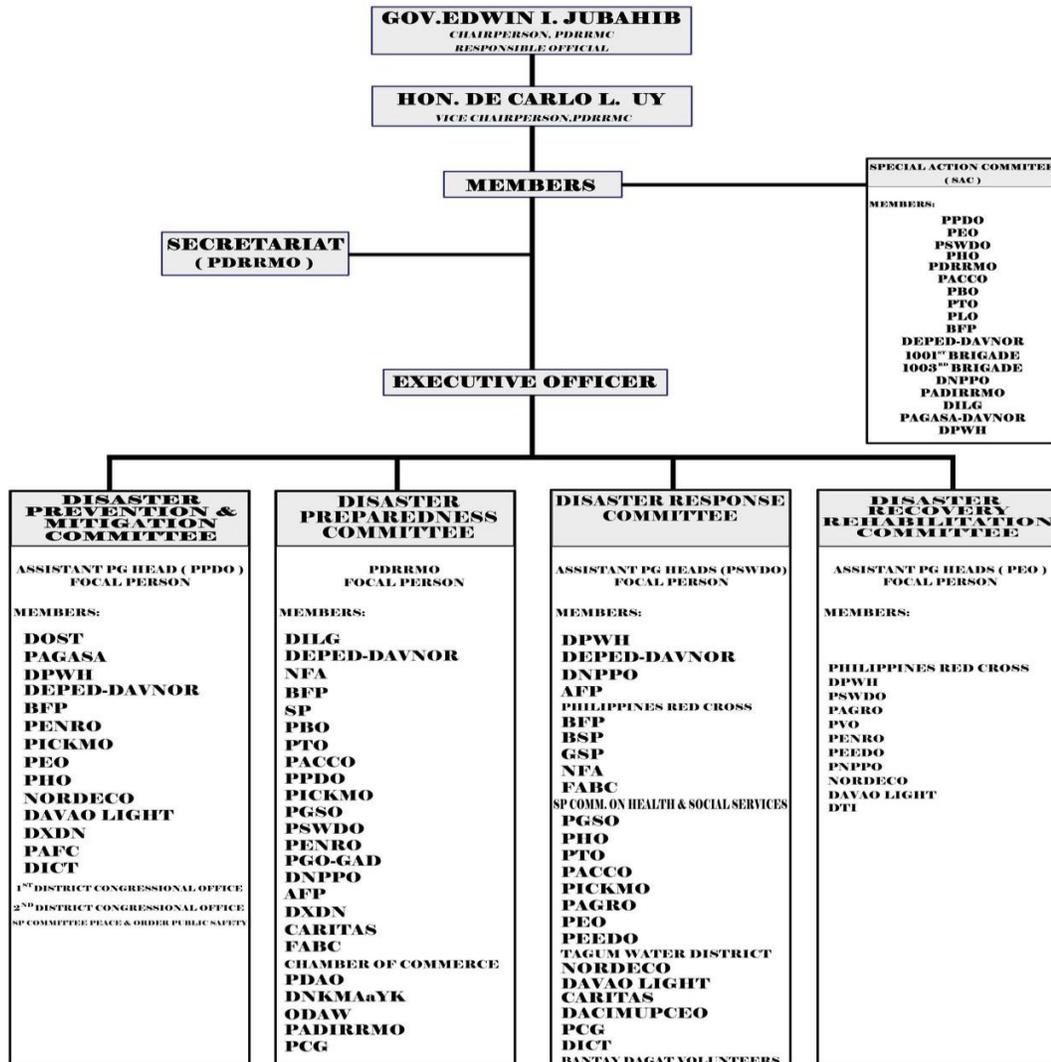
Two of the major challenges plaguing the protection areas are the 1) Non-demarcation of boundaries of protection areas resulting to prevailing open access areas and in turn expansion of settlements within the identified forestlands and coastal areas and 2) vulnerability of the forest sector to hazards brought about by climate change. To address these issues the following strategies/policies shall be pursued:

- The Forest and Forestland of Davao del Norte shall be delineated into management zones where activities shall be identified, regulated and managed. Zoning will address the sometimes conflicting and multiple use demands in forest resources. With a zone system in place, responsible resource managers can be assigned to these areas to avoid environmental destruction and minimize conflicts between and among community members who directly or indirectly benefit from these resources.
- Classified forestlands with slopes 50 percent above and areas with elevation of above 1,000 masl shall be considered as permanent forest permanently covered with forest vegetation. Denuded areas falling under this category shall be subjected to immediate reforestation.
- Denuded areas classified as forestlands which are presently utilized for agricultural purposes shall be subjected to a detailed inventory and assessment by the DENR in coordination with DA and other concerned LGUs. All areas found to be suitable for agricultural use shall be subjected to agro-forestry, while those found not suitable for agriculture will be subjected for reforestation.
- Extractive activities in the forestlands shall be strictly regulated and conducted with due regard to protection, development and utilization of other surface resources.
- Environmental Impact Assessments of all proposed road sections, road right of way and telecommunication facilities traversing classified forestland and hazard prone areas shall be submitted to the DENR and other appropriate agencies for review and approval as a prerequisite for approving the projects.
- Environmental protection and rehabilitation shall go along side with the enhancement of economic and human resources in the province.
- Areas classified as Protection Agriculture Areas shall be reevaluated based on current functional role to allow for its optimum use.

INSTITUTIONAL (LDRRMC and LDRRMO Structure)



**PDRRMC**  
**ORGANIZATIONAL STRUCTURE**



**RISK PROFILE**

**CLIMATE INFORMATION OF THE PROVINCE**

**Historical Rainfall Record**

The effects of climate change are now being felt in the Province of Davao del Norte. Impact of climate change has affected the province’s forest, biodiversity, water, agricultural, fishery resources and cultural assets with wide-range adverse impact on human health and loss of life.

The province has a Type IV climate according to the coronas classification. It is known for its unpronounced dry and wet seasons. Rainfall occurs evenly throughout the year without distinct rainy or dry seasons. Historically, this has been the typical weather pattern in the province. However, from 2019 to 2021, there appears to be a trend of increased rainfall, particularly from April to August, with rainfall amounts exceeding 200 mm. This trend, however, changed in 2022, with the highest rainfall occurring only in April. The increase in rainfall can be attributed to the presence of a low-pressure area and intertropical convergence zone. Unlike in the past, Davao del Norte is no longer immune to typhoons. The province experienced,

Tropical Cyclone Pablo in in December 2012, tropical depression Vicky in December 2020 and tropical storm Dante in May 2021, resulting in damage to infrastructure and agriculture. The level of rainfall during the rainy months in the province has varied over the past 5 years. The provincial rainfall trend showed a peak in 2021, but it slowly decreased in 2022.

**Table 2. Monthly and Annual Rainfalls (in mm), 2018 to 2022, Davao del Norte**

MONTH	2018	2019	2020	2021	2022
January	124.6	299.5	146	170	332.5
February	121.2	36.5	45	339	201.18
March	90.6	108	66.5	94.8	286
April	111.6	34	33.5	332.45	648.008
May	20.2	301.5	272.5	458.5	189
June	51.9	304	314.5	406.5	74.54
July	121	240	136.5	297.5	198.84
August	54	231	278.5	235.6	87.92
September	33.5	180	192	218	14.95
October	459.5	227	174.5	190.5	21.69
November	91	113	70	294	30.98
December	145	206.5	249	135	34.89
<b>Total Rainfall (mm)</b>	<b>1,424.10</b>	<b>2,281.00</b>	<b>1,978.50</b>	<b>3,171.85</b>	<b>2,120.50</b>
<b>Total no. of Rainy Days per year</b>	<b>123</b>	<b>155</b>	<b>188</b>	<b>210</b>	<b>199</b>
<b>Average Rainfall (mm)</b>	<b>11.58</b>	<b>14.72</b>	<b>10.52</b>	<b>15.10</b>	<b>10.66</b>

Source: PDDRMD-Davao del Norte Automated Weather Station

Based on historical data of 30 years (20) as shown in table 3-21 December, January and February (DJF) months poured a lot of rainfall in the province at 637 mm. The amount rainfall reduced during the months of March, April and May (MAM) and then increase again from the months of June, July and August (JJA) to September, October and November (SON) until it reaches the rainy months of December to February.

The scenario as indicated in table 2, in 2036 and 2065 shows a reduction in rainfall in the province during the dry seasons. While dry season becomes drier, wet season becomes wetter as huge amount of rainfall is projected to drop in the months of December to February. However, the current rainfall data shows an even lower rainfall value. The September, October and November (SON) of 2022 shows an even lower rainfall at only 67.62 mm value. Other monthly categories also indicate rainfall values ranging from 200 – 400 mm.

**Table 3. Baseline and Projected Rainfall Change (in%): 2036-2065**

Season	Observed baseline (1971-2000)	Range*	Projected Change (2036-2065)	
			Percent (%)	Projected Rainfall Value (mm)
December-January-February (DJF)	637	Lower Bound	-11.7	562.3
		Median	-2.1	623.6
		Upper Bound	24.2	791.3
March-April-May (MAM)	496.5	Lower Bound	-10.6	443.9
		Median	-2.4	484.5
		Upper Bound	11.6	553.9
June-July-August	535.6	Lower Bound	-12.6	467.9
		Median	-2.8	520.4

(JJA)		Upper Bound	13.0	605.5
September- October- November (SON)	556.2	Lower Bound	-22.3	432.4
		Median	-11.0	495.2
		Upper Bound	10.5	614.5

Source: PAG-ASA (Observe Climate Change and Projected CC in the Philippines) - CDRA

Humidity is a measure of how much water vapor is in the air. Relative humidity, on the other hand, refers to the ratio of the actual amount of water vapor in a given volume of air to the maximum amount of vapor that can be held at the current temperature. In Table No. 3-19, you can find the average monthly relative humidity data for the province of Davao del Norte from 2018 to 2022. Over the past five years, the average humidity has ranged from 67 to 73. It's evident that, based on the previous Provincial Development and Physical Framework Plan (PDPFP), there has been a significant decrease in relative humidity compared to the period from 2009 to 2013 when the average was 89.01. The present years show a decrease of 19.01 in relative humidity.

**Table 4. Average Monthly Relative Humidity Province of Davao del Norte, 2018-2022**

Month	2018	2019	2020	2021	2022
January	83	72	64	77	70
February	81	63	58	74	70
March	77	65	57	71	72
April	78	62	61	68	73
May	74	68	69	75	73
June	75	73	74	72	69
July	68	66	73	68	70
August	67	76	72	64	68
September	67	62	70	68	63
October	67	67	75	69	69
November	70	65	74	73	72
December	73	68	75	70	73
<b>Average (%)</b>	<b>73</b>	<b>67</b>	<b>69</b>	<b>71</b>	<b>70</b>

Source: PDDRM-Davao del Norte Automated Weather Station

### Historical Temperature Record

According to historical data presented in Table 5, Davao del Norte has experienced different mean seasonal temperatures over a 30-year period from 1971 to 2000. During the summer months from March to May, the temperature has been hot, averaging at 27.8°C. On the other hand, the rainy months of December to February have colder temperatures, averaging at 26.7°C. For the remaining months, the temperature stands at 27.4°C. When comparing the temperatures, the months of March, April, and May have average temperatures higher by 1.1°C compared to December, January, and February, and 0.2°C higher compared to the other months.

Table 5. Baseline and Projected Temperature: 2036-2065

Season	Observed baseline (1971-2000)	Range*	Projected Change (2036-2065)	
			Change in °C	Projected Seasonal Mean Temperature (°C)

<b>December- January- February(DJF)</b>	<b>26.7</b>	Lower	1.4	28.1
		Median	1.6	28.3
		Upper	2.2	28.9
<b>March- April-May(MAM)</b>	<b>27.8</b>	Lower	1.5	29.3
		Median	1.7	29.5
		Upper	2.3	29.7
<b>June-July- August(JJA)</b>	<b>27.4</b>	Lower	1.3	28.7
		Median	1.6	29.0
		Upper	2.3	29.7
<b>September- October- November(SON)</b>	<b>27.4</b>	Lower	1.3	28.7
		Median	1.6	29.0
		Upper	2.2	28.6

The temperature is expected to further increase in 2036-2065 given the high-range and medium-range scenarios. Although the highest increase in temperature is during the months of June, July and August in 2036-2065 under the medium-range emission scenario but still the hottest months would be from March to May as indicated in the table below.

**Table 6. Projected Maximum and Minimum Temperature Increase: 2036-2065**

Range	1971-2000 Baseline				Temperature Change (°C) Projections 2036-2065							
	Baseline Observed (°C)				High-Range Emission Scenario				Medium-Range Emission Scenario			
	DJF	MAM	JJA	SON	DJF	MAM	JJA	SON	DJF	MAM	JJA	SON
Lower Values	22.1	22.7	22.7	22.6	1.4	1.5	1.3	1.3	1.0	1.0	1.0	1.0
Normal Values	26.7	27.8	27.4	27.4	1.6	1.7	1.6	1.6	1.2	1.2	1.2	1.2
High Values	31.2	32.8	32	32.3	2.2	2.3	2.3	2.3	1.8	1.8	1.8	1.8

Source: PAG-ASA (Observe Climate Change and Projected CC in the Philippines) - CDRA

In the past five years average monthly temperature however indicates that the hottest months fall under the months of June, July and April. The past five years average monthly temperature ranges from 27 to 31 degrees Celsius.

**Table 6.1. Projected Maximum and Minimum Temperature Increase: 2036-2065**

Month	2018	2019	2020	2021	2022
January	27	28	30	28	28
February	29	28	31	28	28
March	29	29	31	28	29
April	29	30	31	30	29
May	29	31	31	29	29
June	31	30	29	29	30
July	32	30	29	30	30
August	31	29	30	31	30
September	30	31	30	30	31
October	30	30	28	30	30

November	29	31	-	29	31
December	29	29	-	29	28
Average Temperature (in °C)	29.58	29.67	30.00	29.25	29.42

### HAZARD PROFILE

The Province of Davao del Norte is vulnerable to both natural and human-induced hazard. Natural hazards include flooding, rain-induced landslide, sea level rise, storm surge, liquefaction, fault line and sink holes. Meanwhile, human-induced hazards identified in the Province are Structural fire, Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE), Human, Animal and Plant Diseases (EREID, ASF, AIV, Fusarium Wilt), Armed Conflict, Terrorist Attack and Agricultural Pollution.

The level of risks on the likelihood to occur of the identified hazards were categorized as: HIGH which means there is high probability of occurrence; MEDIUM means occasional and seldom to happen; and LOW with low probability of occurrence or improbable-less likely to occur.

The extent of damage or the level of risks on the impacts of hazards were also categorized as:HIGH which means high impact with major damages and also high severity which is catastrophic and critical; MEDIUM means with medium impact and moderate damage; and LOW means with low impact and minor damage.(CDRA 2023)

#### Flooding

Historically, flooding is frequent in the province with an estimated occurrence of once every year, usually along Tagum-Libuganon and Saug Rivers areas. Alluvial plains of Davao del Norte are mostly affected by flooding due to its low physiography and the inability of the nearby rivers to cope with high flood discharge due to heavy siltation of the rivers and other waterways, thereby limiting the physical and economic productivity of the land. About 360 square kilometers or 11.20 percent of the total provincial lands are prone to flooding. The municipalities of Carmen, Asuncion, B.E. Dujali, Kapalong and New Corella, and the City of Tagum are among the LGUs with a large area prone to flooding. Floods (river flooding, dike overflows, sheet flooding and urban flooding) and flashflood incidence in the past has become a challenge to the resiliency of the Davaonons. In the recent year minimal flooding has been recorded due to the dredging activities in Tuganay and Libuganon Rivers.

The recurrence of floods almost every year in the province reveals its vulnerability to the hazard based on the flooding events recorded from year 2013 to 2022. The municipalities of Carmen, B.E. Dujali, Asuncion, New Corella, Kapalong and the City of Tagum are mostly affected by flood occurrences. The lowland areas of these municipalities form the greater plain area and the central part of the province. Flood events usually occur in the first and the last quarter of the year. Population displacement usually happened during flooding. Agricultural lands, crops, livestock and infrastructure were also destroyed or damaged every time flooding occurs.

In December 4, 2012, typhoon Pablo hit Davao del Norte and caused massive destruction in the province and its neighboring provinces of Compostela Valley and Davao Oriental. A 25mm per hour rainfall was recorded in the Automatic Weather Systems installed at the PDRRMC

Operations Center in the Provincial Capitol at the height of the typhoon. The recorded rainfall intensity was more than enough to submerge most areas of Davao del Norte, particularly the flood prone areas and those areas lying along the major river courses of Libuganon, Saug, Tuganay and Hijo river damaging Php 2.62 Billion of the Banana Industry. Around 13,600 cavendish banana workers were greatly affected by losing at least Php 300.00 per day for four to nine months. In an unabated condition, affected populace clamored for government assistance and subsidies, and a number of them were added to the recipients to the 4Ps program of the government. Tropical Storm Vinta also contributed to losses incurred by the province in 2017 amounting to P 194, 696,910.23 in Agriculture and livelihood.

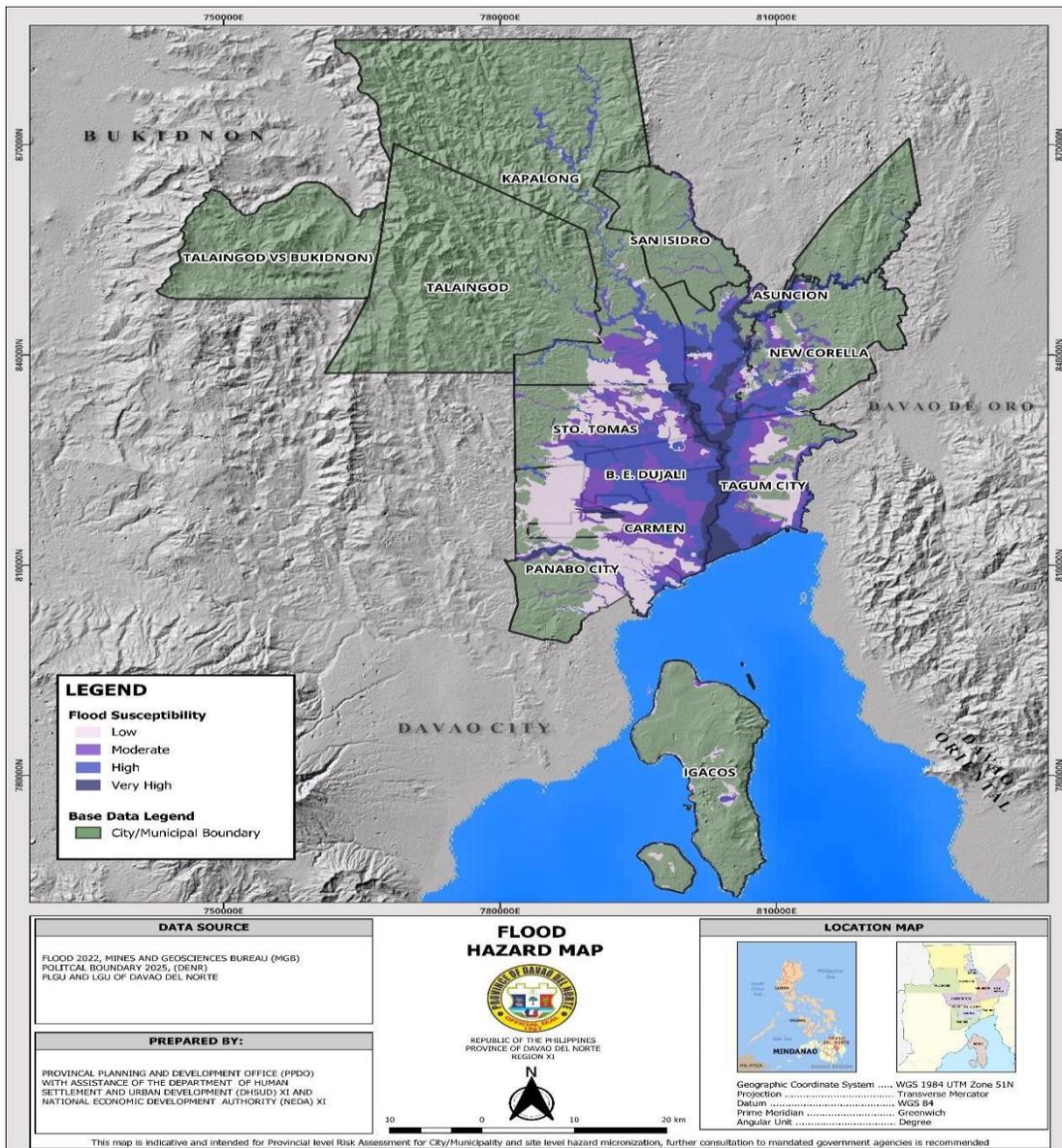
The damages of both disasters to roads and bridges greatly affected the delivery of goods and services to areas served by the networks. It stagnated development and caused inconveniences and artificial shortages of basic goods in the area affected.

Flood hazard susceptibility zones were derived based on the geomorphological analysis of landforms and the fluvial system. Information on flood occurrences, flood depths, duration of inundation as well as topographic information supported the geomorphological-based flood. Levels of susceptibility were classified as low, moderate, high and very high. About 10,916.17 hectares have very high susceptibility to flooding while, 33,217.73 hectares have high susceptibility to flooding. The municipalities of Asuncion, Kapalong, Stomas and B.E. Dujali have large areas that are very susceptible to flooding. On the category of high susceptibility, the municipality of Carmen has the largest area, followed by Asuncion, B.E. Dujali and Kapalong.

*Table 7. Areas Susceptible to Flooding, Davao del Norte (in hectares)*

City/Municipality	Very-high Susceptibility Area (VHSA)	High Susceptibility Areas (HAS)	Moderate Susceptibility Area (MSA)	Low Susceptibility Areas (LSA)
Asuncion	3321.70475	5465.2935	1364.8505	422.21113
B.E. Dujali	476.39363	4792.7913	2968.51	323.10916
Carmen	1595.1136	4944.637	4742.0931	3544.20589
<b>IGaCoS</b>		67.64025	174.98376	1246.84341
Kapalong	11.43723	5973.7699	2540.8303	2590.23774
New Corella	1001.24505	3267.4045	2195.3764	1391.81994
Panabo City	889.15241	658.91494	1500.5096	10552.2212
San Isidro	80.96169	163.56153	441.21586	
Sto. Tomas	842.59511	2739.8064	3975.0822	5349.2194
Tagum City	2698.11084	4894.8206	3286.4022	3497.11169
Talaingod		249.09587	84.07584	46.98638
<b>Davao del Norte</b>	<b>10,916.71</b>	<b>33,217.73</b>	<b>23,273.92</b>	<b>28,963.96</b>

## Flood Hazard Map of Davao del Norte



## Landslide

Landslides, also known as mass movements, occur when materials such as rocks and soil moved downward and outward. They can be triggered by various factors like heavy rainfall, earthquakes, volcanic eruptions, or natural processes like river erosion. Human activities can also contribute to the occurrence of landslides.

Areas prone to landslides typically include previous landslide areas near or beneath steep slopes, as well as areas downstream of streams and creeks. Other factors that increasesusceptibility to landslides are the presence of thick soil or fractured rocks, cut slopes, and poorly drained developed steep slopes. Human activities like constructing buildings on or nearslopes, pipe leaks, septic system and irrigation discharges, as well as vibrations from machineryand blasting, can add pressure and weaken the soil in these areas.

The Geographic Information System (GIS) generated Rain-Induced Landslide Map from the MGB shows the areas susceptible to the hazard. Based from GIS generated map, 33 barangaysin 6 municipalities and 1 city have areas with high susceptibility to rain-induced landslides. These barangays are located in areas with high elevation and steep slopes. These 33 barangaysrepresent 14.7 percent of the total barangay of the province. Among the municipalities, Kapalng have the widest area which are high susceptible to landslide at 564.349 sq. km., followed by Talaingod with 349.149 sq. km. Majority of the area of these two municipalities are classified as forestland, with 91.4 percent for Talaingod and 81.4 for Kapalng.

Data from the PDRRMD indicates that the province has experienced landslide though in a relatively small

magnitude from 2008 to 2016. Fortunately, no damages on person and properties were reported but agricultural crops were greatly affected including accessibility of the areas. Majority of landslides occurred in the Municipality of Talaingod. The Landslide Monitoring Sensor installed in Mesolong, Talaingod by PHIVOLCS showed fast movement of the ground as manifested in the reports gathered.

Out of the 150,836 hectares agricultural areas, 1,425 hectares or 9.45% are classified as highly susceptible areas to rain-induced landslides mostly in the municipalities of Asuncion, Kapalong, San Isidro, Sto. Tomas and Talaingod. The municipality of Kapalong has the greatest number of populations with 29,346 that are highly susceptible to rain-induced landslide. It is followed by the municipality of Talaingod with 18,854 populations exposed to highly susceptible areas. These two municipalities have the largest upland areas in the province.

The province is characterized by rugged, mountainous terrain in the western part and a wide alluvial plain in the central lowland. A significant portion of the province (27.70%) consists of slopes ranging from 30-50%. These topographic features make the province highly susceptible to hazards like landslides. The situation is worsened by the degradation of upland areas caused by past illegal logging activities and unsustainable farming practices, further increasing the vulnerability to landslides.

Susceptibility Levels	Description
High Susceptibility	Presence or active/recent landslides large tension cracks that would affect the community. Areas with drainages that are prone to landslide damming Steep slopes (21%-55% gradient)
Moderate Susceptibility	Areas with inactive and old landslides. Small tension cracks are located away from community Moderately steep slopes (15%-30%) Small, shallow landslides (<1.0 vertical displacement)
Low Susceptibility	Gently sloping to sloping absence of tension cracks Flat terrain (5%-15%)
Possible Landslide Debris Accumulation Zone	Areas to be likely affected by transported landslide materials

Source: DHSUD Region XI: Exposure Database Table-Level of Susceptibility Scoring

### Rain-Induced Landslide

Basing on the map from the Mines and Geosciences Bureau (MGB) 33 barangays in 6 municipalities and 1 city have areas with high susceptibility to rain-induced landslides. These barangays are located in areas with high elevation and steep slopes. These 33 barangays represent 14.7 percent of the total barangay of the province. Among the municipalities, Kapalong have the widest area which are high susceptible to landslide at 54,949.350 has., followed by Talaingod with 40,939.64 has. Majority of the area of these two municipalities are reclassified as forestland, with 95 percent for Talaingod and 75.2 for Kapalong.

Municipalities with high Potentially Affected Population in high susceptibility area are Kapalong and Talaingod, respectively. Under the Moderate susceptibility area, the municipality of Kapalong and Sto. Tomas is the top two LGUs with high potentially affected population.

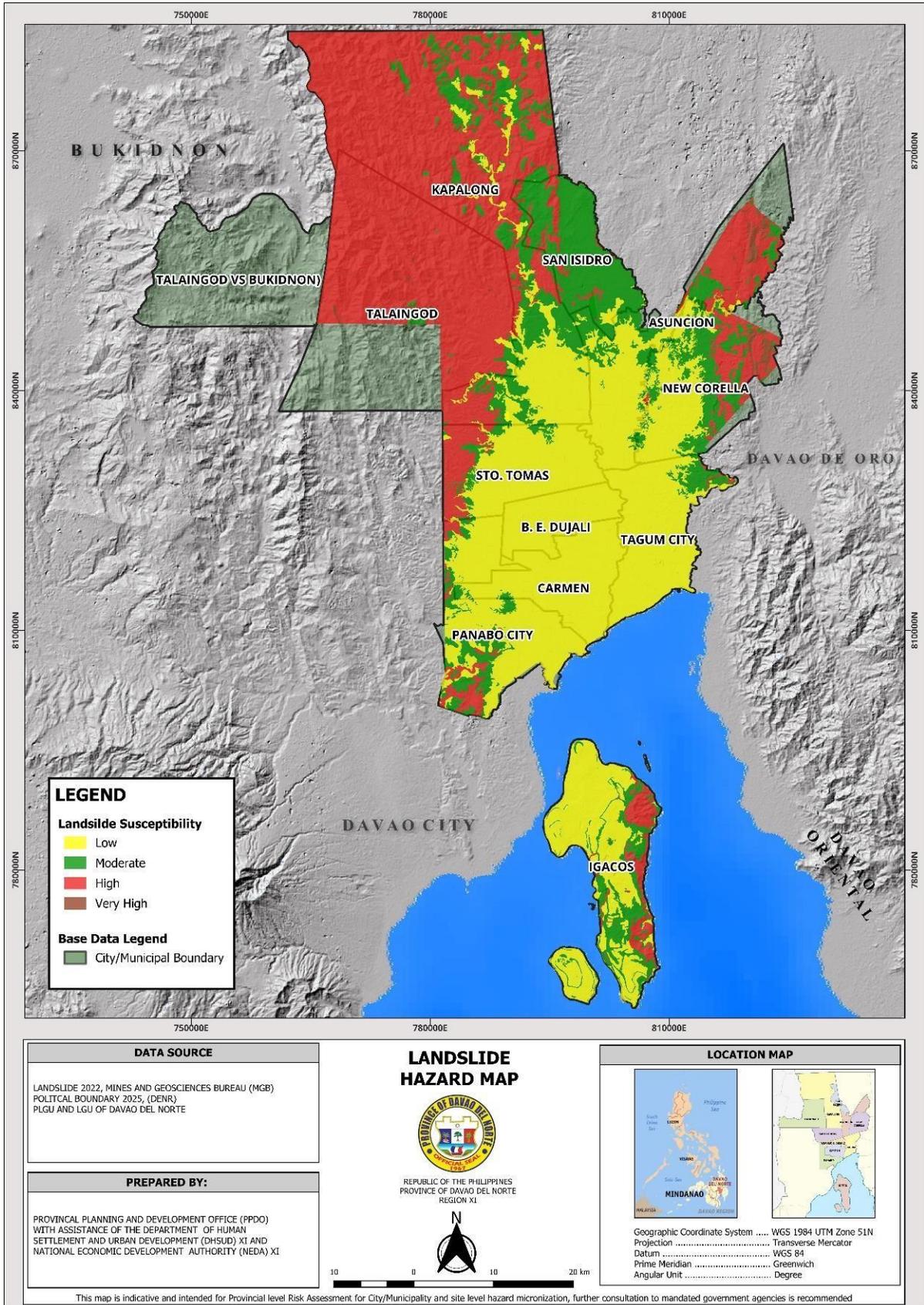
**Table 9. Rain-Induced Landslide Susceptibility Level, Davao del Norte**

City/Municipality	Susceptibility in has.		
	High	Moderate	Low
ASUNCION	7402.4708	5468.5066	11434.1137
B. E. DUJALI			8560.9009
CARMEN		306.4136	15039.2064
IGACOS	3405.2186	5824.8306	17508.6906
KAPALONG	54949.358	15501.124	24640.4661
NEW CORELLA	6159.9804	7707.6562	9146.9237
PANABO CITY	2225.2593	4363.6211	17694.831
SAN ISIDRO	1679.693	13424.706	481.7847

STO. TOMAS	3860.8217	1498.0892	13585.335
TAGUM CITY	144.9146	1485.9701	16173.0476
TALAINGOD	40939.641	910.1865	590.7064
<b>Davao del Norte</b>	<b>121,179.26</b>	<b>56,491.627</b>	<b>134,856</b>

Source: Area Generated through Geographic Information System (GIS) from the MGB Map

### Landslide Hazard Map of Davao del Norte



## Storm Surge

Storm surge is a rise in sea level that occurs during tropical cyclones, intense storms also known as typhoons or hurricanes. The storm produces strong winds that push the water into shore, which can lead to flooding. This makes the storm surge very dangerous for coastal areas.

In general storm surge occurs where winds are blowing onshore. The highest surge tends to occur “near the radius of maximum winds,” or where the strongest winds of the typhoon occur. There are no reported storm surge occurrences in Davao del Norte. However, to determine the effect of the storm surge and the extent of flooding if so ever it occurs in the province, a simulation using the worst case scenario (5 meter surge) is done through GIS. If storm surge will happen it will affect the cities of IGACOS, Panabo, Tagum and municipality of Carmen. All in all, 43 barangays will be affected, mostly in IGACOS. The result of the simulation is presented in Table 27 from DOST PAGASA.

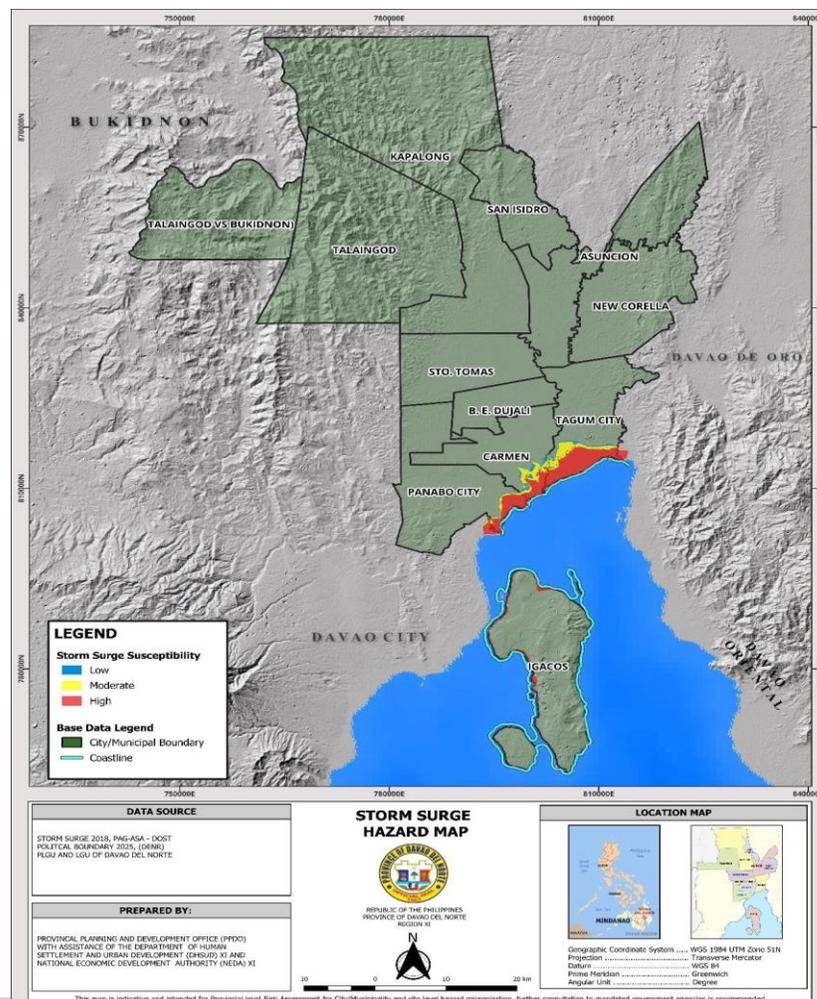
The Island Garden City of Samal is also vulnerable to sea level rise and coastal erosion being an island. Moreover, it has remarkable depressed areas and has limited recharge capacities so that it is vulnerable to dry spell and drought. (CDRA 2023)

**Table 10. Storm surge Susceptibility Level, Davao del Norte**

City/Municipality	Susceptibility in Hectares (Has)		
	Very High	High	Moderate
Tagum City	2,987.93	1,012.07	271.94
Island Garden City of Samal	514.68	101.48	0.05
Panabo City	1,139.40	221.72	50.80
Carmen	820.88	744.89	188.57
<b>Davao del Norte</b>	<b>5,462.89</b>	<b>2,080.17</b>	<b>511.36</b>

Source: Area Generated through Geographic Information System (GIS) from the MGB Map

### Storm Surge Hazard Map of Davao del Norte



## Liquefaction

Soil liquefaction describes a phenomenon whereby a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress, usually earthquake shaking or other sudden change in stress condition, causing it to behave like a liquid.

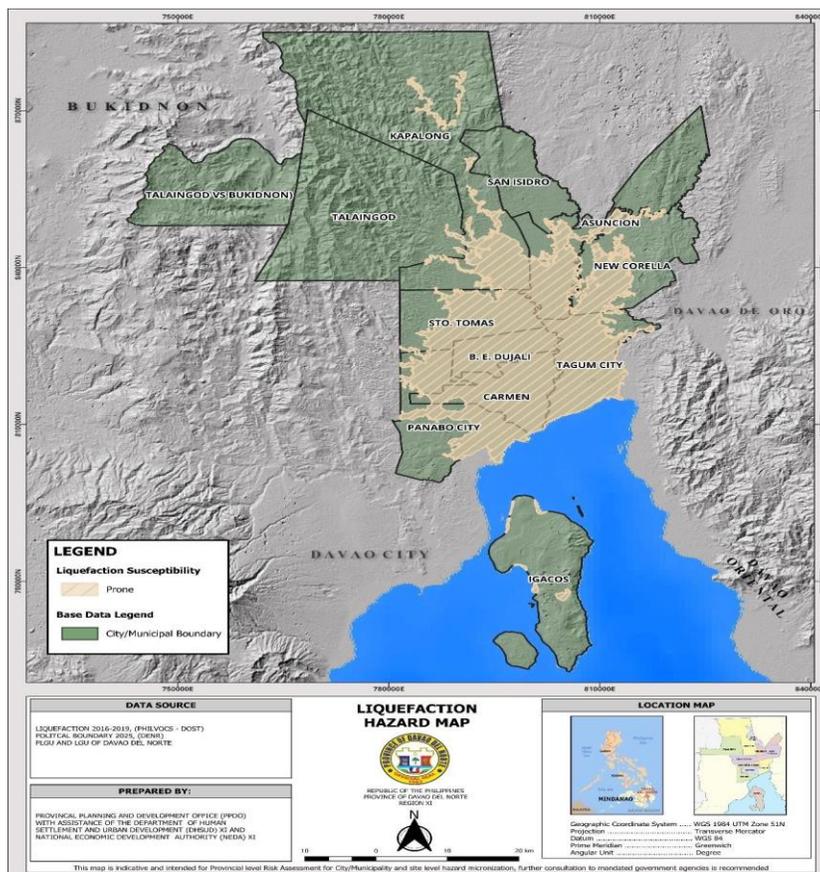
Liquefaction is a process where particles of loosely-consolidated and water-saturated deposits of sand are rearranged into a more compact state. This results in the squeezing of water and sediments towards the surface in the form of “sand fountain” and creating a condition resembling to a “quicksand”. In this phenomenon, the strength of the soil is reduced to a point where it is unable to support structures

This commonly occurs in areas that are water saturated (shallow water table), low-lying and situated in typically loose (unconsolidated) foundation or sandy or silty deposits. Typical example of these areas are river banks, abandoned rivers, flood plains, coastlines and swamps. There are no reported liquefaction occurrences in the Province. However, zones of different liquefaction potential were derived based on the geomorphological analysis. Tagum City and the Municipality of Sto. Tomas and Asuncion are the top three (3) LGUs with areas highly susceptible to liquefaction. But in terms of the area susceptibility against the total land area, 97.39 percent of the municipality of B.E. Dujali is highly susceptible to liquefaction. The other Municipalities have either low or moderate susceptibility. Details of the liquefaction hazard Susceptibility is presented in the table.

**Table 11. Liquefaction Susceptibility Level, Davao del Norte**

Municipality	Prone	Grand Total
ASUNCION	9173.2616	9173.2616
B. E. DUJALI	8560.894	8560.894
CARMEN	14643.450 4	14643.4504
IGACOS	635.8626	635.8626
KAPALONG	9411.0564	9411.0564
NEW CORELLA	7835.3613	7835.3613
PANABO CITY	12539.700 5	12539.7005
SAN ISIDRO	92.0589	92.0589
STO. TOMAS	12157.836 9	12157.8369
TAGUM CITY	16376.419 1	16376.4191
TALAINGOD	303.6366	303.6366

Map 4. Liquefaction Hazard Map of Davao del Norte



**Fault**

A fault primarily refers to a fracture or zone of weakness in the Earth's crust, where tectonic plates often meet. These fractures or cracks occur due to the buildup of stress along the plate boundaries. When the stress exceeds the strength of the rocks, it causes them to break, resulting in an earthquake. Fault lines are responsible for seismic activity and play a significant role in the formation of earthquakes and other geological phenomena.

When an earthquake occurs, waves of energy are released and travel through the ground, causing the surface to vibrate up and down or side to side. The severity of the shaking can vary based on factors such as the magnitude of the earthquake, the distance from the epicenter, and the type of soil or rock that the seismic waves travel through. Strong ground shaking can have serious consequences for structures and people in the affected area, potentially causing damage or injury.

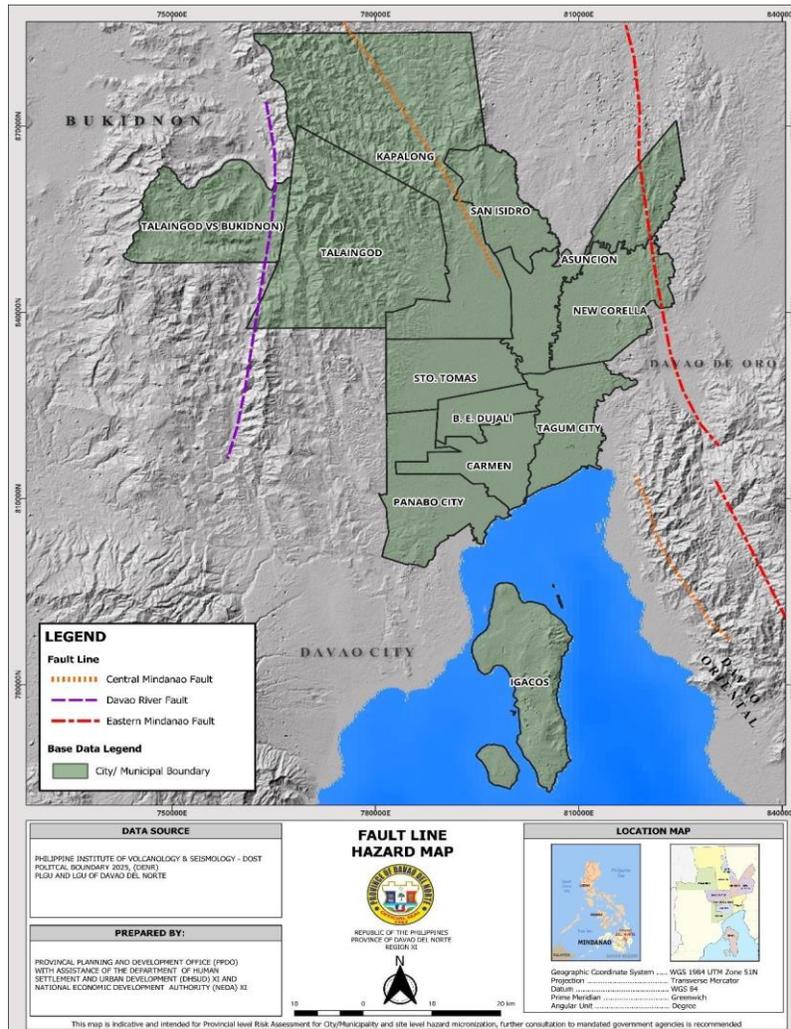
Davao del Norte is a province located in the southern part of the Philippines, which is situated along the Pacific Ring of Fire, where many earthquakes occur due to the different Fault line that traverse throughout the province. In the past, the province has experienced seismic activity and ground shaking due to nearby earthquakes, including those that occurred in the neighboring provinces and offshore areas

**Table 12. Fault line LGU Exposure, Davao del Norte**

Fault_Name	Municipality
Central Mindanao Fault	SAN ISIDRO
Central Mindanao Fault	KAPALONG
Eastern Mindanao Fault	NEW CORELLA
Eastern Mindanao Fault	ASUNCION
Davao River Fault	TALAINGOD

Source: Area Generated through Geographic Information System (GIS) from the MGB Map

Map 5. Fault line Hazard Map of Davao del Norte



### Sink Holes

Sinkholes commonly occur in areas where the underlying rock consists of limestone, carbonaterock, salt beds, or other types of rocks that can be naturally dissolved by groundwater. This dissolution process creates empty spaces and caverns underground. Sinkholes are particularly striking because the surface of the land often remains intact for a period of time until the underground spaces become too large. When there is insufficient support for the land above these spaces, a sudden collapse of the land surface can happen.

Another consideration of the existence of a sinkhole is when an area of land lacks natural external drainage, meaning that when it rains, the water collects within the sinkhole and typically drains into the subsurface. Sinkholes can vary in size, ranging from a few feet to hundreds of acres, and in depth, ranging from less than 1 to over 100 feet. Some sinkholes are bowl-shaped or saucer-shaped, while others have vertical walls. Some may hold water and form natural ponds. Usually, sinkholes form gradually, with minimal noticeable changes, but they can also form suddenly due to a collapse. In urban areas, such a collapse can have a significant impact.

In the Province, areas that are prone to sinkholes have yet to be delineated by the Mines and Geosciences Bureau on their hazard mapping assessment using a deep penetrating radar.

### Climate Change and Hazard Information

Climate can be a valuable asset for improving decision-making processes in crucial development sectors. By utilizing climate information and services, which consist of historical, real-time, and predicted climate data, a wide array of development choices can be guided, ranging from immediate responses to comprehensive strategies. These choices encompass evaluating the impacts of climate change and

formulating plans for addressing climate change. The objective of this report is to present a summary of the climate conditions in Davao del Norte based on climate projections derived from the Philippine Climate Extremes Report 2020. Through the analysis of observed and projected climate extremes, this information facilitates well-informed decisions regarding climate change adaptation and risk management in the region.

The term 'climate extremes' encompasses both extreme weather events and extreme climate events, although the distinction between the two is not precisely defined and is primarily related to their respective time scales. Extreme weather events occur within shorter time frames, ranging from less than a day to a few weeks, and are physically associated with shifting weather patterns. On the other hand, extreme climate events unfold over longer time scales and result from the accumulation of numerous extreme and non-extreme events.

To describe the magnitude, frequency, and duration of climate extremes, various extreme indices are utilized. These indices are typically based on the probability of certain quantities or thresholds being exceeded. In this report, we examine historical and projected changes in Temperature and rainfall extremes by focusing on indices that are relevant to the local climate. The thresholds used for calculating these indices are based on historical simulations conducted over the baseline period of 1986-2005.

### **Temperature Extremes**

(TNn) The coldest nighttime temperature, °C. This represents the lowest nighttime temperature of the year, averaged over a 20-year period. Based on historical data, the average lowest nighttime temperature in Davao del Norte from 1986 to 2005 was 19.4°C. Under RPC4.5, it is expected that TNn will increase by 0.8°C, 1.6°C, and 1.9°C in the early, mid, and late future periods, respectively. Under RPC8.5, the anticipated increases in temperature for the early, mid, and late future periods are 1.1°C, 2.2°C, and 3.0°C, respectively.

(TNm) The average nighttime temperature, °C. This represents the average temperature during the nighttime throughout the year. Changes in nighttime temperature can impact crop yield when minimum temperature thresholds for specific crops are exceeded. In Davao del Norte, historical nighttime temperatures averaged at 22.3°C, with colder temperatures in higher elevations and warmer temperatures along the coast (Table 1.0). Under RPC4.5, TNm is projected to increase from 0.6°C in the early future to 1.5°C in the late future. The increase may reach 3.4°C under RPC8.5 in the late future.

(TNx) Warmest night time temperature, °C. This refers to the warmest night time temperature of the year. Historical observations show that the typical warmest night time temperature in most areas of Davao del Norte province fall within the range of 24.9°C (Table 1.0). TNx is projected to increase in both RPC scenarios. At RPC4.5, TNx is projected to increase by 0.6°C, 1.1°C and 1.4°C, in the early, mid and late-futures, respectively. At RPC8.5, it is projected to increase by 0.7°C, 1.6°C and 3.1°C in the early, mid and late-futures, respectively.

(TNx) Highest nighttime temperature, °C. This represents the warmest nighttime temperature recorded in a year. According to historical observations, the typical highest nighttime temperature in most areas of Davao del Norte province falls within the range of 24.9°C. Under both RPC scenarios, TNx is expected to increase. At RPC4.5, TNx is projected to increase by 0.6°C, 1.1°C, and 1.4°C in the early, mid, and late-futures respectively. Under RPC8.5, the increase is projected to be 0.7°C, 1.6°C, and 3.1°C in the early, mid, and late-futures respectively.

(TXn) Lowest daytime temperature, °C. This refers to the coldest daytime temperature recorded each year. Baseline data shows that the annual coldest daily maximum temperature in Davao del Norte is 24.4°C. Under RPC4.5, it is expected to increase in the future by 0.6°C, 1.2°C, and 1.5°C in the early, mid, and late-futures respectively. Under RPC8.5, more significant warming is anticipated, ranging from 0.8°C in the early-future to 3.1°C in the late-future.

(TXm) Average daytime temperature, °C. This represents the average temperature during the daytime. Historical data indicates that the average daytime temperature in Davao del Norte is 30.6°C (Table 1.0). It is expected to increase under both RPCs. In the RPC4.5 scenario, TXm is projected to rise by 0.5°C in the

early-future and 1.6°C in the late-future. In the RPC8.5 scenario, it is expected to increase by as much as 3.4°C in the late-future.

(TXx) Highest daytime temperature, 0°C. This refers to the temperature recorded on the hottest day of the year. Based on baseline observations, the hottest daytime temperature in Davao del Norte is 33.8°C. It is projected to increase by approximately 1.7°C and 3.7°C in the late-future for the RPC4.5 and RPC8.5 scenarios respectively.

(DTR) Daily temperature range, 0°C. It represents the difference between the yearly average of the daily maximum and minimum temperatures. When the DTR decreases, it indicates a larger increase in nighttime temperature compared to daytime temperature, suggesting overall heat storage in the atmosphere. According to historical data, the daily temperature range in Davao del Norte is 8.3°C.

(TN10p) Percentage of cold nights. This refers to the proportion of nights in a year when the minimum temperature falls below the 10th percentile threshold of the baseline. On average, only 11.3% of the year (41 nights) in Davao del Norte are considered cold based on baseline observations. In the RPC4.5 scenario, the number of cool nights is projected to decrease by 7.6% (27 nights), 9.7% (34 nights), and 10.4% (37 nights) in the early, mid, and late-future scenarios respectively. In the RPC8.5 scenario, cool nights are expected to decrease by 8.3% (30 nights), 10.4% (37 nights), and 10.6% (38 nights) in the early, mid, and late-future scenarios respectively.

(TN90p) Percentage of warm nights. TN90p indicates the frequency of warm nights when the minimum temperature exceeds the 90th percentile threshold. Historical data of Davao del Norte shows that on average, TN90p is at 11.2% (40 nights). However, projections indicate an increase of 24.1% (87 nights) in the early-future, 51.2% (184 nights) in the mid-future, and 64% (230 nights) in the late-future for the RPC4.5 scenario. For RPC8.5, the increase would be as much as 31.6% (114 nights) in the early-future, 70.7% (255 nights) in the mid-future, and 87.9% (316 nights) in the late-future.

(TX10p) Percentage of cool days. This tracks the number of days when the maximum temperature falls below the 10th percentile threshold of the baseline. Historically, cool days in Davao del Norte occur around 11.3% of the year or 41 days. However, projections suggest a decrease in the occurrence of cool days by at least 5.2% (19 days) in the early-future up to 9.4% (34 days) in the late-future for the RPC4.5 scenario and 6.7% (24 days) in the early-future up to 10.6% (38 days) in the late-future for the RPC8.5 scenario.

(TX90p) Percentage of hot days. TX90p represents the number of hot days when the maximum temperature exceeds the 90th percentile threshold. On average, Davao del Norte experiences 11.5% (41 days) of hot days in a year. However, projections indicate a significant increase, with at least 10.3% (37 days) in the early-future and up to 43.3% (156 days) in the late-future for RPC4.5, as well as 19.3% (69 days) in the early-future and up to 70.4% (253 days) in the late-future for RPC8.5.

(WSDI) Warm spell duration index, in days. WSDI measures the number of days contributing to warm periods, which occur when the daily temperature exceeds the 90th percentile threshold for six or more consecutive days. Warm spells can have negative impacts on sectors like human health, energy, and agriculture. Historical records show that Davao del Norte has a WSDI of 2.5 days. However, the duration of warm spells is projected to increase by at least 10.4 days in the early-future and up to 72.2 days in the late-future under the RPC4.5 scenario. In the RPC8.5 scenario, the projected increase is even higher, with 28.2 days in the early-future and up to 247.2 days in the late-future.

## **Rainfall Extremes**

(PRCPTOT) Total wet day rainfall, mm. PRCPTOT refers to the total amount of rainfall received during wet days, when at least 1 mm of daily rainfall is recorded within the year. Average over a 20-year period, it provides a general pattern indicating how much rainfall the area receives in a year. It provides an estimate of the water resources available for the area. Baseline observations showed that Davao del Norte received an annual average rainfall of 2116.6 mm (Table 1.0). However, projections for both RPC4.5 and RPC8.5 show a decrease of rainfall throughout the years. For RPC4.5, it is expected to have a 98.3 mm decrease in annual rainfall in the early-future and by as much as 166.2 mm in the late-future. In the RPC8.5 scenario,

the projected decrease in annual rainfall becomes larger and more widespread overtime with 71.4 mm in the early-future and by as much as 271.4 mm in the late-future.

(SDII) Simple daily intensity index, mm/day. SDII is the average daily rainfall intensity and indicates the typical amount of rainfall during wet days. Historically, the average amount of rainfall in Davao del Norte is 10.4 mm/day (Table 1.0). This is projected to decrease in the future. For RPC4.5, a decrease of 0.5, 0.8 and 0.7 mm/day in the early-, middle- and late-futurescenarios, respectively. For RPC8.5, a decrease of 0.4, 0.9 and 1.3 mm/day in the early-, middle- and late-future scenarios, respectively.

(Rx1day) Maximum 1-day rainfall total, mm. Rx1day describes the maximum amount of rainthat can fall in one day. Such extreme rainfall is typically associated with local thunderstormsor large-scale systems such as monsoons or tropical cyclones, and may induce flash floods or landslides. Baseline observations showed that Davao del Norte experience a maximum 1-day rainfall total of up to 73.5 mm (Table 1.0). For RPC4.5, different areas receive 3.8 mm, 2.7 mm and 2.3 mm less rainfall during the early-, mid and late-future scenarios, respectively. ForRPC8.5, different areas get additional rainfall of 4.1 mm and 0.3 mm during the early-and mid-future scenarios, respectively, while a decrease of 2.6 mm in the late-future scenario.

(Rx5day) Maximum 5-day rainfall total, mm. As with the Rx1day, Rx5day describes the maximum amount of rainfall that falls over a period of five consecutive days. These typically occur during the wet season and are closely related with large-scale systems such as tropical cyclones, monsoons and the Intertropical Convergence Zone (ITCZ). Increased 5-day consecutive rainfall may lead to widespread flooding and swelling of waterways. Baseline observations showed that Davao del Norte experience a maximum 5-day rainfall total of up to161 mm (Table 1.0). For RPC4.5, different areas receive 7.2 mm, 5.6 mm and 6.6 mm less rainfall during the early-, mid and late-future scenarios, respectively. For RPC8.5, different areas get additional rainfall of 1.1 mm during the early-future scenario, while a decrease of 0.8mm and 6.6mm during the mid- and late-future scenarios, respectively.

(P95) Rainfall on very wet days, mm. P95 is the threshold for very wet days. It is defined as the 95th percentile of the baseline daily rainfall during wet days. That is 5% of wet days duringthe year are expected to be “very wet”. Baseline observations showed that Davao del Norte experience a maximum rainfall on very wet days of up to 30.6 mm (Table 1.0). The projected change in P95 values indicate an average of 2.3 mm decrease throughout the province for both RPC scenarios. For RPC4.5, there are marked decreases of 1.7 mm, 2.3 mm and 2.0 mm duringthe early-, mid and late-future scenarios, respectively.

or RPC8.5, different areas get less rainfall of 1.6 mm, 2.4 mm and 3.8 mm during the early-,mid- and late-future scenarios, respectively.

(P99) Rainfall on extremely wet days, mm. P99 indicates the amount of rainfall “extremely wet days”, defined as those exceeding 99th percentile threshold. Baseline observations showedthat Davao del Norte experience a maximum rainfall on extremely wet days of up to 52.0 mm(Table 1.0). The projected change in P99 values indicate an average of 3.8 mm decrease throughout the province for both RPC scenarios. For RPC4.5, there are marked decreases of 3.8 mm, 4.3 mm and 3.7 mm during the early-, mid and late-future scenarios, respectively. ForRPC8.5, different areas get less rainfall of 2.4 mm, 3.4 mm and 5.3 mm during the early-, mid-and late-future scenarios, respectively.

(R95p) Total rainfall from very wet days, mm. R95p indicates the total amount of rain that fallson “very wet days”, or when daily rainfall exceeds the 95th percentile threshold of the base period. Historically, the R95p of Davao del Norte is peg at 444.2 mm (Table 1.0). However, itis projected that the total rainfall from very wet days will decrease by at least 54.1 mm in the early-future and by as much as 74.4 mm in the mid-future and 61.6 mm in the late-future in theRPC4.5 scenarios. In the RPC8.5, the projected decrease is much higher at 45.7 mm in the early-future, 77.4 mm in the mid-future and as much as 119.1 mm in the late-future.

(R99p) Total rainfall extremely wet days, mm. R99p describes the total amount of rain that falls on “extremely wet” days, when rainfall exceeds the 99th percentile. Similar to R95p, it isrelated to the rainfall

events that occur during the wet season as well as during the tropical cyclone events. Historically, R99p can reach 138.8 mm in Davao del Norte (Table 1.0). In the future, dryer conditions is projected in the mid-future of RPC4.5 at 31.8 mm and in the late future of RPC8.5 at 29.9 mm.

(P95d) Number of very wet days, days. P95d pertains to the number of very wet days when the daily rainfall is greater than the 95th percentile of the baseline daily rainfall. In the past, the number of very wet days reached 10.1 days across the province of Davao del Norte (Table 1.0). In the future, the number of very wet days is projected to decrease in all parts of the province. For RPC4.5, the highest projected decrease is in the mid-future scenario at 1.7 days, while in the RPC8.5, the highest projected decrease is in the late-future scenario at 2.8 days.

(P99d) Number of extremely wet days, days. P99d counts the number of days when daily rainfall exceeds P99. As such, the spatial distribution of P99d closely follows the pattern of P99. The number of extremely wet days in the past is recorded at 2.1 days across the province of Davao del Norte (Table 1.0). The projected changes in both RPC4.5 and RPC8.5 are the same at 0.4 day, except in the RPC8.5 late-future scenario at 0.5 day.

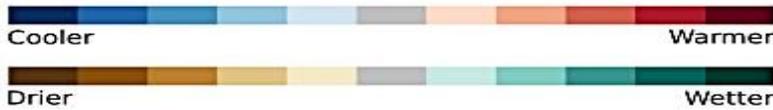
(CWD) Longest wet spell, days. CWD is the number of consecutive wet days, when daily rainfall is at least 1 mm. It denotes the longest stretch of wet days within the year. CWD has implications on soil saturation, storage of water reservoirs and drainage waterways. Increased CWD indicates not only increased water availability but also increased flooding and landslide hazards. On the other hand, decreased WDC would also point out towards less water availability and increased drying and heating.

Historically, Davao del Norte experience the longest wet spell of 18.7 days of rain (Table 1.0). Model projections generally show a spatial varying change in CWD, mainly towards a shortening in duration. In RPC 4.5, a maximum deduction of 2.4 days, 2.1 days and 1.8 days in the early-mid- and late-future scenarios, respectively. In RPC8.5, minimal deductions of 0.8 day, 1.7 days and 1.1 days in the early-mid- and late-future scenarios, respectively.

(CDD) Longest dry spell, days. CDD is the number of consecutive dry days, when daily rainfall is less than 1 mm, denoting the longest stretch of dry days. Increasing CDD indicates more dry days and therefore less rainy days. Conversely, decreasing CDD indicates fewer dry days and therefore more rainy days. This has implications on recharge surface and groundwater resources. Historical observations showed that Davao del Norte experience at least 14 consecutive dry days within the year (Table 1.0). In RPC4.5 scenario, the CDD decreases in the early to late-future. However, in RPC8.5 scenario, the CDD decreases in the early- and mid-future but switches in the late-future, indicating an increase in CDD.

**Table 1.0. Projected Temperature and Precipitation, By Extreme Index relative to Magnitude, Frequency and Duration, under Moderate Emission (RPC 4.5) and HighEmission (RCP 8.5), Davao del Norte**

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)			
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	
Temperature	<b>Magnitude</b>										
		TNn	Coldest night time temperature	°C	19.4	20.2 (0.8)	21.0 (1.6)	21.3 (1.9)	20.5 (1.1)	21.6 (2.2)	23.3 (3.9)
		TNm	Average night time temperature	°C	22.3	22.9 (0.6)	23.5 (1.2)	23.8 (1.5)	23.1 (0.8)	24.0 (1.7)	25.7 (3.4)
		TNx	Warmest night time temperature	°C	24.9	25.5 (0.6)	26.0 (1.1)	26.3 (1.4)	25.6 (0.7)	26.5 (1.6)	28.0 (3.1)
		TXn	Coldest day time temperature	°C	24.4	25.0 (0.6)	25.6 (1.2)	25.9 (1.5)	25.2 (0.8)	26.1 (1.7)	27.5 (3.1)
		TXm	Average day time temperature	°C	30.6	31.1 (0.5)	31.7 (1.1)	32.2 (1.6)	31.3 (0.7)	32.3 (1.7)	34.0 (3.4)
		TXx	Warmest day time temperature	°C	33.8	34.4 (0.6)	35.1 (1.3)	35.5 (1.7)	34.6 (0.8)	35.6 (1.8)	37.5 (3.7)
		DTR	Daily temperature range	°C	8.3	8.3 (0.0)	8.3 (0.0)	8.3 (0.0)	8.3 (0.0)	8.2 (-0.1)	8.3 (0.0)
		<b>Frequency</b>									
		TN10p	Fraction of cold nights	%	11.3	3.7 (-7.6)	1.6 (-9.7)	0.9 (-10.4)	3.0 (-8.3)	0.9 (-10.4)	0.7 (-10.6)
		TN90p	Fraction of warm nights	%	11.2	35.3 (24.1)	62.4 (51.2)	75.2 (64.0)	42.6 (31.6)	81.9 (70.7)	99.1 (87.9)
		TX10p	Fraction of cool days	%	11.3	6.1 (-5.2)	2.8 (-8.5)	1.9 (-9.4)	4.6 (-6.7)	1.8 (-9.5)	0.7 (-10.6)
		TX90p	Fraction of hot days	%	11.5	21.8 (10.3)	42.8 (31.3)	54.8 (43.3)	30.8 (19.3)	53.5 (42.0)	81.9 (70.4)
		<b>Duration</b>									
		WSDI	Warm Spell Duration Index	days	2.4	12.8 (10.4)	44.3 (41.9)	74.6 (72.2)	30.6 (28.2)	95.0 (92.6)	249.6 (247.2)
Precipitation	<b>Magnitude</b>										
		PRCPTOT	Total wet-day rainfall	mm	2116.6	2018.3 (-98.3)	1968.8 (-147.8)	1950.4 (-166.2)	2045.2 (-71.4)	1930.7 (-185.9)	1845.2 (-271.4)
		SDII	Average daily rainfall intensity	mm/day	10.4	9.9 (-0.5)	9.6 (-0.8)	9.7 (-0.7)	10.0 (-0.4)	9.5 (-0.9)	9.1 (-1.3)
		Rx1day	Maximum 1-day rainfall total	mm	73.5	69.7 (-3.8)	70.8 (-2.7)	71.2 (-2.3)	77.6 (4.1)	73.8 (0.3)	70.9 (-2.6)
		Rx5day	Maximum 5-day rainfall total	mm	161.0	153.8 (-7.2)	155.4 (-5.6)	154.4 (-6.6)	162.1 (1.1)	160.2 (-0.8)	154.4 (-6.6)
		P95	Rainfall on very wet days	mm	30.6	28.9 (-1.7)	28.3 (-2.3)	28.6 (-2.0)	29.0 (-1.6)	28.2 (-2.4)	26.8 (-3.8)
		P99	Rainfall on extremely wet days	mm	52.0	48.2 (-3.8)	47.7 (-4.3)	48.3 (-3.7)	49.6 (-2.4)	48.6 (-3.4)	46.7 (-5.3)
		R95p	Total rainfall from very wet days	mm	444.2	390.1 (-54.1)	369.8 (-74.4)	382.6 (-61.6)	398.5 (-45.7)	366.8 (-77.4)	325.1 (-119.1)
		R99p	Total rainfall from extremely wet days	mm	138.8	115.7 (-23.1)	107.0 (-31.8)	114.0 (-24.8)	127.4 (-11.4)	118.3 (-20.5)	108.9 (-29.9)
		<b>Frequency</b>									
		P95d	Number of very wet days	days	10.1	8.7 (-1.4)	8.4 (-1.7)	8.5 (-1.6)	9.1 (-1.0)	8.2 (-1.9)	7.3 (-2.8)
		P99d	Number of extremely wet days	days	2.1	1.7 (-0.4)	1.7 (-0.4)	1.7 (-0.4)	1.7 (-0.4)	1.7 (-0.4)	1.6 (-0.5)
	<b>Duration</b>										
	CWD	Longest wet spell	days	18.7	16.3 (-2.4)	16.6 (-2.1)	16.9 (-1.8)	17.9 (-0.8)	17.0 (-1.7)	17.6 (-1.1)	
	CDD	Longest dry spell	days	14.1	13.5 (-0.6)	14.0 (-0.1)	15.0 (0.9)	14.0 (-0.1)	13.8 (-0.3)	15.0 (0.9)	



Source: Climate Extreme Report, 2020

**Local Climate Change Projections**

The different seasons that are used are as follows: a) DJF (December, January, February or northeast monsoon season, locally known as "Amihan"); b) MAM (March, April, May or summer); c) JJA (June, July, August or southwest monsoon season, locally known as "Habagat"); and d) SON (September, October, November or transition from southwest to northeast monsoon). The generated future climatic scenarios could be used as a guide when developing municipal and barangay-level climate change adaptation plans. The provincial predictions were produced and used in this report because there is no data available at the local level.

**Table 1.1.1.A: Projected Changes in seasonal temperature in the mid-21<sup>st</sup> century 2050(2036-2065) for the Province of Davao del Norte, based on the High Emission Scenario (RCP 8.5)**

Season	Observed baseline	Range*	Projected Change		Findings
			Change in (°C)	Projected Seasonal Mean Temperature (°C)	
December-January-February (DJF)	26.7	Lower Bound	1.4	28.1	DJF are projected to have temperatures higher by 1.6°C than their historical baseline the same with JJA & SON.
		Median	1.6	28.3	
		Upper Bound	2.2	28.9	
March-April-May (MAM)	27.8	Lower Bound	1.5	29.3	Hottest Months MAM are projected to be hotter by 1.7°C than the historical baseline, not only the said months but also the historical hottest months of the whole year
		Median	1.7	29.5	
		Upper Bound	2.3	30.1	
June-July-August (JJA)	27.4	Lower Bound	1.3	28.7	JJA continues the same trend as the previous months with an increase of 1.6°C than the historical baseline temperature
		Median	1.6	29.0	
		Upper Bound	2.3	29.7	
September-October-November (SON)	27.4	Lower Bound	1.3	28.7	SON continue the same trend with the previous months with an increase of 1.6°C than the baseline temperature
		Median	1.6	29.0	
		Upper Bound	2.2	28.6	

\*Percentile range of model projections: lower bound=10<sup>th</sup> percentile, upper bound=90<sup>th</sup> percentileSource: PAG-ASA

**Note:**

- PAG-ASA use three-climate scenarios (high, medium and low range scenarios). The high-range emission scenario will be used for the CDRA It indicates “a future world of very rapid economic growth, with the global population peaking in mid-century and declining thereafter and there is rapid introduction of new and more efficient technologies with energy generation balanced across all sources (PAG-ASA, 2018)

By 2050, the Province of Davao del Norte's temperature projections point to continued warming. In the middle of the twenty-first century (2036–2065), according to projections, the seasonal mean temperature could rise by as much as 1.3–2.3°C (in the high emission scenario, RCP 8.5). According to RCP 8.5, observed seasonal temperatures for December-January- February, June-July-August, and September-October-November in the middle of the twenty- first century (2036–2065) are predicted to be 1.6°C hotter than baseline temperatures, while March–April–May is predicted to be 1.7°C hotter.

**Table 1.1.1.B: General Changes Expected in Climate Variables and Information about patterns of change for the Province of Davao del Norte based on High Emission Scenario (RCP 8.5)**

Season	Observed baseline	Range*	Projected Change		Findings
			Percent (%)	Projected Rainfall Value (mm)	
December-January-February (DJF)	637	Lower Bound	-11.7	562.3	Minimal to no Change
		Median	-2.1	623.6	Minimal to decrease rainfall change of 2%
		Upper Bound	24.2	791.3	The highest possible future rainfall change during the NE (NorthEast) Monsoon or Amihan shows an increase of 24%
March- April-May (MAM)	496.5	Lower Bound	-10.6	443.9	Minimal to no Change
		Median	-2.4	484.5	Minimal to decrease rainfall change of 2%
		Upper Bound	11.6	553.9	Minimal to no Change
June-July-August (JJA)	535.6	Lower Bound	-12.6	467.9	Minimal to no Change
		Median	-2.8	520.4	Minimal to decrease rainfall change of 2%
		Upper Bound	13.0	605.5	Minimal to no Change
September-October-November (SON)	556.2	Lower Bound	-22.3	432.4	The driest possible future rainfall change during the NE to SW Monsoon or Amihan shows a reduction of 22%
		Median	-11.0	495.2	Minimal to decrease rainfall change of 11%
		Upper Bound	10.5	614.5	Minimal to no Change

*\*Percentile range of model projections: lower bound=10<sup>th</sup> percentile, upper bound=90<sup>th</sup> percentile Source: PAG-ASA*

### Hazard Inventory

Due to the geographical characteristics of the province, Davao del Norte is prone to several hazards. Based on the hazard maps generated from MGB and PHIVOLCS-DOST, the Province of Davao del Norte is highly susceptible to flooding and earthquake. Data from PAG-ASA-DOST show that the coastal areas of Tagum City, Panabo City, Carmen and IGACOS are highly susceptible to Sea Level Rise and Storm Surge. The province except the Municipality of Braulio E. Dujali is highly susceptible to rain-induced landslide as shown in the hazard map provided by MGB.

**Table 1.2 Hazard Inventory Matrix, Province of Davao del Norte**

Hazard	Map Information					Hazard Description				
	Source	Scale	Format	Date	Reference System	Susceptibility	Magnitude	Speed of Onset	Frequency and/or Duration	Areas Covered
A	B	C	D	E	F	G	H	I	J	K
Flood	MGB	1:10,000	JPEG & Shapefile	2022	WGS 84	Very High, High, Moderate, & Low	Depth	Sudden	-	Whole Davao del Norte
Rain Induced Landslide	MGB	1:10,000	JPEG & Shapefile	2022	WGS 84	High, Moderate, & Low	Proneness	Sudden	-	Whole Davao del Norte excluding Dujali
Earthquake (Liquefaction)	PHIVOLCS - DOST	1:10,000	JPEG & Shapefile	2018	WGS 84	High, Moderate, & Low	-	Low	-	Whole Davao del Norte
Earthquake (Fault Line)	PHIVOLCS - DOST	1:10,000	JPEG & Shapefile	2018	WGS 84	High, Moderate, & Low	-	Sudden	-	Whole Davao del Norte
Storm Surge	PAG-ASA - DOST	<b>1:10,000</b>	JPEG & Shapefile	<b>2020</b>	<b>WGS 84</b>	High, Moderate, & Low	<b>Depth</b>	<b>Sudden</b>	-	Tagum City, IGACOS, Panabo City, & Carmen

Sea Level Rise	PAG-ASA - DOST	1:10,000	JPEG & Shapefile	2018	WGS 84	High, Moderate, & Low	Depth	Sudden	-	Tagum City, IGACOS, Panabo City, & Carmen
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Source: PAG-ASA, PPDO 2023

### Records of Previous Disasters

Historically, the Province of Davao del Norte is not spared from natural and human-induced disaster. Data gathered in the past ten (10) years (2013-2022) shows that the province is frequently affected by flooding and landslide incidents mainly due to hydrometeorological events. Flooding as the top hazard of province affects not only the population but it also caused major devastation to infrastructure and agriculture.

Hazard Events and Description	Affected Brgy.	No. of Casualties			No. of Affected		No. of Houses Damaged		Damage to Properties (PhP)				
		Dead	Injured	Missing	Persons	Families	Partially	Totally	Infrastructure	Agriculture	Institutions	Private/Commercial	Total
Rain Induced Landslide @ Talaingod, August 12, 2022	1	1	0	0	100	20	0	6	-	-	-	-	-
Flooding Incident - Heavy Rainfall due to Shearline (Dec. 25, 2022)	5	0	0	0	6,925	1,385	0	0	-	-	-	-	-

Landslide Incident due to Localized Thunderstorm (Oct. 16, 2022)	1	0	0	0	10	2	0	2	36,000.00				
Hazard Events and Description	Affected Brgy.	No. of Casualties			No. of Affected		No. of Houses Damaged		Damage to Properties (PhP)				
		Dead	Injured	Missing	Persons	Families	Partially	Totally	Infrastructure	Agriculture	Institutions	Private/Commercial	Total
Flooding Incident - Heavy Rainfall brought by Inter-tropical Convergence Zone (ITCZ) (July 27, 2022)	1	0	0	0	25	5	0	0	-	-			
Flood incident @ Sto. Tomas, Davao del Norte (July 21, 2022)	8	0	0	0	6,107	1,895	0	0	-	-	-	-	-
Rain Induced Landslide @ San Isidro July 9, 2022	1	0	0	0		91			-	-	-	-	-

Flooding Incident - Moderate to heavy rainfall brought by ITCZ (April 26, 2022)	27	0	0	0	109,040	21,808	0	1	41,502,080.00	60,173,571.95	-	-	
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Hazard Events and Description	Affected Brgy.	No. of Casualties			No. of Affected		No. of Houses Damaged		Damage to Properties (PhP)				
		Dead	Injured	Missing	Persons	Families	Partially	Totally	Infrastructure	Agriculture	Institutions	Private/Commercial	Total
Flood incident @ Sto. Tomas, Davao del Norte (April 21, 2022)	11	0	0	0	39,101	8,776	0	0	-	-	-	-	-
Flood incident @ Sto. Tomas, Davao del Norte (April 16, 2022)	9	0	0	0	3,538	17,896	0	0	-	-	-	-	-
Flooding Incident - Heavy Rainfall due to low Pressure Area (April 6, 2022)	38	0	0	0	77,205	15441	27	6	10,244,081.35	16,213,401.60	-	-	26,457,482.95
Flooding Incident - Heavy Rainfall due to Low Pressure Area (LPA) (Mar. 7, 2022)	10	0	0	0	24,555	4,911	0	1	10,280,000.00	84,842,600.00	-	-	95,122,600.00

Hazard Events and Description	Affected Brgy.	No. of Casualties			No. of Affected		No. of Houses Damaged		Damage to Properties (PhP)				
		Dead	Injured	Missing	Persons	Families	Partially	Totally	Infrastructure	Agriculture	Institutions	Private/Commercial	Total
Flooding Incident - Heavy Rainfall due to Trough of Low Pressure Area (LPA) (Feb 28, 2022)	64	0	0	0	153,815	30,763	1	4	5,765,199.16	84,303,340.02	-	-	90,068,539.18
Flood due to Trough of Low Pressure Area @ Davao del Norte (Feb. 25, 2022)	48	0	0	0	104,132	21,244	4	1	5,764,199.14	84,303,340.02	-	-	90,067,539.16
Flooding Incident - Heavy Rainfall due to Shear Line (Jan 17, 2022)	62	0	0	0	173,165	34,633	28	9	13,016,872.51	71,497,732.00	-	-	84,514,604.51
Flood incident @ Panabo City, Davao del Norte ( Nov. 10, 2021)	2	0	0	0	1,510	302	0	0	-	-	-	-	-

Hazard Events and Description	Affected Brgy.	No. of Casualties			No. of Affected		No. of Houses Damaged		Damage to Properties (PhP)				
		Dead	Injured	Missing	Persons	Families	Partially	Totally	Infrastructure	Agriculture	Institutions	Private/Commercial	Total
Heavy Rainfall due to Localized Thunderstorm	13	0	0	0	43,995	8,799	0	0	-	-			-
Flood Incident due LPA @ Sto. Tomas, Davao del Norte (October 22, 2021)	4	0	0	0	5,789	1,700	0	0	-	-	-	-	-
Flooding Incident - Heavy Rainfall due to ITCZ (Sept. 19, 2021)	18	0	0	0	24,125	4,825	0	0	-	4,421,078.00			4,421,078.00
Flooding Incident - Heavy Rains due to Easterlies (Jul12, 2021)	3	0	0	0	7,865	1,573	0	0	-	-			-

Hazard Events and Description	Affected Brg y.	No. of Casualties			No. of Affected		No. of Houses Damaged		Damage to Properties (PhP)				
		Dead	Injured	Missing	Persons	Families	Partially	Totally	Infrastructure	Agriculture	Institutions	Private/Commercial	Total
Flooding Incident - Tropical Storm "Dante" (May 30, 2021)	8	0	0	0	30,000	6,000	0	0	-	3,507,589.72			3,507,589.72
Flooding Incident - Trough of LPA (April 10, 2021)	6	0	0	0	0	0	0	0	-	-			-
Flooding Incident - Localized Thuderstorm (Feb 14, 2021)	27	0	0	0	93,750	18,750	169	3	16,873,208.00	48,958,444.47			65,831,652.47
Flooding Incident - TD "VICKY" (Dec 18, 2020)	33	0	0	0	45,035	9,007	0	0	600,000.00	8,787,358.10			9,387,358.10
Flooding Incident (Oct 31, 2019)	5	0	0	0	11,765	2,353	0	0	-	-			-

Hazard Events and Description	Affected Brg y.	No. of Casualties			No. of Affected		No. of Houses Damaged		Damage to Properties (PhP)				
		Dead	Injured	Missing	Pers ons	Famili es	Partiall y	Totall y	Infrast ructure	Agricult ure	Institutions	Private/ Commer cial	Total
Flooding Incident - Tail-end of a Cold Front (Jan 26, 2019)	87	1	0	0	407,365	81,473	47	41	74,096,963.00	1,083,272,978.72			1,157,369,941.72
Flooding Incident - Trough of LPA (Jan 11, 2019)	22	0	0	0	68,855	13,771	0	0	22,594,310.00	730,621.65			23,324,931.65
Flooding Incident - Tropical Storm "Vinta" (Dec. 21, 2017)	60	0	0	0	321,142	66,209	0	0		194,696,910.23			194,696,910.23
Flooding Incident - Tail-end of a Cold Front (Jan 18, 2017)	35	0	0	0	106,225	21,245	0	0	285,672,500.00	8,411,024.00			294,083,524.00
Landslide Incident due to Localized Thunderstorm @ Talaingod (Sept 22, 2015)	1	0	0	0	1,025	205	0	3	-	-	-		-

Hazard Events and Description	Affected Brgy.	No. of Casualties			No. of Affected		No. of Houses Damaged		Damage to Properties (PhP)					
		Dead	Injured	Missing	Persons	Families	Partially	Totally	Infrastructure	Agriculture	Institutions	Private/Commercial	Total	
Flooding Incident - Tropical Storm Seniang @ Asuncion (Jan 7, 2015)	24	0	0	0	22,805	4,572	0	0	-	915,146.41				915,146.41
Flooding Incident - Localized Thunderstorm @ Carmen (July 1, 2014)	3	0	0	0	1,155	231	0	0						-
Landslide Incident - Heavy Rains @ Tagum City (June 20, 2014)	1	0	0	0	4	1	0	1						-
Flooding Incident - Localized Thunderstorm (April 17, 2014)	10	0	0	0	324	69	0	0						-
Flooding Incident - Tropical Storm Crising (Feb 19, 2014)	56	0	0	0	81,905	16,931	0	0						-

## Hazard Susceptibility Inventory

In terms of hazard susceptibility, majority of the province's total land area is exposed to multiple hazards. This is largely due to the location and geographical context as the risk involving flooding and earthquake hazards is high. Also, as the province has an island and coastal areas, storm surge and sea level rise are posing serious risks to the safety of the populace. Flooding, landslide, and earthquake further contribute to the exposure to natural hazards. Of these, flooding due to hydro-meteorological events, accounted as the top hazard in the province during the last decade.

**Table 1.4 Hazard Susceptibility Inventory Matrix, Province of Davao del Norte**

City/ Municipality	Income class	Flood		Rain- Induced Landslide		Earthquake (Liquefaction)		Earthquake (Faultline)		Storm Surge		Sea Level Rise	
		Actual	Projected	Actual	Projected	Actual	Projected	Actual	Projected	Actual	Projected	Actual	Projected
ASUNCION	1st Class	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE				
CARMEN	1st Class	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
DUJALI	4th Class	TRUE	TRUE			TRUE	TRUE	TRUE	TRUE				
IGACOS	Component City	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
KAPALONG	1st Class	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE				
NEW CORELLA	2nd Class	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE				
PANABO	Component City	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
SAN ISIDRO	5th Class	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE				
STO. TOMAS	1st Class	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE				
TAGUM	Component City	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
TALAINGOD	2nd Class	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE				

Source: DSHUD XI CDRA AR5 Guidelines

## POTENTIAL IMPACTS OF CLIMATE CHANGE AND HAZARDS

### Climate Stimuli and Hazard Mapping

In order to determine the most relevant scenario projections for the Province of Davao del Norte, the CDRA Technical Working Group (TWG) selected a pessimistic high (RPC8.5) ACDC climate scenario. This scenario incorporates the highest temperature forecast and lowest total rainfall forecast values, representing a worst-case assumption.

In 2030, the seasons of December, January, and February (DJF) and September, November, and November (SON) are projected to experience the highest temperature increase, ranging from +0.90C to +1.10C. By 2050, the same seasons (DJF and SON) are expected to witness a temperature increase ranging from +1.90C to +2.10C, compared to the observed values. During this timeframe, the months of March, April, and May (MAM) and June, July, and August (JJA) are anticipated to be the warmest. Historical trends indicate that the MAM and JJA seasons have consistently been hotter in the Province over the past 30 years. Climate experts attribute this temperature rise to greenhouse gases, which trap heat and hinder its escape from the Earth's atmosphere. The increasing temperatures pose significant risks to the population, areas of natural resource production, urban zones, critical infrastructure, and essential utilities.

In both 2030 and 2050 projections, the DJF season has the highest projected seasonal rainfall reduction, with 629.9% less than the observed data, while the MAM season has the lowest, with 386.28% less than the observed value. The Province will receive seasonal rainfall; however, the summer months will be drier than the Amihan season. In 2030 and 2050, less rain is likely to have an impact on population, natural resource production, agriculture, and lifeline utilities. During extreme events, the number of hot days will rise, while the number of dry days will fall, with heavy rains expected in 2030 and 2050.

### Impact Chain Analysis

Climate Change is one of the biggest challenges of our time, especially for developing nations with limited capacity to address its multiple implications on a country's economic development. The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere which is in addition to natural climate variability observed over a comparable period of time. Evidence is visible supporting the fact that the change cannot simply be explained by natural variation. Recent scientific assessments have confirmed that the warming of the climate system since the mid-20th century is most likely due to the increase in greenhouse gas (GHG) concentrations from human activities. Current warming has increasingly posed quite considerable challenges to man and the environment and will continue to do so in the future (DOST-PAGASA).

The province of Davao del Norte identified two (2) major variables of climate change that evidently observed, according to PAGASA the projected changes in seasonal temperature increased an average of 1.6°C in all seasons than the historical baseline temperature. In contrast, the projected rainfall in the province has decreased by 11% particularly during the transition from southwest to northeast monsoon (SON) than the observed baseline rainfall. The rising temperature and decrease in rainfall brought a drier dry season, for the reason that when temperature increases, water evaporates more quickly, thus increasing the risk of drought. The prolonged dry season (drought) in the natural climate cycle may result in scarcity of water sources, increased energy consumption, and increased time for construction, and can have a serious impact on health, economy, environment, and agriculture such as a decrease in crop yield and increase of pests and diseases in crops.

Meanwhile, the frequency and intensity of extreme weather events is associated with the increasing temperature and moisture in the atmosphere resulting in extremely wet days and increasing intensity and frequency of tropical cyclone entering the Philippine Area of Responsibility (PAR). This

phenomenon is supported by the Journal of Geophysical Research (2016), accordingly, warmer temperatures and increased moisture in the atmosphere seemed to correlate more with heavier precipitation events than with weaker ones. Climate-related hazards such as flood and rain-induced landslides are brought by extreme rainfall, tropical cyclones, thunderstorms, the ITCZ, and frontal passages making wet seasons wetter (PAGASA). These hazards dramatically cause damage to crops, bring delays in construction activities, affect soil compaction causing soil erosion, transport disruption, and worse the displacement of communities along flat plane and landslide-prone areas. However, the comforting side is making water sources more abundant.

Another detrimental effect of climate change can be exacerbated by the storm surge from tropical cyclones. According to the published information from the Climate Change Commission (CCC), the tropical cyclones entering the PAR and made landfall were found consistent with the currently observed trends, however, the intensity is projected to increase, exceeding 170pkh. With this, areas vulnerable to storm surge are most affected by this climate-related hazard, causing displacement of coastal communities and damage to properties and fishery equipment/cages. Historically, when Typhoon Haiyan locally known as “Bagyong Yolanda” made landfall has brought a storm surge that rose up to 15-20 feet, displacing thousands or even millions of citizens living in coastal communities (climate reality project.org)

Conversely, the sea level rise is also identified as a variable of climate change. According to the World bank (2022), there are two (2) reasons for sea level rise. Firstly, the glaciers and icesheets worldwide are melting adding water to the ocean. Secondly, the volume of the ocean is expanding as the water warms. Thus, the Philippines as an archipelagic country with 60% of cities located along the coast is highly vulnerable to sea level rise and its impacts.

According to the National Climate Change Commission, the sea level has risen by 5.7 – 7.0 millimeters per year over certain parts of the Philippines from 1993-2015, which is approximately double the highest global average rate of 2.8 -3.6 millimeters per year.

It is projected that the sea level in the country will continue to be slightly larger than the global average. The increase is expected to reach by approximately 20 centimeters by the end of the 21st century (under RCP 8.5 scenario). Among those that are threatened by the events brought by sea level rise are communities living near the coasts, land loss, seawater intrusion, and ecosystem damage.

In general, the identified climate change variables and hazards can seriously bring damage to public and private infrastructure, cause disease, injuries, and even mental health disorders, compromise access to hygiene and sanitation, economic disruption leading to food insecurity, worsening poverty, and even cause death to vulnerable individuals. On the flip side, the drastic impacts of climate change provide an opportunity for resource allocation on climate-resilient infrastructure.

## **2.1 Summary of Potential Impacts of Climate Stimuli**

### **Summary of Potential Impacts of Climate Stimuli**

Climate change disrupts the Earth's temperature equilibrium, with far-reaching consequences for humans and the environment. As a tropical country, the Philippines is experiencing increased rainfall and flooding as temperatures rise. Province of Davao del Norte is vulnerable to flooding due to its location in low-lying areas. Based on the findings, the CDRA TWG identified two climate change stimuli that could affect the province: (a) increased temperature and (b) decreased in rainfall.

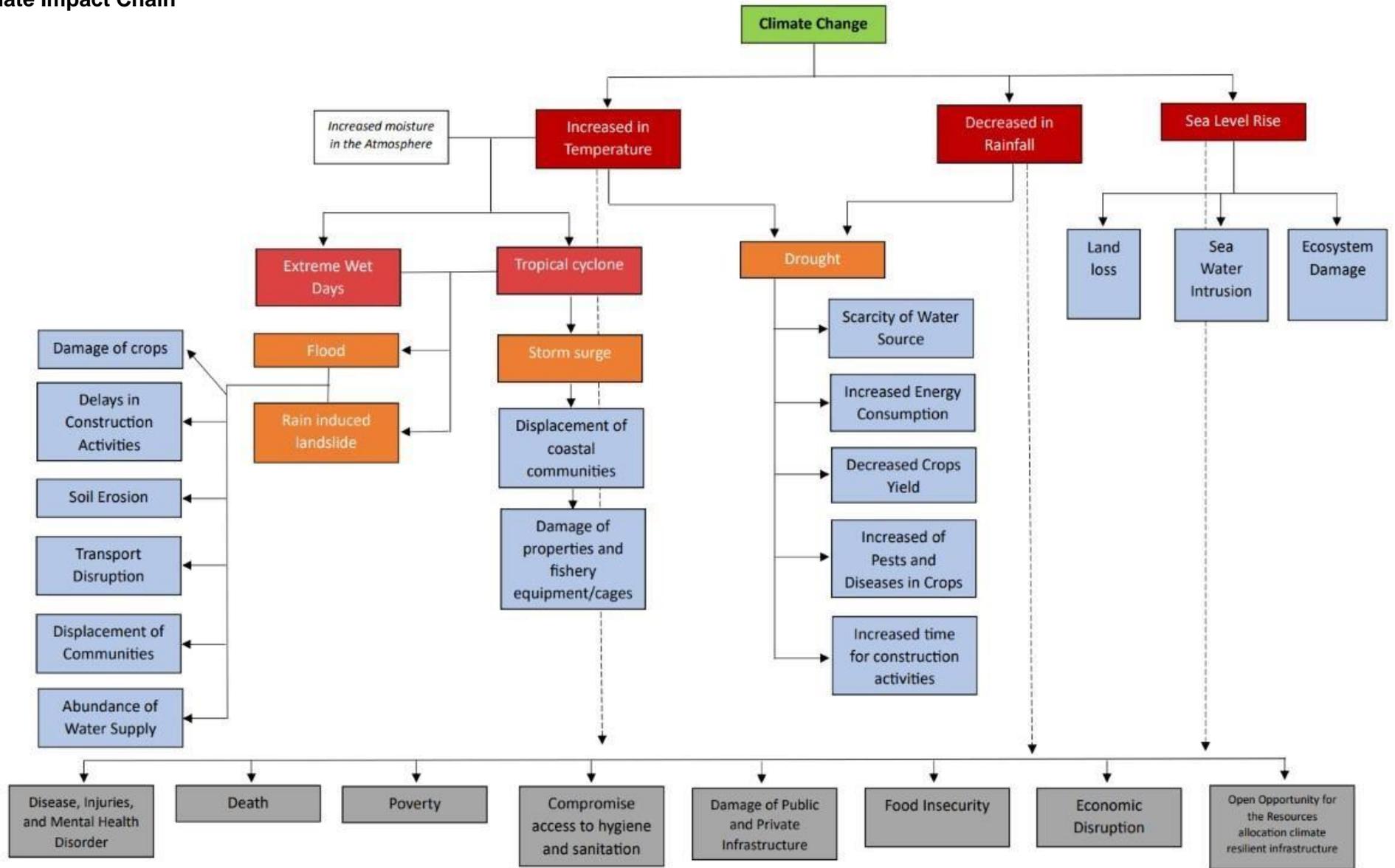
Temperature rise and precipitation decline brought on by climate change are hazardous to human

health. The availability of food is impacted by the climate and wheatear conditions. Despite the flexibility of agricultural operations, farmers face problems from climate change, water stress, disease, and extreme weather events like flooding. How we live and work is changing because of the climate problem. Almost every industry is at risk from climate change, either directly or indirectly. Disasters brought on by climate change have an impact on operations, resulting in facility damage and a disruption of the workforce. As a result, there will be a decline in economic activity and income. Public buildings including hospitals, schools, and government offices can sustain damage from flooding. As temperatures rise, so does the amount of energy needed for cooling. Basic services are interrupted when critical point facilities are adversely impacted.

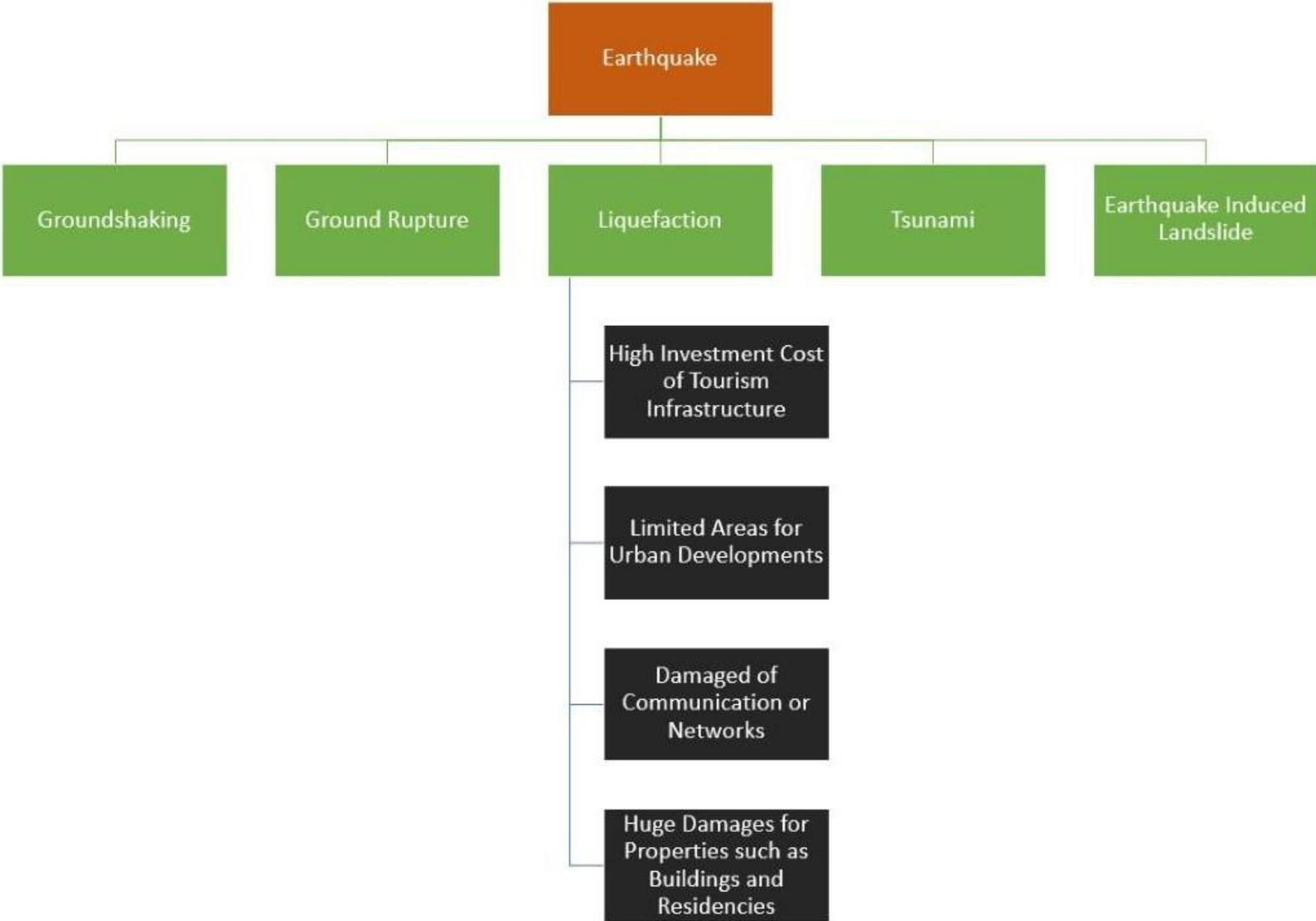
Summary of Projected Changes in Climate Stimulus, Province of Davao del Norte

Climate Variable	General Changes Expected	Specific Change Expected and Reference Period	Information about Patterns of Change	Population	Natural Resource Based	Critical Point Facilities	Urban Use Areas	Infrastructure and Utilities
Temperature	Increase	<b>CHANGE IN 2030</b>	Warm summer on MAM and JJA.	Yes	Yes	Yes	Yes	Yes
		DJF-SON: +0.9 TO +1.1						
		<b>CHANGE IN 2050</b>	Same result from the last 30 years which is hotter or warmer during MAM and JJA season.	Yes	Yes	Yes	Yes	Yes
		DJF-SON: +1.9 TO 2.1						
Rainfall	Seasonal increase/decrease	<b>CHANGE IN 2030</b>	Decreased rainfall will be experience, particularly drier summer months and wetter in Amihan season. Although, seasonal rainfall is also expected.	Yes	Yes	Yes	Yes	Yes
		DJF: $637 + (367 \times 0.011) = 629.99$						
		MAM: $496.5 + (496.5 \times -0.022) = 386.28$						
		JJA: $535.6 + (535.6 \times -0.079) = 493.29$						
		SON: $556.2 (556.2 \times -0.022) = 543.96$						
		<b>CHANGES IN 2050</b>		Yes	Yes	Yes	Yes	Yes
		DJF: $637 + (637 \times 0.011) = 629.99$						
		MAM: $496.5 + (496.5 \times -0.022) = 386.28$						
		JJA: $535.6 + (535.6 \times -0.079) = 493.29$						
		SON: $556.2 (556.2 \times -0.022) = 543.96$						
Extreme Events	Number of hot or warm days are increasing	Exceeding normal temperature in 2030 and 2050	Number of hot days will increase in 2020 and 2050	Yes	Yes	Yes	Yes	Yes
	Number of dry days are decreasing		More days with rainfall compared to baseline	Yes	Yes	Yes	Yes	Yes
	Extreme/heavy rainfall		Extreme rainfall expected in 2030 and 2050	Yes	Yes	Yes	Yes	Yes

# Climate Impact Chain



**Earthquake Impact Chain**



A Summary of Potential Impacts on Increased Temperature Climate Stimuli on Exposed Unit

Derived from Step 1		Derived from Step 2.1		Exposed Elements
Climate stimuli	General Changes in Climate stimuli	System of interest/ Ecosystem	Potential climate change Impacts	
Increase in temperature	Drought	Residential, Built up	<ul style="list-style-type: none"> <li>• Compromise access to hygiene and sanitation</li> <li>• Increased Poverty rate</li> <li>• Death</li> </ul>	Population
		Commercial Areas	<ol style="list-style-type: none"> <li>1. Scarcity of Water Source</li> <li>2. Increased of Energy consumption</li> <li>3. Economic Disruption</li> </ol>	Urban Use
		Agriculture/ Forestry	<ol style="list-style-type: none"> <li>4. Decreased in Crops yield</li> <li>5. Increased of Pest and diseases in Crops</li> <li>6. Food insecurity</li> <li>7. Damage to properties and fishery equipment/cages</li> </ol>	Natural Based Areas Resource Production
		Institutional/ Health Areas	<ol style="list-style-type: none"> <li>8. Disease, injuries and</li> <li>9. mental health disorder</li> </ol>	Critical Point Facilities
		Infrastructure	<ol style="list-style-type: none"> <li>9. Increase time construction activities</li> <li>10. Damage of Public and Private Infrastructure</li> <li>11. Open opportunity for the resources allocationclimate resilient infrastructure</li> </ol>	Lifeline Utilities
	Tropical Cyclone	Residential, Built up	12. Displacement of Coastal communities	Population
		Agriculture/ Forestry	13. Damage of properties and fishery equipment/cages	Natural Resource Based Production
	Extreme Wet days	Agriculture/ Forestry	<ol style="list-style-type: none"> <li>14. Damage to crops</li> <li>15. Soil Erosion</li> </ol>	Natural Resource Based Production
		Infrastructure	<ol style="list-style-type: none"> <li>16. Delayed in Construction activities</li> <li>17. Transport Disruption</li> </ol>	Lifeline Utilities

## A Summary of Potential Impacts on Increased Temperature Climate Stimuli on Exposed Unit

Derived from Step 1		Derived from Step 2.1		Exposed Elements
Climate stimuli	General Changes in Climate stimuli	System of interest/ Ecosystem	Potential climate change Impacts	
Decreased in Rainfall	Drought	Residential, Builtup	<ul style="list-style-type: none"> <li>• Compromise access to hygiene and sanitation                             <ul style="list-style-type: none"> <li>• Increased Poverty rate</li> <li>• Death</li> </ul> </li> </ul>	Population
		Commercial Areas	18. Scarcity of Water Source 19. Increased of Energy consumption 20. Economic Disruption	Urban Use
		Agriculture/ Forestry	21. Decreased in Crops yield 22. Increased of Pest and diseases in Crops 23. Food insecurity 24. Damage to properties and fishery equipment/cages	Natural Resource Based Production Areas
		<i>Institutional/ Health Areas</i>	25. Disease, injuries and mental health disorder	Critical Point Facilities
		Infrastructure	26. Increase time construction activities 27. Damage of Public and Private Infrastructure 28. Open opportunity for the resources allocation climate resilient infrastructure	Lifeline Utilities
Sea Level Rise	Land Loss	Residential, Builtup	29. Economic disruption	Population
	Sea water Intrusion	Agriculture/ Forestry	30. Damage to Crops	Natural Resource Based Production Areas
	Ecosystem Damage	Infrastructure	31. Damage to Public and Private Infrastructure	Lifeline Utilities

## Exposed Element Risk Assessment Summary

### Population

The table provides an overview of varying degrees of susceptibility to flood, landslide, and storm surge. According to the data presented, in Davao del Norte, there are 7,373 people exposed to a very high risk of flooding, 3,268 people exposed to a high risk, and 42,615 people exposed to a moderate risk. Similarly, in terms of landslide exposure, the summary indicates 390 people at a very high risk, 10,552 at a high risk, and 35,768 at a moderate risk. Lastly, for storm surge exposure, the data shows 20,488 people at a very high risk, 6,728 at a high risk, and 2,330 at a moderate risk.

### Population Risk per Hazard

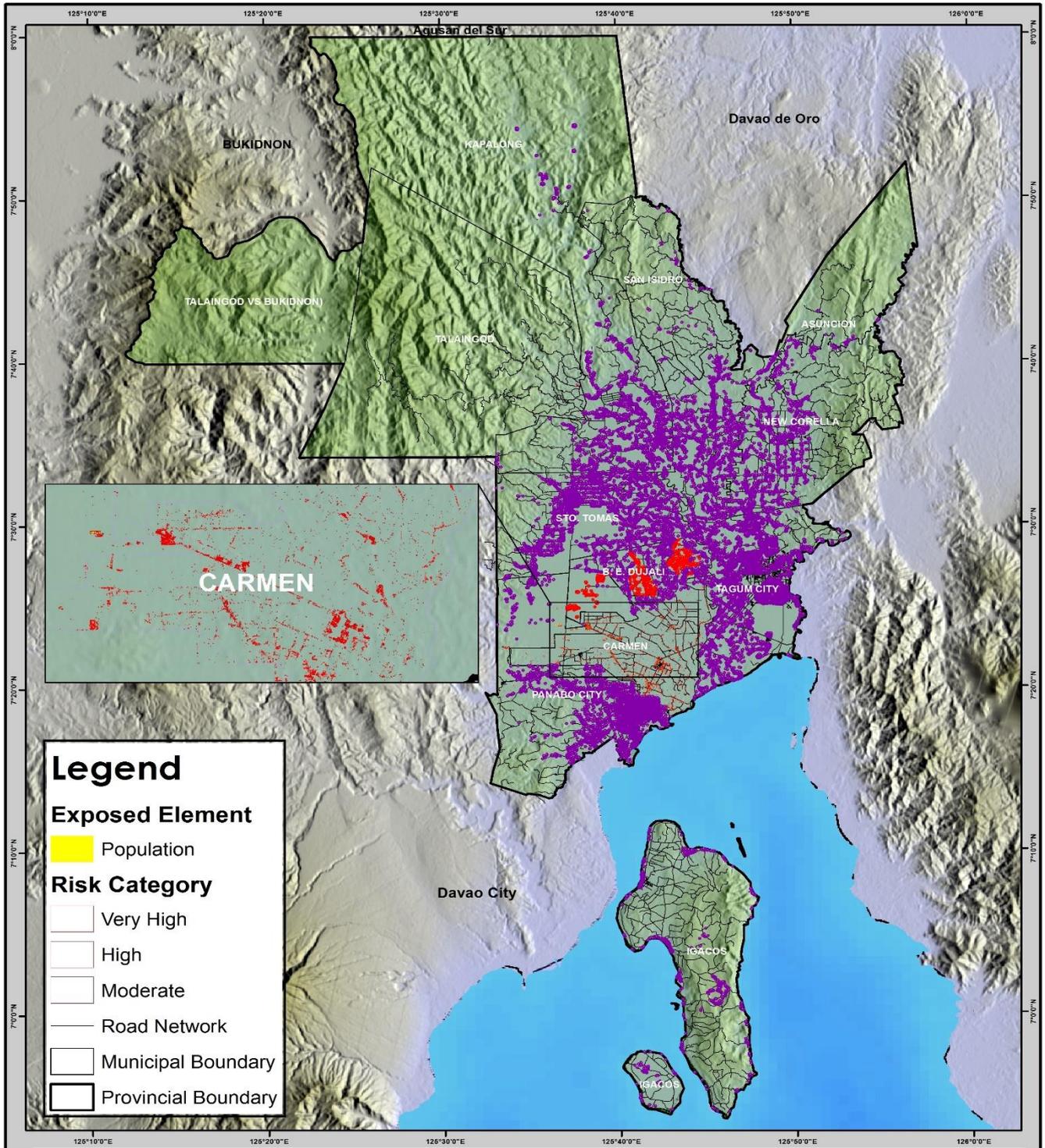
CITY/MUN.	SUSCEPTIBILITY	POPULATION EXPOSED TO FLOOD	POPULATION EXPOSED TO LANDSLIDE	POPULATION EXPOSED TO STORM SURGE
TAGUM CITY	Very High	2,161		2,557
	High	7,156	89	1,264
	Moderate	12,073	942	510
ASUNCION	Very High	2,050	36	
	High	4,530	1,279	
	Moderate	3,040	1,939	
SAN ISIDRO	Very High	3	72	
	High	103	474	
	Moderate	90	6,028	
NEW CORELLA	Very High	492	233	
	High	2,894	1,229	
	Moderate	2,488	3,207	
KAPALONG	Very High			
	High	6,700	1,374	
	Moderate	2,441	2,980	
PANABO CITY	Very High	267		6,497
	High	739	456	2,827
	Moderate	5,463	2,062	1,423

Source: CDRA Template 3: Exposure Database

CITY/MUN.	SUSCEPTIBILITY	POPULATION EXPOSED TO FLOOD	POPULATION EXPOSED TO LANDSLIDE	POPULATION EXPOSED TO STORMSURGE
IGACOS	Very High		3	10,587
	High	13	2,573	1,768
	Moderate	952	16,355	
B.E. DUJALI	Very High	254		
	High	2,751		
	Moderate	3,285		
STO. TOMAS	Very High	414		
	High	3,722	396	
	Moderate	4,786	1,107	
CARMEN	Very High	1,732		847
	High	3,889		869
	Moderate	7,917	487	397
TALAINGOD	Very High		46	
	High	171	2,678	
	Moderate	80	661	
DAVAO DELNORTE	<b>Very High</b>	<b>7,373</b>	<b>390</b>	<b>20,488</b>
	<b>High</b>	<b>3,2668</b>	<b>10,552</b>	<b>6,728</b>
	<b>Moderate</b>	<b>42,615</b>	<b>35,768</b>	<b>2,330</b>

Source: CDRA Template 3: Exposure Database

# Population Risk Map to Flooding



### Legend

**Exposed Element**

- Population

**Risk Category**

- Very High
- High
- Moderate

**Other Elements**

- Road Network
- Municipal Boundary
- Provincial Boundary

**DATA SOURCE**

MINES AND GEOSCIENCES BUREAU (MGB)  
 POLITICAL BOUNDARY 2015 (DENR)  
 MAP SCALE 1:10 000  
 NATIONAL MAPPING AND RESOURCE INFORMATION AUTHORITY (NAMRIA)  
 LOCAL GOVERNMENT UNIT (LGU)

**PREPARED BY:**

PROVINCIAL PLANNING AND DEVELOPMENT OFFICE (PPDO) WITH THE ASSISTANCE OF THE DEPARTMENT OF HUMAN SETTLEMENT AND URBAN DEVELOPMENT (DHSUD) XI AND NATIONAL ECONOMIC DEVELOPMENT AUTHORITY (NEDA) XI

**POPULATION RISK MAP TO FLOODING**

PROVINCE OF DAVAO DEL NORTE  
 REPUBLIC OF THE PHILIPPINES  
 REGION XI

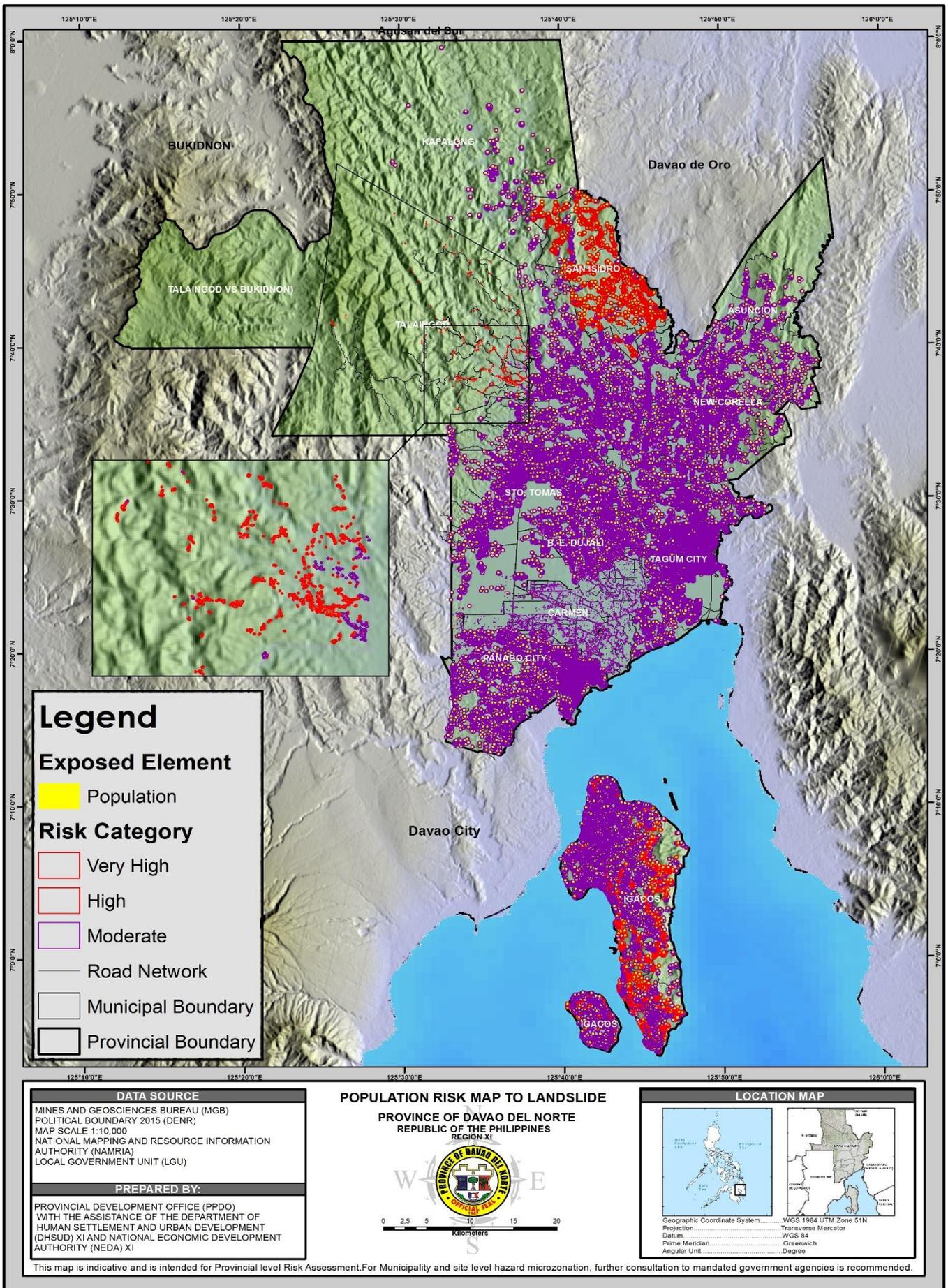
0 2.5 5 10 15 20  
 Kilometers

**LOCATION MAP**

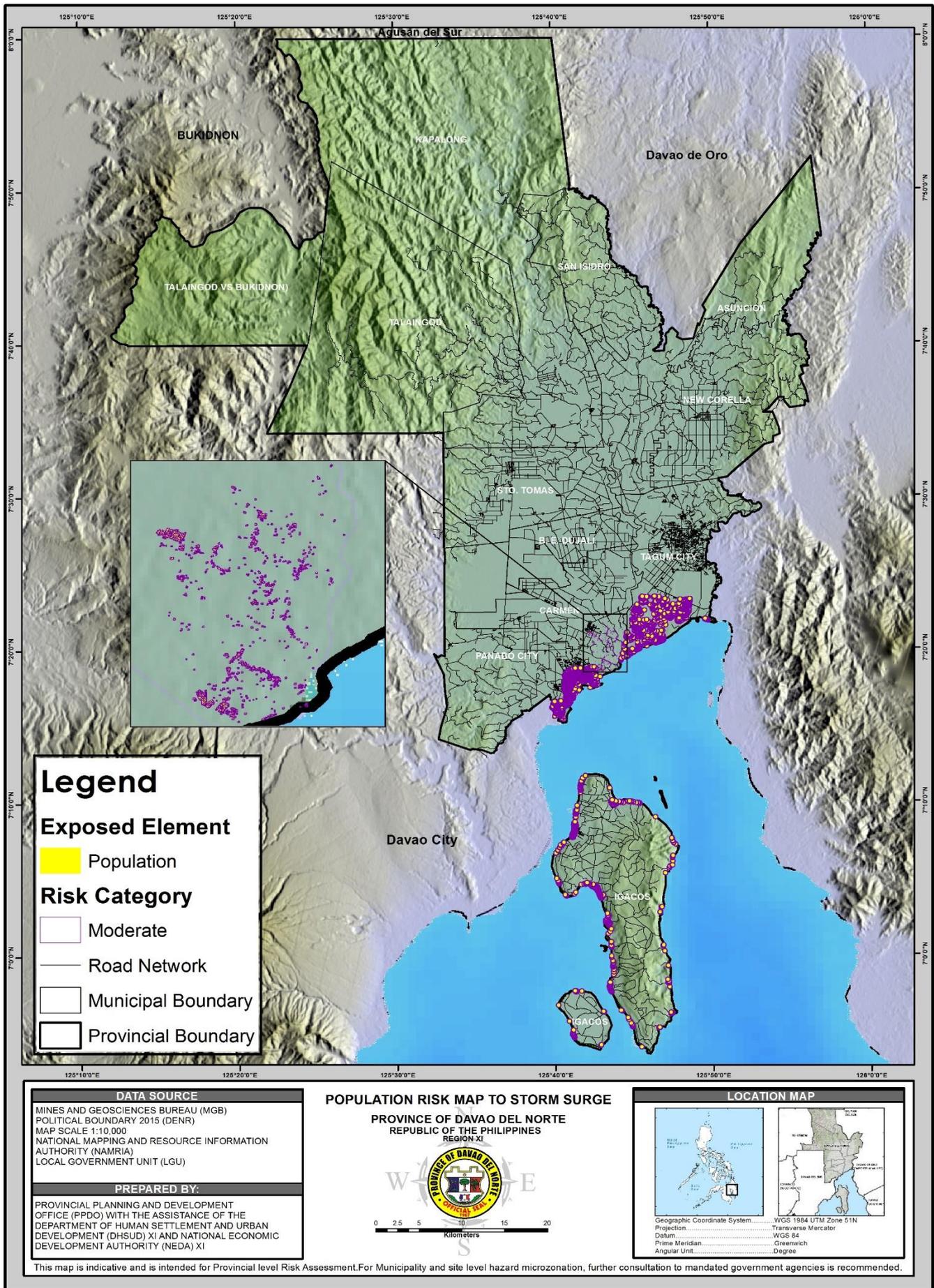
Geographic Coordinate System ..... WGS 1984 UTM Zone 51N  
 Projection ..... Transverse Mercator  
 Datum ..... WGS 84  
 Prime Meridian ..... Greenwich  
 Angular Unit ..... Degree

This map is indicative and is intended for Provincial level Risk Assessment. For Municipality and site level hazard microzonation, further consultation to mandated government agencies is recommended.

**Map 23. Population Risk Map to Landslide**



Map 24. Population Risk Map to Storm Surge



## Natural Resource Base Production Areas

The table provides data categorized by Natural Base Resource Production Areas. Within these areas, there are a total of 102,099.2 hectares of land highly susceptible to floods, with 44,188.27 hectares falling under the high susceptibility category, and an additional 21,856.38 hectares in Davao del Norte affected by flood moderately. Furthermore, in the case of Storm Surge, there are 3,815 hectares highly susceptible, along with 2,103.949 hectares falling under the high and moderately affected categories.

In Davao del Norte, there are 1,906 hectares of land categorized as very highly susceptible to landslides, while 21,300.54 hectares are highly susceptible, and 41,803.73 hectares are moderately affected. Although liquefaction has not yet occurred, all Local Government Units (LGUs) in Davao del Norte are vulnerable to it, encompassing a total of 382,268.2 hectares of affected land.

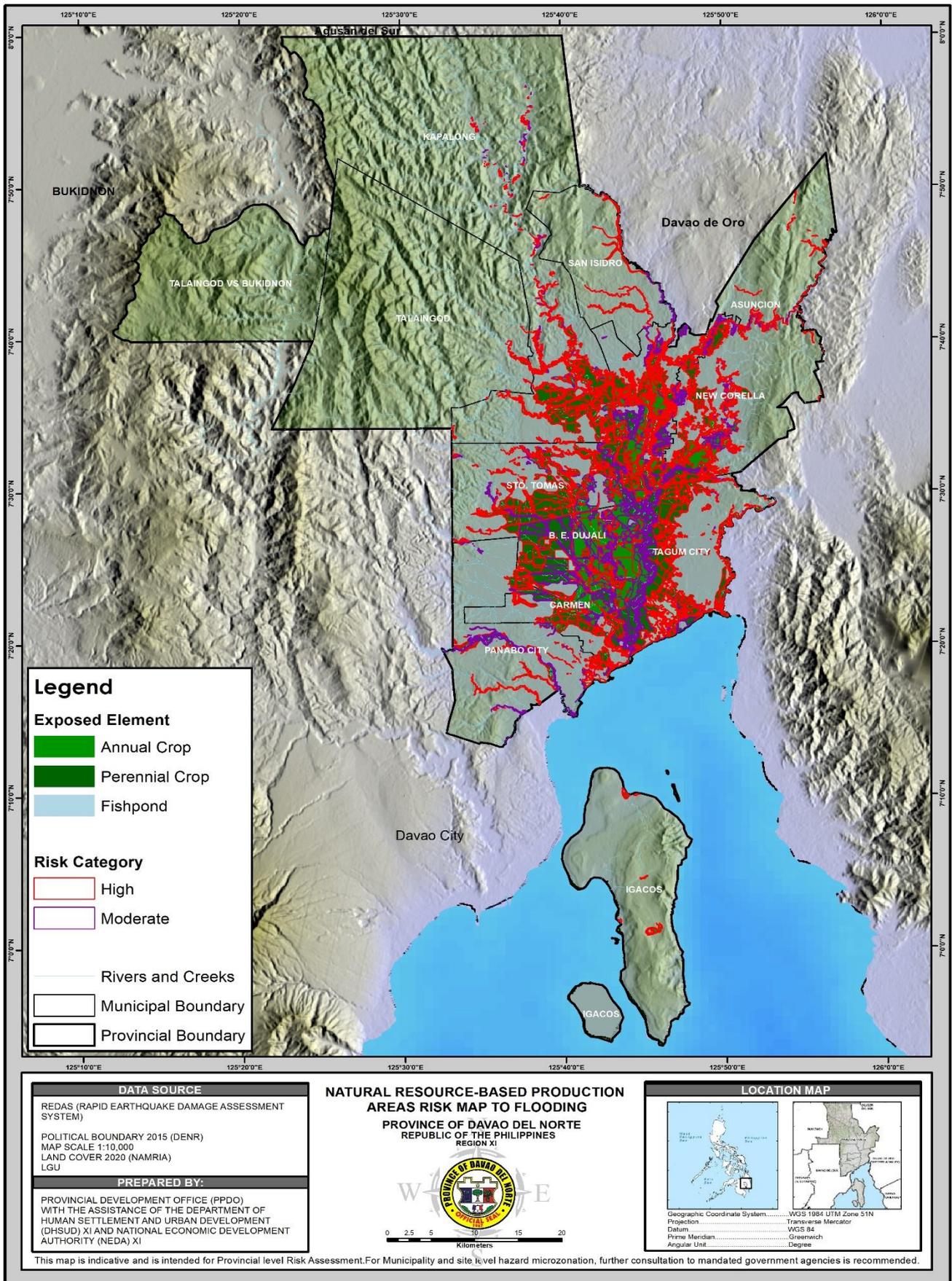
**Table 4.3.1 Summary Natural Resource Based Risk per Hazard**

City/ Mun	Susceptibility	FLOOD		LANDSLIDE		STORM SURGE		LIQUEFACTION		
		Area affected	% Affected vs DDN Area	Area affected	% Affected vs DDN Area	Area affected	% Affected vs DDN Area	Susceptibility	Area affected	% Affected vs DDN Area
ASUNCION	Very High	2733.55	15.22%	761.695	3.65%			PRONE	20011.04	4.14%
	High	5086.75	28.33%	6857.55	32.84%					
	Moderate	1170.78	6.53%	4992.87	23.91%					
B.E. DUJALI	Very High	93521.4	63.38%					PRONE	7898.476	12.78%
	High	4719.81	31.99%							
	Moderate	2681.1	18.17%							
CARMEN	Very High	1422.9	7.03%			622.276	22.70%	PRONE	13703.54	4.22%
	High	9037.25	22.41%			665.943	24.40%			
	Moderate	4238.44	20.94%	169.013	50.00%	165.1	6.41%			
IGACOS	Very High			13.527	0.95%	225.589	45.05%	PRONE	22676	50.06%
	High	46.3049	30.15%	2364.17	54.39%	49.8259	9.95%			
	Moderate	142.903	42.36%	5299.51	42.78%	0.03459	0.02%			
KAPALONG	Very High	0.4461	0.01%	0.17427	0.00%			PRONE	16227.76	1.19%
	High	6703.17	31.13%	1814.9	11.82%					
	Moderate	2410.68	20.44%	5863.71	38.18%					
NEW CORELLA	Very High	843.118	7.20%	1087.58	8.07%			PRONE	22260.69	13.79%
	High	7159.17	35.82%	5253.64	19.50%					
	Moderate	2699.39	23.15%	7132.62	32.00%					
PANABO CITY	Very High	627.7	15.18%			611.748	86.69%	PRONE	19441.63	1.51%
	High	456.711	21.15%	1474.46	15.40%	87.5923	18.07%			
	Moderate	1129.93	27.39%	3375.21	35.26%	6.3008	1.30%			

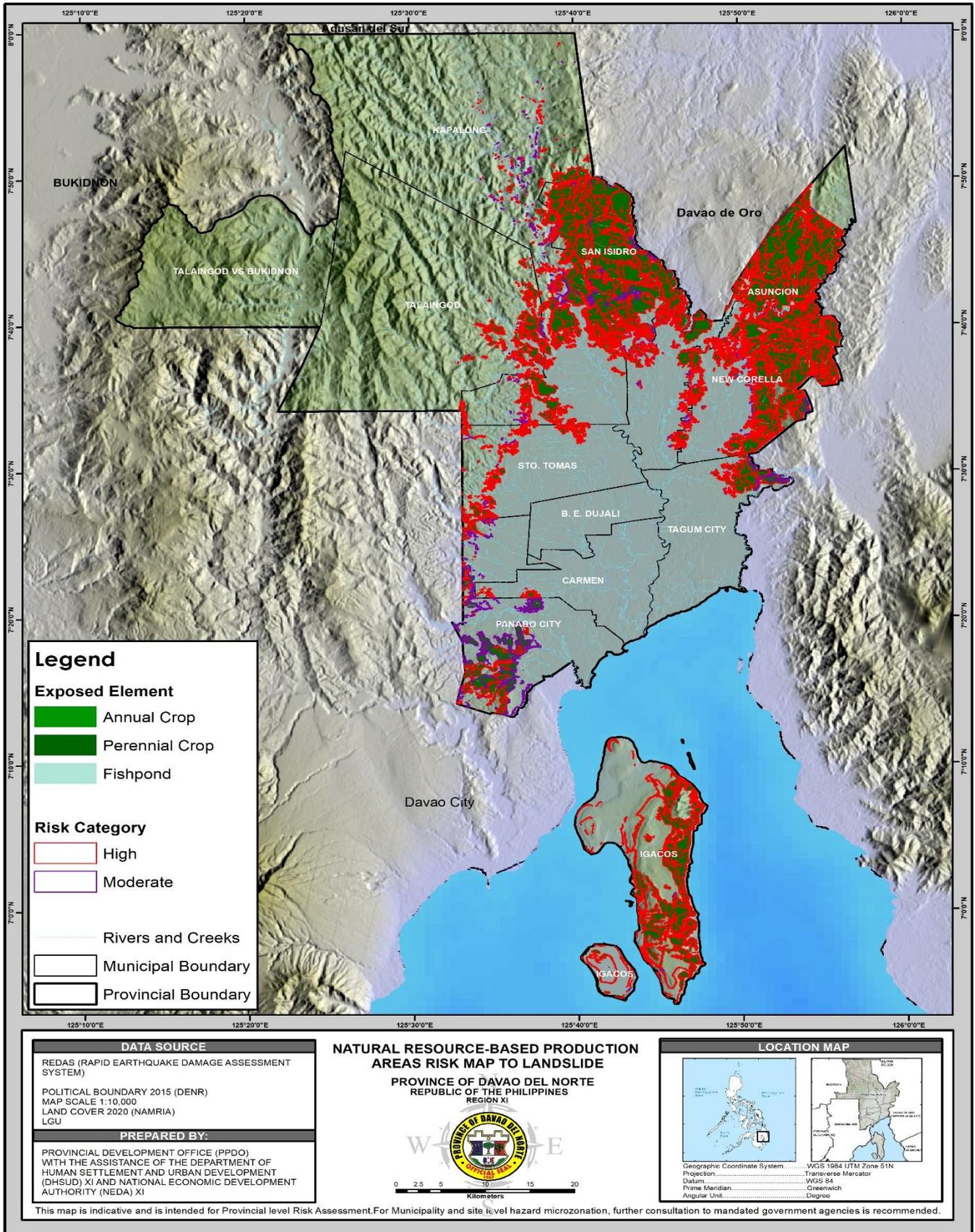
SAN ISIDRO	Very High	39.0894	7.39%	40.0697	0.18%			PRONE	4118.118	50.00%
	High	132.508	25.04%	1351.36	7.38%					
	Moderate	357.484	67.57%	12178.9	44.87%					
STO. TOMAS	Very High	715.343	5.39%	1.01529	0.08%			PRONE	13019.71	2.94%
	High	3338.63	21.80%	435.903	15.72%					
	Moderate	4336.76	32.67%	949.17	35.03%					
TAGUM CITY	Very High	2195.66	13.34%			2355.75	67.60%	PRONE	15807.82	1.50%
	High	7450.68	24.87%	136.343	8.75%	889.616	15.33%			
	Moderate	2629.1	15.97%	1423.87	45.66%	239.536	4.13%			
TALAINGOD	Very High			2.30421	0.08%					
	High	57.2805	24.78%	1612.23	39.64%					
	Moderate	59.8225	26.14%	418.813	12.49%					

Source: CDRA Template 3: Exposure Database

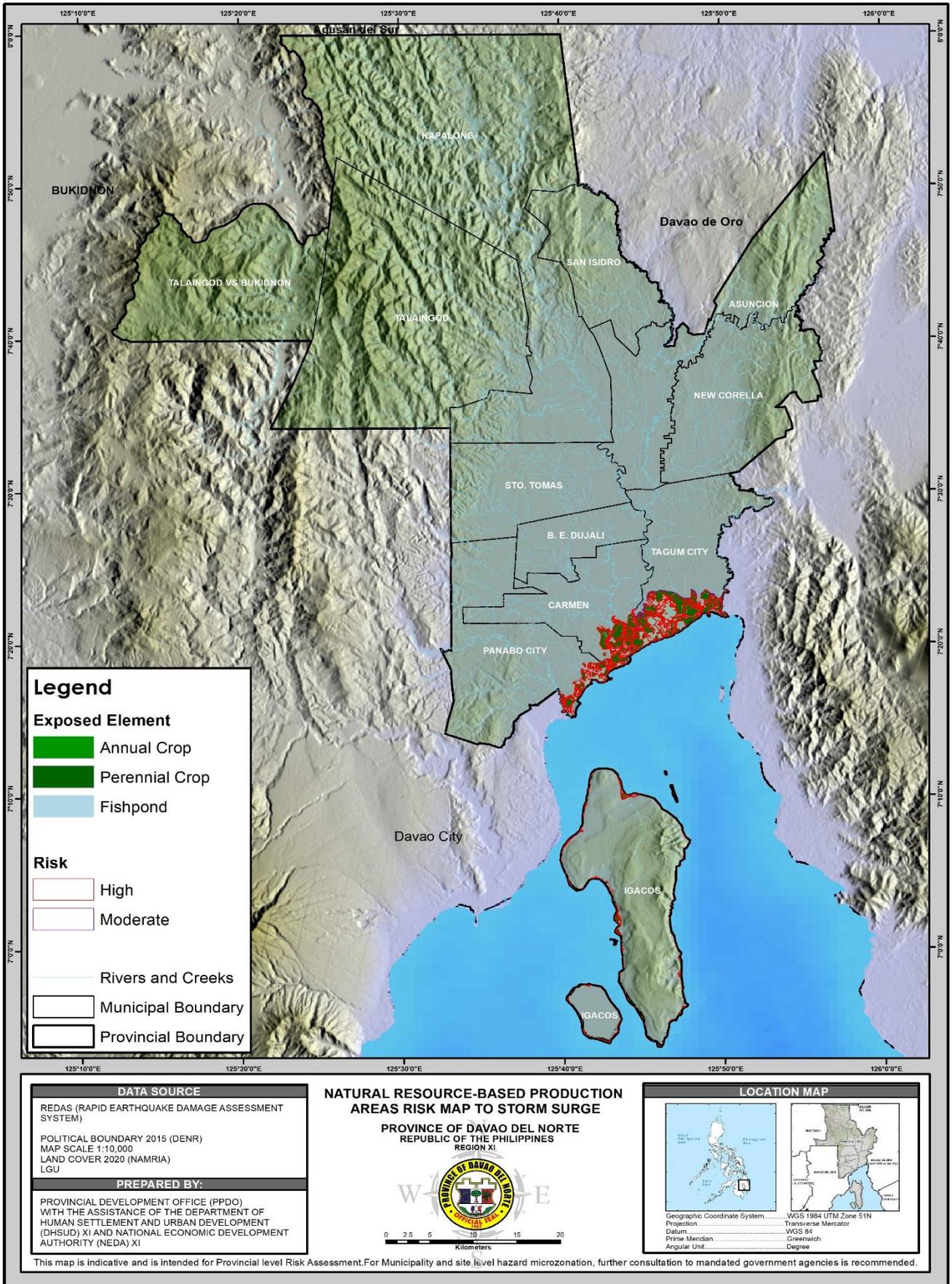
Map 25. Natural Resource Based Production Areas Risk Map to Flooding



Map 26. Natural Resource Based Production Areas Risk Map to Landslide



Map 27. Natural Resource Based Production Areas Risk Map to Storm Surge



## Lifeline Utilities

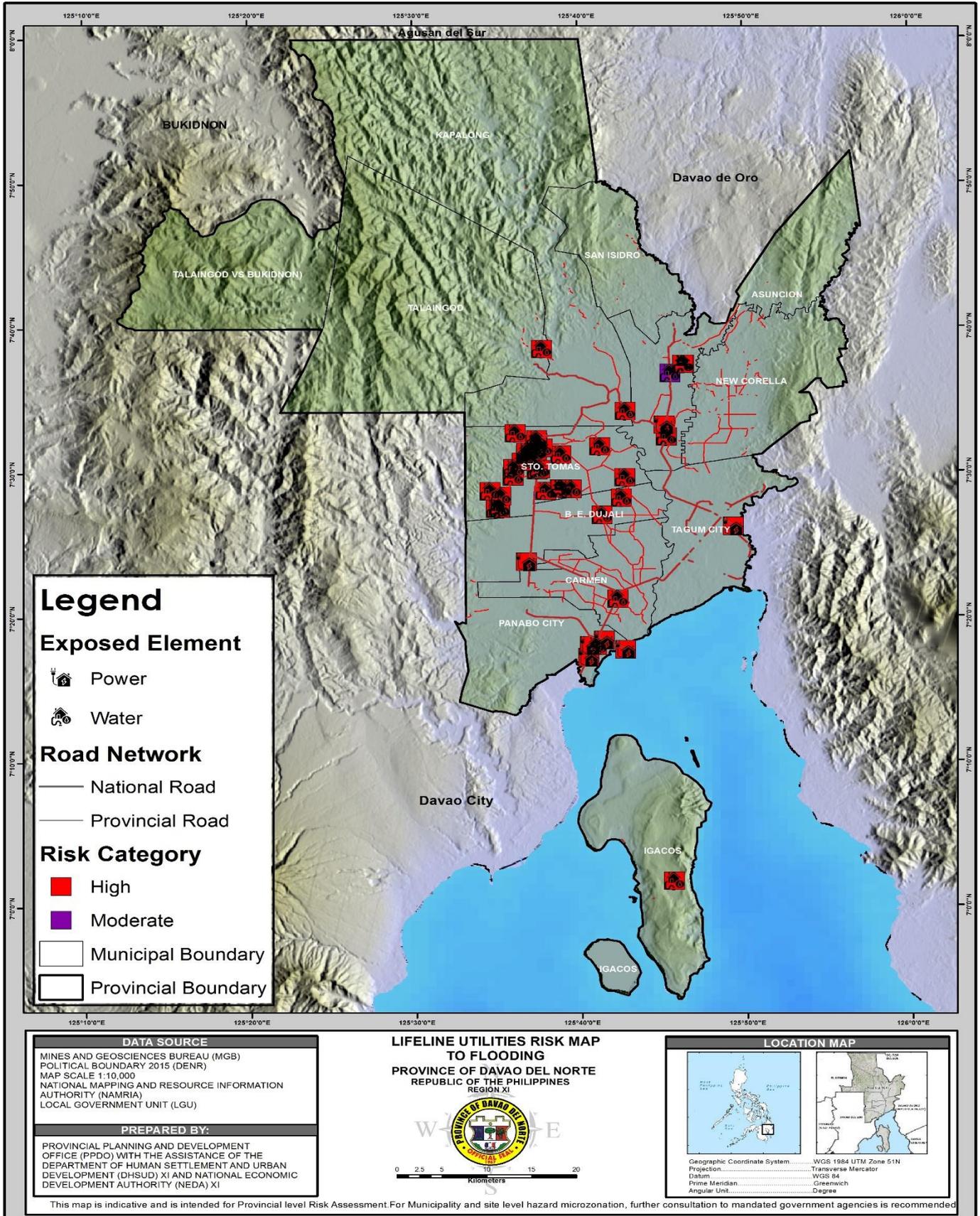
The table presented above provides a summary of data concerning lifeline utilities across three distinct categories: Landslide, Flooding, and Storm Surge. According to the information in the table, the Landslide category exhibits a total of 6,468.0 for the very high level, 82,932.00 for the high level, and 147,593.99 for the moderate level. Moving on to the Flooding category, the cumulative total for the very high level is 22,197.38, while for the high level, it stands at 112,968.77, and for the moderate level, it amounts to 95,975.39. Finally, within the Storm Surge category, the grand total for the very high level reaches 18,608.92, for the high level it reaches 30,275.84, and for the moderate level, it reaches 12,321.29.

**Table 4.4.1 Summary of Lifeline Utilities per Hazard**

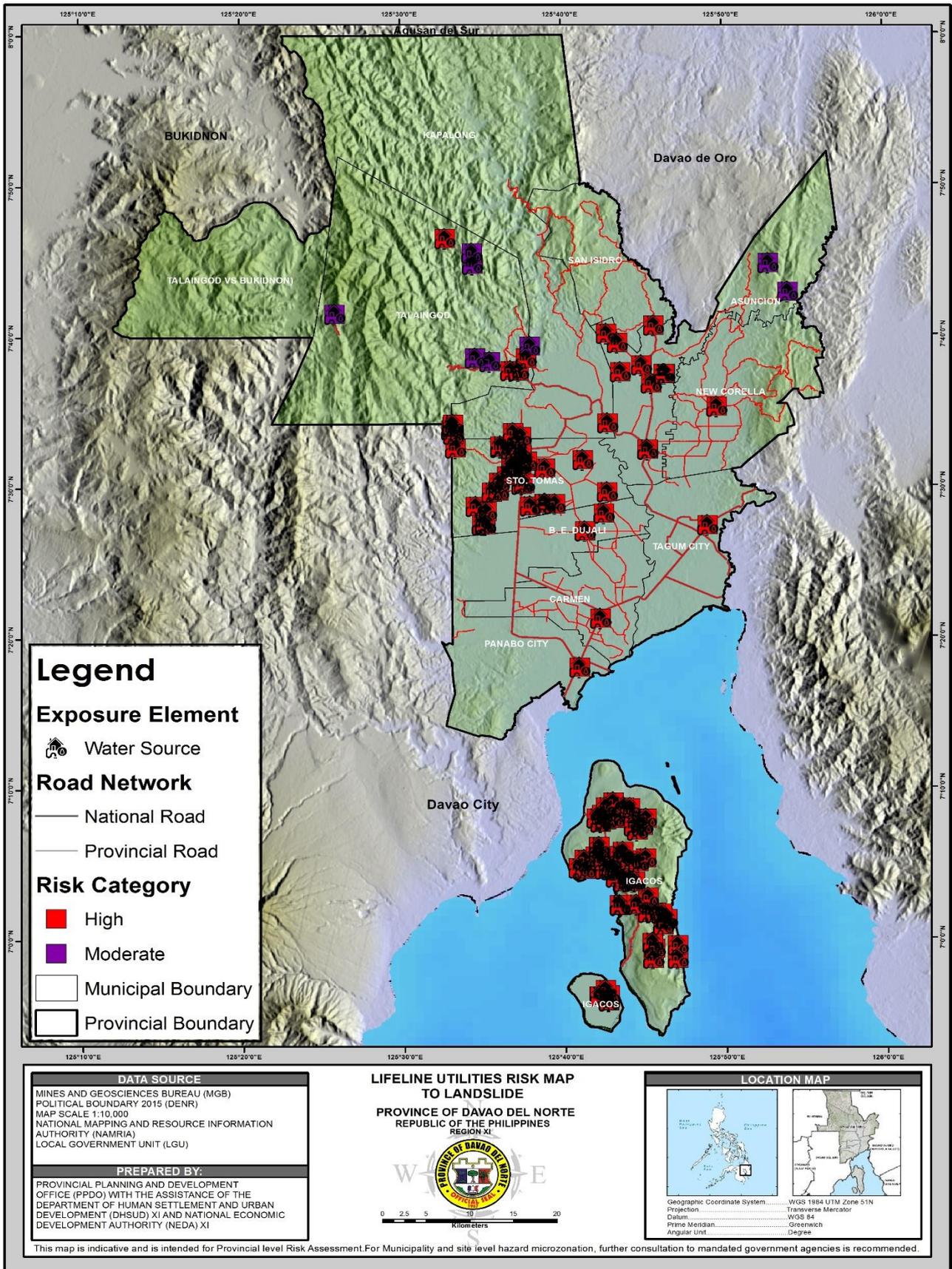
		<b>GRAND TOTAL</b>
<b>LANDSLIDE</b>	Very High	<b>6468.60</b>
	High	<b>82,932.00</b>
	Moderate	<b>147,593.99</b>
<b>FLOODING</b>	Very High	<b>22,197.38</b>
	High	<b>112,968.77</b>
	Moderate	<b>95,975.39</b>
<b>STORM SURGE</b>	Very High	<b>18608.92</b>
	High	<b>30275.84</b>
	Moderate	<b>12321.29</b>

*Source: CDRA Template 3: Exposure Database*

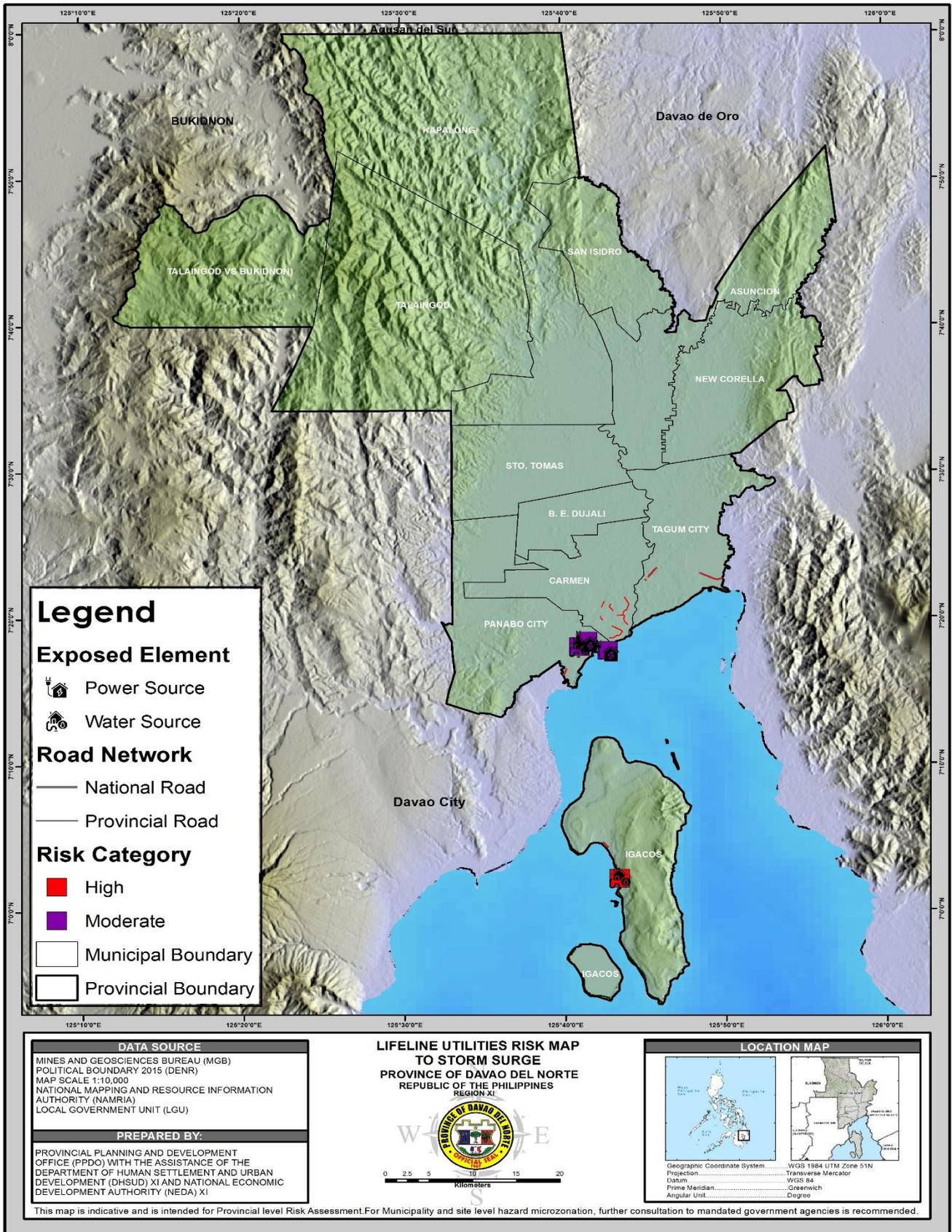
Map 28. Lifeline Utilities Risk Map to Flooding



Map 29. Lifeline Utilities Risk Map to Landslide



**Map 30. Lifeline Utilities Risk Map to Storm Surge**



## Critical Point Facilities

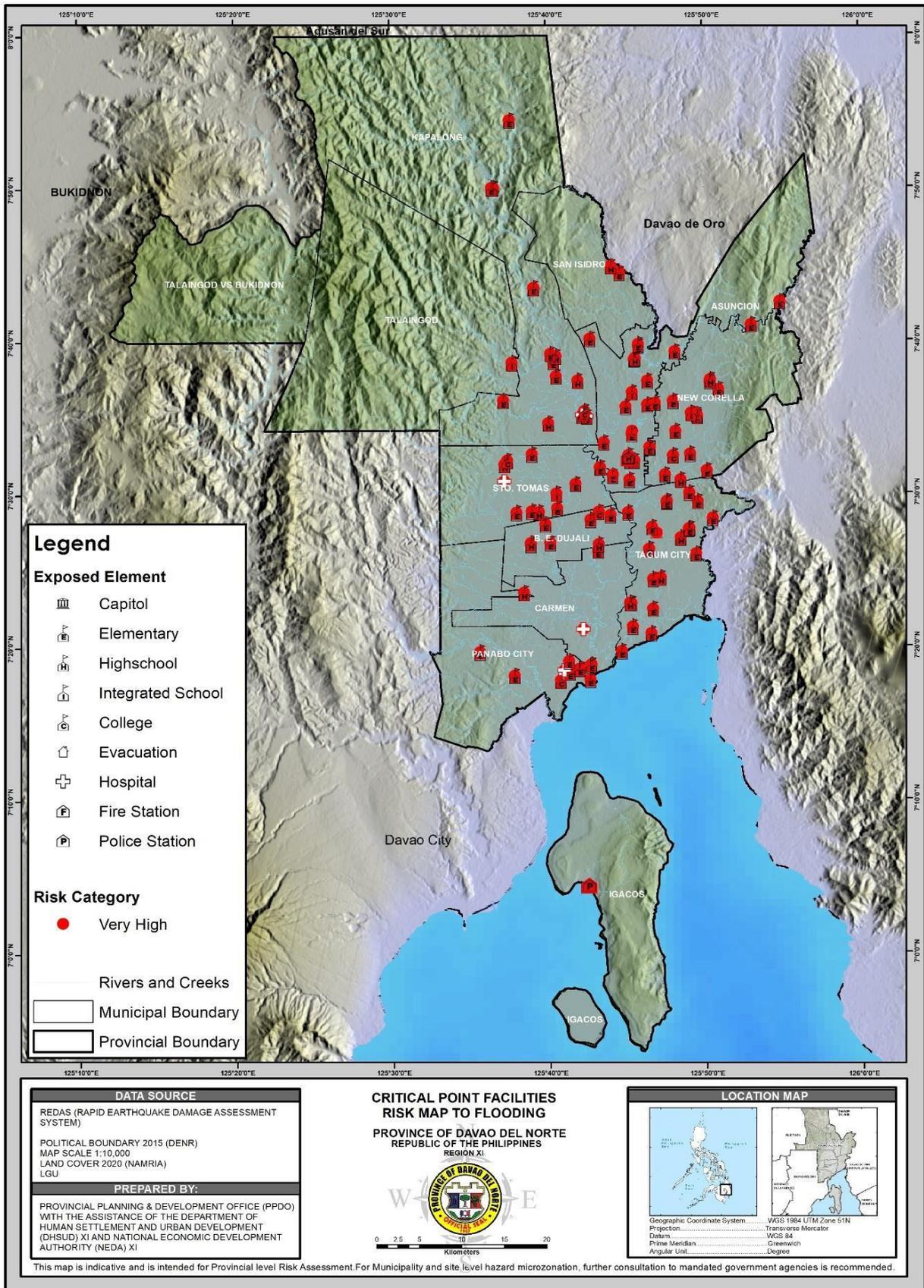
Critical facilities are elements of the infrastructure that support essential services in a society. They include such things as transport systems, air, and sea ports, electricity, water, and communications systems, hospitals and health clinics, and centers for fire, police, and public administration services. In the Province of Davao del Norte, 69,000 hectares are categorized as highly susceptible Critical Point Facilities exposed to landslide while 74,000 hectares are labeled as moderately affected by landslide. When it comes to Critical Point Facilities exposed to flood, 11,000 hectares fall under the category of highly susceptible while 229,000 hectares belong to high and moderately affected areas.

**Table 4.5.1 Critical Point Facilities per Hazard**

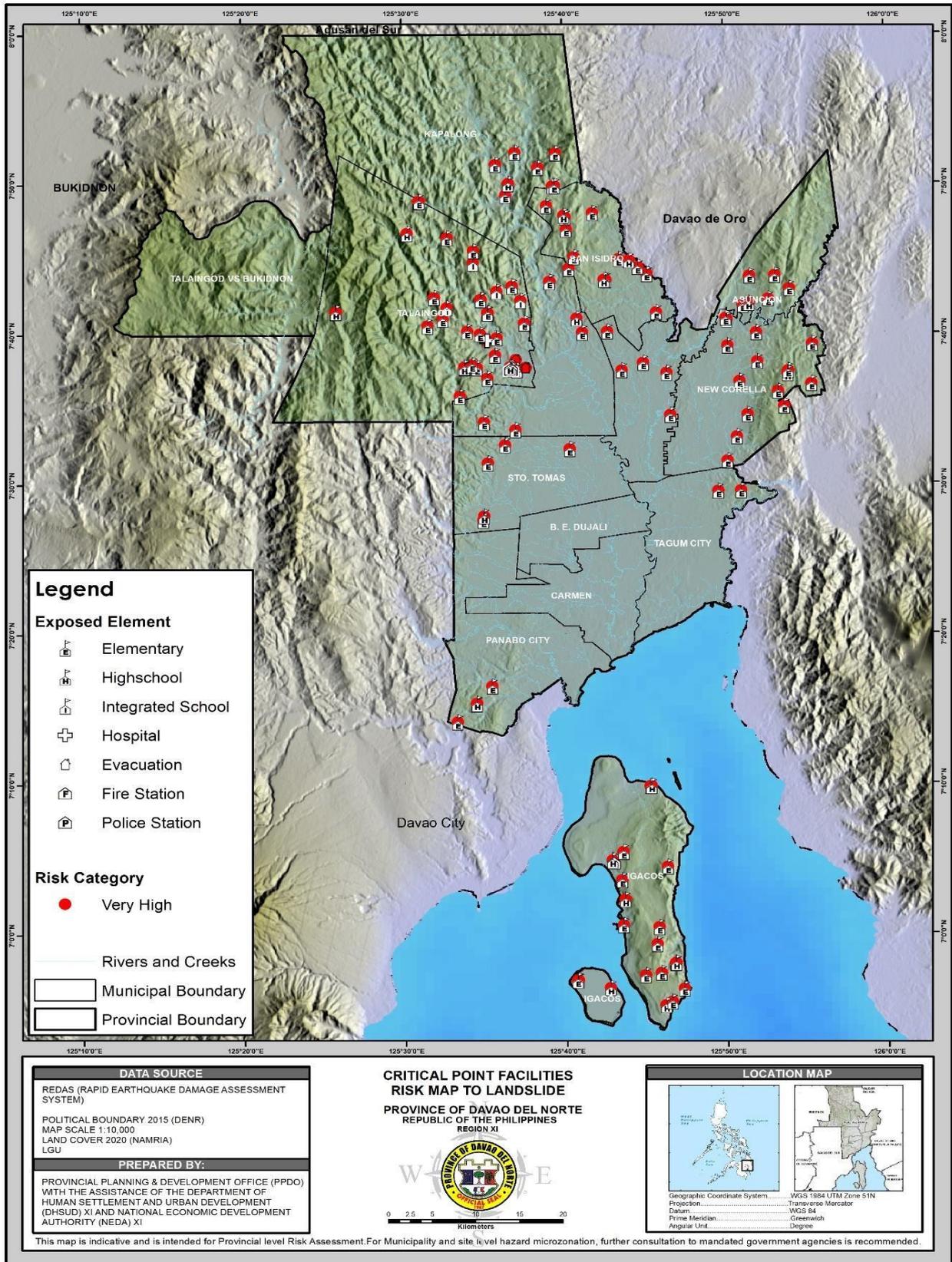
City/Mun	Susceptibility	LANDSLIDE		FLOOD		STORM SURGE	
		Area affected	% Affected vs DDN Area	Area affected	% Affected vs DDN Area	Area affected	% Affected vs DDN Area
ASUNCION	Very High			6000	0.0020%		
	High	6000	0.0020%	13000	0.0043%		
	Moderate	6000	0.0020%	12000	0.0039%		
B.E. DUJALI	Very High						
	High			5000	0.0055%		
	Moderate			3000	0.0033%		
CARMEN	Very High					10000	0.0059%
	High			81000	0.0479%		
	Moderate			2000	0.0012%		
IGACOS	Very High					29000	0.0096%
	High	1000	0.0003%			1000	0.0003%
	Moderate	21000	0.0070%	1000	0.0003%		
KAPALONG	Very High						
	High	8000	0.0010%	32000	0.0039%		
	Moderate	7000	0.0008%	3000	0.0004%		
NEW CORELLA	Very High			1000	0.0004%		
	High	6000	0.0024%	5000	0.0020%		
	Moderate	9000	0.0036%	10000	0.0040%		
PANABO CITY	Very High			1000	0.0004%	6000	0.0024%
	High			5000	0.0020%	1000	0.0004%
	Moderate	4000	0.0016%	11000	0.0044%	3000	0.0012%
SAN ISIDRO	Very High						
	High			2000	0.0013%		
	Moderate	14000	0.0088%				
STO. TOMAS	Very High			2000	0.0006%		
	High			4000	0.0012%		
	Moderate	5000	0.0016%	14000	0.0044%		
TAGUM CITY	Very High			3000	0.0015%	5000	0.0026%
	High			11000	0.0056%	3000	0.0015%
	Moderate	3000	0.0015%	18000	0.0092%	1000	0.0005%
TALAINGO D	Very High						
	High	48000	0.0064%				
	Moderate	5000	0.0007%	2000	0.0003%		

Source: CDRA Template 3: Exposure Database

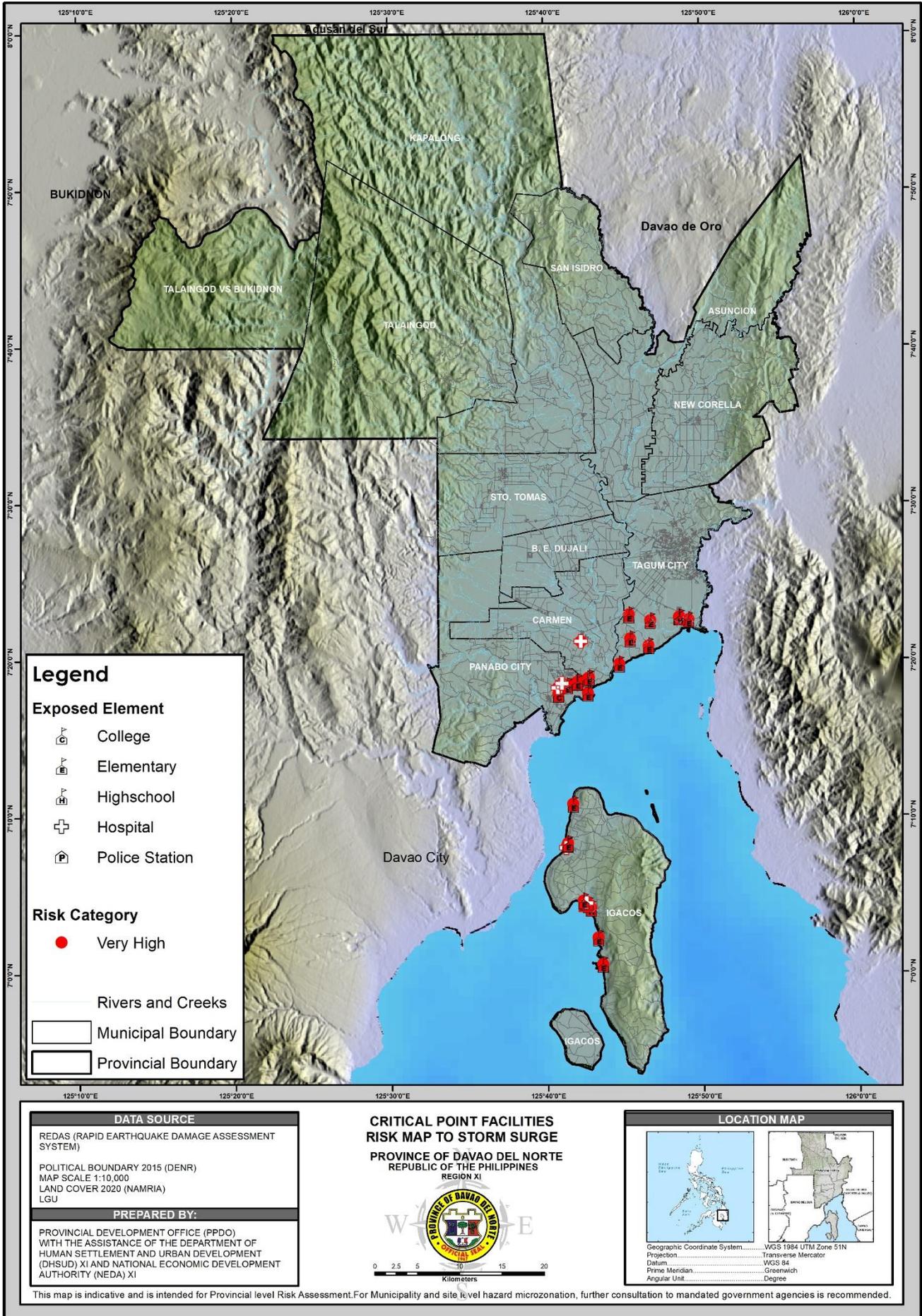
**Map 31. Critical Point Facilities Risk Map to Flood**



**Map 32. Critical Point Facilities Risk Map to Landslide**



**Map 33. Critical Point Facilities Risk Map to Storm Surge**



## Urban Use Areas

Urban use refers to the various activities and purposes associated with the development and utilization of land within urban areas or cities. It encompasses a wide range of functions and infrastructures designed to support the needs of a densely populated and developed environment.

In the province of Davao del Norte, there are 147.88 hectares of land categorized as highly affected Urban Use Areas, vulnerable to flooding, while an additional 425.16 hectares and

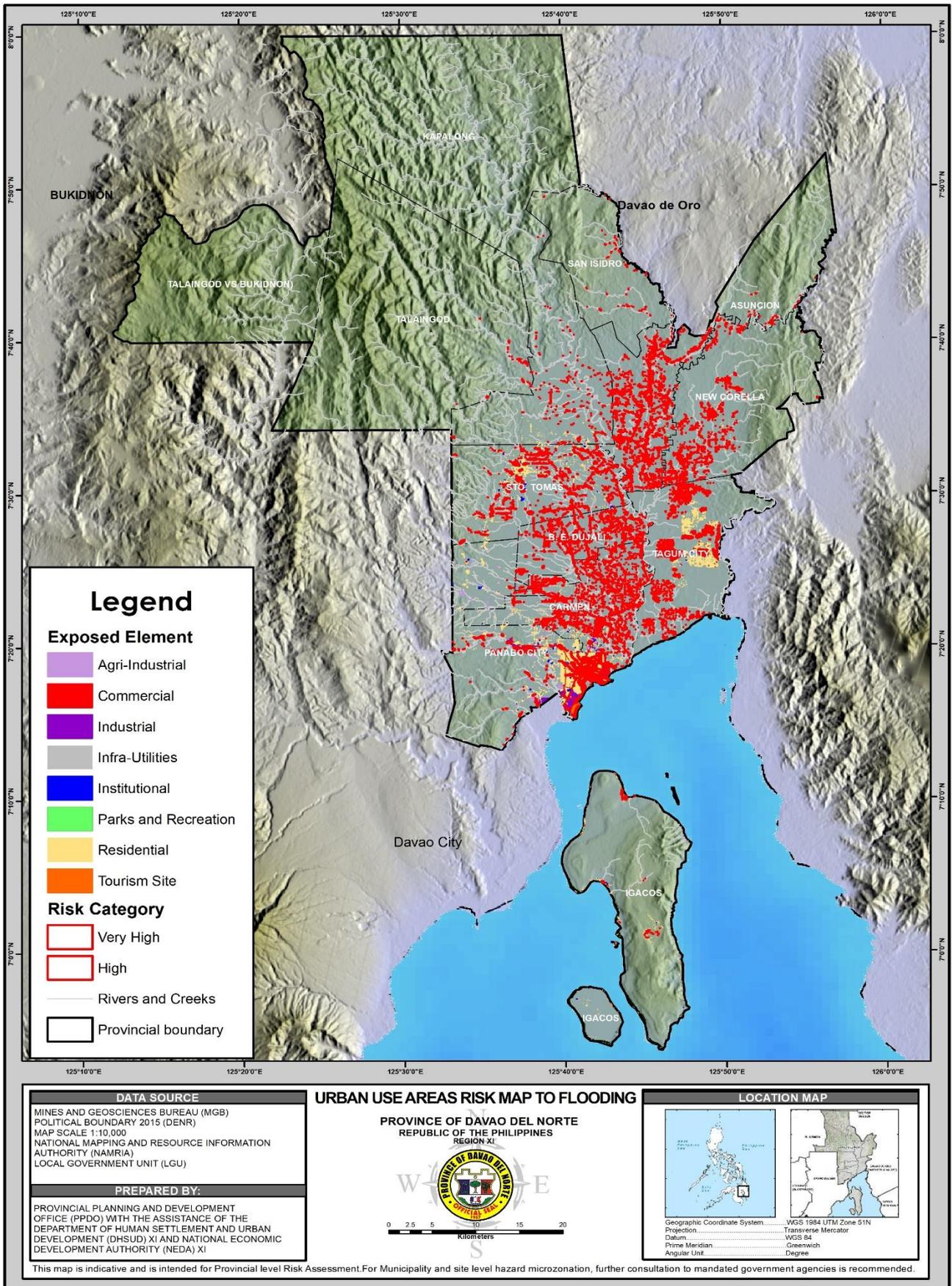
696.21 hectares fall into the high and moderately affected categories, respectively. Moreover, a total of 4,711.78 hectares are susceptible to Urban Use considerations, with 93.92 hectares falling under the very high susceptibility, 987.98 hectares designated as high, and 3,629 hectares considered moderately affected. Storm Surge is also a concern for Local Government Units (LGUs) and may impact their Urban Use areas. In Davao del Norte, 1,281.23 hectares are highly susceptible to Storm Surge, and a combined total of 311.52 hectares are categorized as high and moderately affected areas.

**Table 4.6.1 Summary of Urban Use Areas per Hazard**

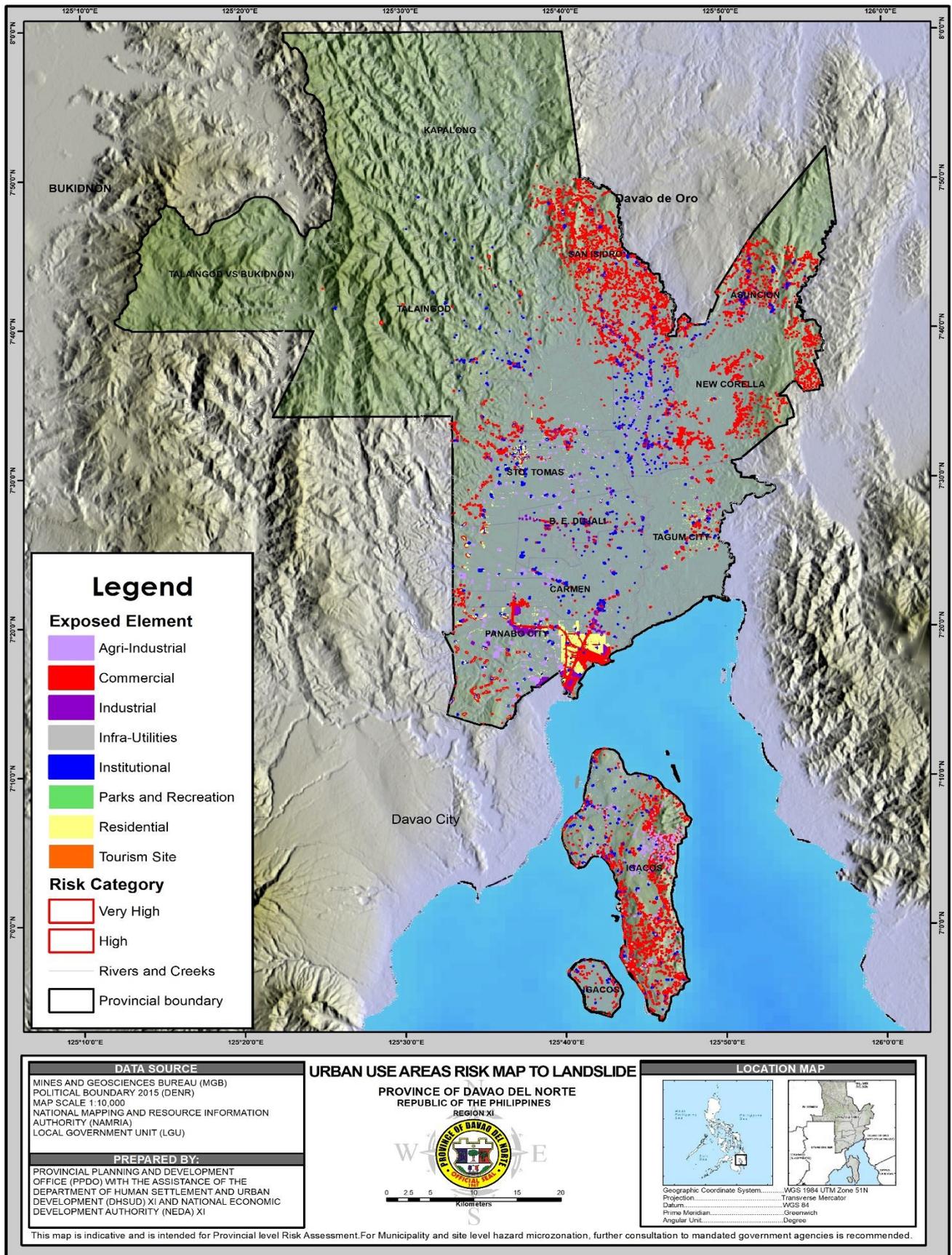
CITY/MUN.	SUSCEPTIBILITY	POPULATION EXPOSED TO FLOOD	POPULATION EXPOSED TO LANDSLIDE	POPULATION EXPOSED TO STORMSURGE
TAGUM CITY	Very High	0.334522		12.658553
	High	32.870276		7.839092
	Moderate	74.27953	0.684055	0.811456
ASUNCION	Very High	39.702394	0.574557	
	High	75.264456	17.666965	
	Moderate	36.602334	33.616564	
SAN ISIDRO	Very High	0.039666	1.35705	
	High	2.186072	6.549467	
	Moderate	2.41337	209.988522	
NEW CORELLA	Very High	1.082703	80.213433	
	High	24.63143	322.273021	
	Moderate	22.340261	232.699551	
KAPALONG	Very High	0.152193		
	High	10.039997	3.294693	
	Moderate	7.510044	21.561406	
PANABO CITY	Very High	72.697514		1113.372937
	High	71.291187	72.89533	220.444598
	Moderate	214.135165	2373.13216	46.391527
IGACOS	Very High		11.512439	149.266339
	High	0.314826	478.546375	23.501054
	Moderate	15.976704	671.096114	
B.E. DUJALI	Very High	2.351456		
	High	25.596847		
	Moderate	38.740772		
STO. TOMAS	Very High	10.870336		
	High	147.190686	37.29895	
	Moderate	154.259962	71.935238	
CARMEN	Very High	20.651953		5.937004
	High	34.373889	0.102197	7.529755
	Moderate	128.399143	5.191427	5.000624
TALAINGOD	Very High		0.260703	
	High	1.400187	49.351126	
	Moderate	1.556434	9.978608	
DAVAO DEL NORTE	Very High	147.88	93.92	1281.23
	High	425.16	987.98	259.31
	Moderate	696.21	3629.88	52.20

Source: CDRA Template 3: Exposure Database

# Urban Use Areas Risk Map to Flood



**Map 35. Urban Use Areas Risk Map to Landslide**



**Legend**

**Exposed Element**

- Agri-Industrial
- Commercial
- Industrial
- Infra-Utilities
- Institutional
- Parks and Recreation
- Residential
- Tourism Site

**Risk Category**

- Very High
- High
- Rivers and Creeks
- Provincial boundary

**DATA SOURCE**  
 MINES AND GEOSCIENCES BUREAU (MGB)  
 POLITICAL BOUNDARY 2015 (DENR)  
 MAP SCALE 1:10,000  
 NATIONAL MAPPING AND RESOURCE INFORMATION AUTHORITY (NAMRIA)  
 LOCAL GOVERNMENT UNIT (LGU)

**PREPARED BY:**  
 PROVINCIAL PLANNING AND DEVELOPMENT OFFICE (PPDO) WITH THE ASSISTANCE OF THE DEPARTMENT OF HUMAN SETTLEMENT AND URBAN DEVELOPMENT (DHSUD) XI AND NATIONAL ECONOMIC DEVELOPMENT AUTHORITY (NEDA) XI

**URBAN USE AREAS RISK MAP TO LANDSLIDE**  
 PROVINCE OF DAVAO DEL NORTE  
 REPUBLIC OF THE PHILIPPINES  
 REGION XI

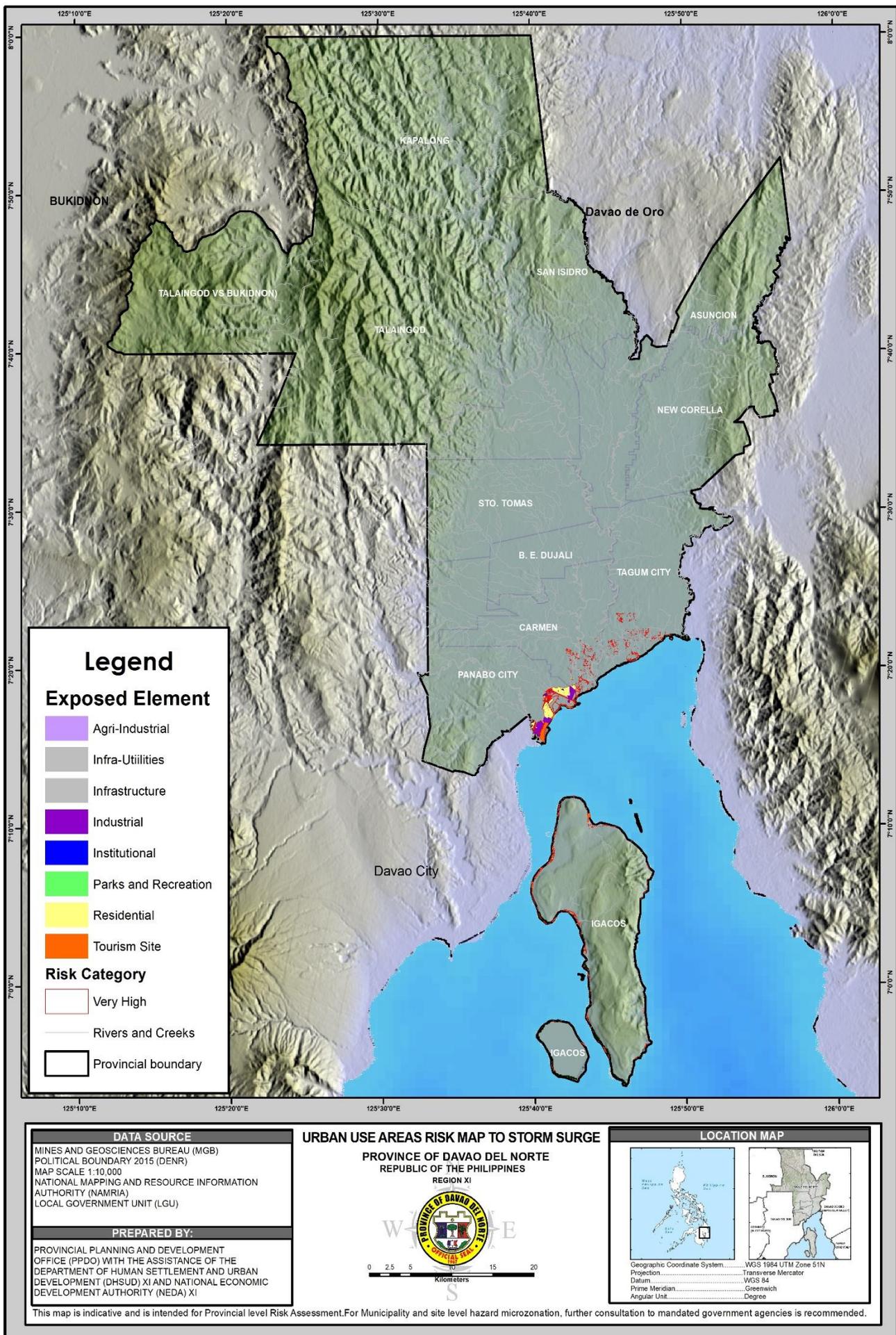
0 2.5 5 10 15 20  
 Kilometers

**LOCATION MAP**

Geographic Coordinate System.....WGS 1984 UTM Zone 51N  
 Projection.....Transverse Mercator  
 Datum.....WGS 84  
 Prime Meridian.....Greenwich  
 Angular Unit.....Degree

This map is indicative and is intended for Provincial level Risk Assessment. For Municipality and site level hazard microzonation, further consultation to mandated government agencies is recommended.

Map 36. Urban Use Areas Risk Map to Storm Surge



## SITUATIONAL ANALYSIS

<b>DISASTER PREVENTION AND MITIGATION</b>	
<b>Strengths</b>	<b>Weakness</b>
<b><u>Disaster Risk Assessment</u></b>	<b><u>Disaster Risk Assessment</u></b>
Formulation of Provincial Climate and Disaster Risk Assessment (CDRA)	Insufficient data availability for certain hazards or vulnerabilities
Regularly updated disaster risk maps and assessment	Lack of access to satellite imagery
Fire Hazard Mapping (identification of fire hazard areas)	
<b><u>Planning and Policy Development and Implementation</u></b>	<b><u>Planning and Policy Development and Implementation</u></b>
Comprehensive Disaster Risk Reduction Plan (e.g.)	Inadequate resources to implement
Development of comprehensive and integrated Local DRMM-H Plan	Unavailable lot for the standard fire station and training facilities for the Provincial BFP
Participation of stakeholders in crafting plans and policy	Funds supporting vulnerable sectors is not fully utilized
Established Runing Card System	Untrained Disease surveillance officers/ no dedicated surveillance officer
Presences of Pre-Fire Planning	
Sufficient Human Resource Personnels	
Formulation of LEECP	
Support to vulnerable sectors (Women, Senior Citizen, PWD)	
Formulation of Local Health Immunization Program Plan	
Functional Disease surviellance system	
Agricultural Insurance Program	
Formulation of Local Health Contingency Plans	
<b><u>Early Warning System</u></b>	
Unified Multi-Hazard Localized Early Warning System	Some communities are not receptive on the given warnings
Effective dissemination of early warning through mass and social media	
Presence of 24/7 Multi-Hazard Monitoring & Warning Center	
<b><u>Environmental Protection</u></b>	<b><u>Environmental Protection</u></b>
Enactment of the Provincial Ordinance for the Environment Code of Davao del Norte	Weak enforcement of environmental laws
Presence of Local Climate Change Action Plan	Inadequate funding for environmental protection programs
Expansion of carbon sinks through tree growing activities	Increasing deforestation and land conversions
<b><u>Structural Prevention and Mitigation</u></b>	<b><u>Structural Prevention and Mitigation</u></b>

Strong enforcement of building codes and construction standards	Inadequate funding for structural mitigation projects
Capacity to plan and implement projects	Prioritization of the projects
Infrastructure Insurance for critical infra (Hospitals, Health Center, Bridges, other government buildings)	Integrity of critical buildings, regular conduct of building audit
<b><u>Relocation and Resettlement</u></b>	<b><u>Relocation and Resettlement</u></b>
Presence of Housing Office under PADO	Resistance from communities to relocation
Public-Private Partnership Linkage	Lack of suitable resettlement sites
Shelter Assistance Program	Insufficient funding for resettlement programs
	Culture Based
<b><u>Livelihood and Business Protection</u></b>	<b><u>Livelihood and Business Protection</u></b>
Implementation of RA 9509 (TECHVOC Operations)	None
Risk Financing Mechanism	
<b><u>Food Security</u></b>	<b><u>Food Security</u></b>
Adoption of climate-smart agriculture	Low food self-sufficiency level
Increase food production through KAAGAPAY Program	High per capita consumption for rice
Availability of flood resilient variety of rice and other crops	Agricultural areas are vulnerable to flooding (CLUP, Land Classification)
Data are available from different agencies	The Local DRRM-H Plan is not incorporated to the Local DRRM Plan
	The Local DRRM-H System is not institutionalized
	Limited Local Health Contingency Plan for El Nino, ERID, etc.
	LDRRM-H Plan and Health Contingency Plans are not monitored and evaluated
	The LGU has no Local DRRM-H Plan and Health Contingency Plans
	Construction of health EOC and Provincial disease surveillance unit.
	Outdated CBMS
	<b><u>Centralization of Data</u></b>
	Spread of African Swine Fever, Avian Influenza, and Foot and Mouth Diseases.
	C/MLGUs has no political will to put up local veterinary checkpoints.

<b>DISASTER PREPAREDNES</b>	
<b>Strength</b>	<b>Weakness</b>
-	-
<ul style="list-style-type: none"> <li>Communities appropriately respond to the impacts of the hazards as a result of regular campaign on disaster readiness and responsiveness via television, social media, seminars and drills helps in the readiness of. Available Facilities in providing information. <i>(social media reach, buy in or respond of the community)</i></li> </ul>	<ul style="list-style-type: none"> <li>Outdated CBMS of 9 LGUs</li> </ul>
<ul style="list-style-type: none"> <li>Access to a diverse pool of expertise and resources from different sectors (including our DRRM personnel)</li> </ul>	<ul style="list-style-type: none"> <li>2 LGUs do not have CBMS</li> </ul>
<ul style="list-style-type: none"> <li>Availability of DRRM Plans (PSCP, CP, PDRP, LDRRMFIP, AIP, Risk Communication Plan, LDRRMP, SOPG, CCCMP, CDRA)</li> </ul>	<ul style="list-style-type: none"> <li>Tenurial status of DRRM Job Order responders and personnel unstable</li> </ul>
<ul style="list-style-type: none"> <li>Availability of funds to implement the DRRM plans</li> </ul>	<ul style="list-style-type: none"> <li>Lack training of Water Search and Rescue among DNPPO Search and Rescue personnel</li> </ul>
<ul style="list-style-type: none"> <li>DRRM Capacity building through trainings, drills, and seminars ( BLS-CPR, CSSR, WASAR, Basic Swimming, DRRM Orientation, Saktong Impormasyon Tabang Panahon sa Emerhensiya, SPEED, DRRM Planning Workshop on BDRRMP, CP, LDRRMP)</li> </ul>	<ul style="list-style-type: none"> <li>Compliance of LGUs to the provisions of RA 10121 needs improvement particularly on <i>Section 11</i></li> </ul>
<ul style="list-style-type: none"> <li>Participation of different sectors in crafting different DRRM Plan</li> </ul>	
<ul style="list-style-type: none"> <li>Strong Alliance of Local DRRM Officers of Davao Del Norte</li> </ul>	
<ul style="list-style-type: none"> <li>Established interoperability of response clusters, incident management team, emergency operations center</li> </ul>	
<ul style="list-style-type: none"> <li>Capacitated PDRRMO personnel</li> </ul>	
<ul style="list-style-type: none"> <li>Presence of mechanisms for partnerships <i>(MOA w/ DepEd, LGUs, Suppliers, BFP, Academe, DSWD)</i></li> </ul>	
<ul style="list-style-type: none"> <li>Prepositioned reponse resources ( Tools, Equipment, Food and Non-Food Items, Evacuation Centers)</li> </ul>	
<ul style="list-style-type: none"> <li>Established Provincial DRRM Council with active members</li> </ul>	
<b>Opportunities</b>	<b>Challenges</b>
<ul style="list-style-type: none"> <li>Organized and established Information Officers Network</li> </ul>	<ul style="list-style-type: none"> <li>Information Gap in relaying disaster related information and announcements</li> </ul>

<ul style="list-style-type: none"> <li>Readily available personnel from Office of Civil Defense XI for Capacity Development Initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Costly to undergo the CBMS process (training and actual conduct) Prevention and Mitigation</li> </ul>
<ul style="list-style-type: none"> <li>Data are available from various agencies (<i>PWD, SEEP, GAD</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Centralization of data from various agencies (Prevention and Mitigation)</li> </ul>
<ul style="list-style-type: none"> <li>Readiness of National Government Agencies (RDRRMC, DSWD, AFP, BFP, PNP, DPWH) to augment resources of PDRRMC in the event of shortage</li> </ul>	
<u>Political</u>	<u>Political</u>
None	Irregularity of status of employment of City/Municipal LDRRM Officers and Personnel due to political turnover
<u>Technological</u>	<u>Environmental Policies</u>
Presence of DICT in Davao del Norte to provide communication system in the eventuality of hazards	<ul style="list-style-type: none"> <li>Intensification of Climate Change impact</li> </ul>

<b>DISASTER RESPONSE</b>	
<b>Strengths</b>	<b>Weakness</b>
<b>Assessment and Documentation</b>	<b>Assessment and Documentation</b>
<ul style="list-style-type: none"> <li>Available list of affected families</li> <li>Presence of trained and functional Incident Management Team (ICS)</li> <li>Utilization of RDANA</li> <li>Presence of Provincial Disaster Response Plan - Meteorological Hazard</li> </ul>	<ul style="list-style-type: none"> <li>Not all data are updated and disaggregated</li> <li>Absence of Provincial DRRM data banking system</li> </ul>
<b>Camp Management</b>	<b>Camp Management</b>
<ul style="list-style-type: none"> <li>Camp Managers/CMT are trained in CCCM</li> <li>Identified evacuation centers (DNSTC and Operation Center)</li> <li>Provision of animal feeds</li> <li>Presence of CCCM Plan</li> </ul>	<ul style="list-style-type: none"> <li>Lack of permanent evacuation center - preparedness</li> </ul>
<b>Logistics</b>	<b>Logistics</b>
<ul style="list-style-type: none"> <li>Available vehicles and equipment</li> <li>Available radio base communication, GSAT of AFP</li> </ul>	<ul style="list-style-type: none"> <li>Absence of standard warehouse - preparedness</li> <li>Lack of training on chain/warehouse management - preparedness</li> </ul>
<b>Food and NFI</b>	<b>Food and NFI</b>
<ul style="list-style-type: none"> <li>Prepositioned Food and NFI</li> <li>Pest control management service</li> </ul>	<ul style="list-style-type: none"> <li>Lack of inventory system on the expiration of food and non-food items as basis for disposal/distribution</li> </ul>
<b>Protection of Internally Displaced Persons</b>	<b>Protection of Internally Displaced Persons</b>
<ul style="list-style-type: none"> <li>Presence of MHPSS Team</li> <li>Personnel trained on Psychological First Aid (PFA)</li> <li>Presence of women and children protection mechanism/ case management system</li> </ul>	<ul style="list-style-type: none"> <li>Schools serve as evacuation centers - hampered education/class schedule of students</li> </ul>
<b>Emergency and Telecommunications</b>	<b>Emergency and Telecommunications</b>
<ul style="list-style-type: none"> <li>Available radio base communication, GSAT of AFP</li> <li>Presence of PTV DavNor, Radio Station</li> </ul>	<ul style="list-style-type: none"> <li>Coverage Gaps in Remote Areas: Remote or rural areas may suffer from inadequate telecommunication</li> </ul>

<ul style="list-style-type: none"> <li>● Presence of community based emergency communication response</li> </ul>	<p>infrastructure, including limited network coverage or unreliable connectivity.</p>
<p><b><u>Education</u></b></p> <ul style="list-style-type: none"> <li>● Dep-Ed DRR Personnel involved in DRR Response activities</li> <li>● Institutionalized DRRM Coordinators</li> <li>● Integration of Practical Exercises</li> </ul>	<p><b><u>Education</u></b></p> <ul style="list-style-type: none"> <li>● Insufficient Focus on Psychological Preparedness</li> </ul>
<p><b><u>Management of the Dead and the Missing</u></b></p> <ul style="list-style-type: none"> <li>● Presence of IMT</li> <li>● Presence of partner funeral homes/parlor</li> </ul>	<p><b><u>Management of the Dead and the Missing</u></b></p>
<p><b>Health</b></p> <ul style="list-style-type: none"> <li>● Presence of PLGU run hospitals, blood bank, pharmacy</li> <li>● Trained health care workforce</li> <li>● Presence of preventive health care programs <ul style="list-style-type: none"> <li>● Availability of list of local Health Emergency Response Team</li> </ul> </li> <li>● Provision of health emergency operation Center</li> <li>● Operationalized Health Emergency Operation Center</li> </ul>	<p>Health</p> <ul style="list-style-type: none"> <li>● Insufficient number of Local Health Emergency Response Personnel</li> <li>● Insufficient Health Emergency Commodities</li> <li>● No dedicated personnel assigned to health emergency operations</li> <li>● Fast turnover of health emergency response personnel</li> <li>● Insufficient storage room for the Health Emergency Commodities in the LGUs</li> <li>● No monitoring and inventory of Health Emergency Commodities</li> </ul>
<p><b><u>Search, Rescue, and Retrieval</u></b></p> <ul style="list-style-type: none"> <li>● Presence of trained SRR Team</li> <li>● Presence of rescue vehicles</li> <li>● Strong collaboration and coordination among partner agencies</li> <li>● Established protocols and SOPs</li> </ul>	
<p><b>Pre-emptive Evacuation</b></p> <ul style="list-style-type: none"> <li>● Implement early warning systems to alert communities about imminent floods</li> </ul>	
<p><b>Early Recovery</b></p> <ul style="list-style-type: none"> <li>● Funding of cash and food for work for the affected families</li> </ul>	
<p><b><u>Law and Order</u></b></p> <ul style="list-style-type: none"> <li>● Coordination with AFP (1003rd Brigade, 1001st Brigade) and DNPPPO</li> <li>● Public trust and community engagement</li> </ul>	
<b>Opportunities</b>	<b>Challenges</b>
<p><b><u>Political</u></b></p> <ul style="list-style-type: none"> <li>● Support and partnership of PLGUs/City and Municipal LGUs</li> <li>● Functional and supportive Local Health Board</li> </ul>	<p><b><u>Political</u></b></p> <ul style="list-style-type: none"> <li>● Not all LGUs formulated LDRRM-Health Plan</li> </ul>
<p><b><u>Economic and Infrastructure</u></b></p> <ul style="list-style-type: none"> <li>● National collaboration for funding and expertise</li> </ul>	<p><b><u>Economic and Infrastructure</u></b></p> <ul style="list-style-type: none"> <li>● Limited Public-Private Partnerships for Infrastructure Resilience</li> <li>● Climate Change and Increasing Frequency of Disasters</li> <li>● Insufficient insurance coverage for infrastructure and economic assets poses a significant threat</li> <li>● No dedicated health emergency operation center (shared center)</li> </ul>
<p><b><u>Linkage</u></b></p> <ul style="list-style-type: none"> <li>● Recognized as GAWAD KALASAG and SGLG Awardee</li> </ul>	<p><b><u>Linkage</u></b></p> <ul style="list-style-type: none"> <li>● Limited linkage of psychiatrist for MHPSS support services</li> </ul>

<ul style="list-style-type: none"> <li>• Technical and financial support from OCD, DILG, DSWD, NEDA, NHA, DOST, DOH</li> </ul>	<ul style="list-style-type: none"> <li>• The need of presence and support of NGOs and private health sectors</li> </ul>
<b><u>Technological</u></b>	<b><u>Technological</u></b>
<ul style="list-style-type: none"> <li>• Integration of Technology for Early Warning Systems</li> <li>• Presence of health data and information system - PHIMS</li> </ul>	<ul style="list-style-type: none"> <li>• Poor internet/communication signal especially in GIDAs</li> <li>• Limited integration of advance technology for surveillance and communication</li> </ul>
<b><u>Environmental Policies</u></b>	<b><u>Environmental Policies</u></b>
<ul style="list-style-type: none"> <li>• Mandate of RA10121, RA 9003</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of capacity to properly implement environmental policies</li> </ul>

<b>DISASTER REHABILITATION AND RECOVERY</b>	
<b>Strengths</b>	<b>Weakness</b>
<u>Livelihood and Business Development</u>	<u>Livelihood and Business Development</u>
<ul style="list-style-type: none"> <li>• Livelihood Trainings conducted to affected communities through PADO-EWDD</li> </ul>	<ul style="list-style-type: none"> <li>• Limited fund source for trainings</li> </ul>
<u>Agriculture and Fisheries</u>	<u>Agriculture and Fisheries</u>
<ul style="list-style-type: none"> <li>• Available Agri-Technology and Manpower</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<u>Housing and Settlements</u>	<u>Housing and Settlements</u>
<ul style="list-style-type: none"> <li>• Provision of Shelter Assistance</li> </ul>	<ul style="list-style-type: none"> <li>• People have tendency to return to their original houses which are situated on hazardous locations.</li> </ul>
<u>Social Services</u>	<u>Social Services</u>
<ul style="list-style-type: none"> <li>• The relief distribution and provision of medical and psycho-social services continue even after the return of the evacuees to their residences.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of long term interventions for livelihood (Provision of seed capital with trainings)</li> </ul>
<u>Physical Infrastructures</u>	<u>Physical Infrastructures</u>
<ul style="list-style-type: none"> <li>• Capable to conduct PDNA</li> <li>• Capable to Design in Buiding Back Better approach</li> <li>• With trained damage assessment team``</li> </ul>	<ul style="list-style-type: none"> <li>• Not all area/category are covered in PDNA</li> <li>• Limited funding source for prioritized needs for rehab. projects.</li> </ul>
<u>Health Services</u>	<ul style="list-style-type: none"> <li>• Not all PDNA team are trained to conduct assessment</li> </ul>
<ul style="list-style-type: none"> <li>• Development of comprehensive and integrated Local DRMM-H Plan</li> </ul>	
<ul style="list-style-type: none"> <li>• Formulation of Local Health Contingency Plans</li> </ul>	
<b>Opportunities</b>	<b>Challenges</b>
<u>Political</u>	<u>Political</u>
<ul style="list-style-type: none"> <li>• PPAs can be easily funded if they are aligned with the priorities.</li> </ul>	<ul style="list-style-type: none"> <li>• Witholding of information of some LGUs</li> <li>• Rehab projects are not permitted to be implemented in some LGUs</li> </ul>
<u>Economic and Infrastructure</u>	<u>Economic and Infrastructure</u>
<ul style="list-style-type: none"> <li>• Some Rehab Projects are funded by DPWH or National Agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Not all National projects are aligned with the Provincial Rehab Projects</li> </ul>
<u>Linkage</u>	<u>Linkage</u>

<ul style="list-style-type: none"> <li>Active inter-agency agreements and cooperation</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<u>Technological</u>	<u>Technological</u>
<ul style="list-style-type: none"> <li>Inter-LGU replication of good practices and new technologies</li> </ul>	<ul style="list-style-type: none"> <li>Budgetary constraints in acquiring new equipment</li> </ul>
<u>Environmental Policies</u>	<u>Environmental Policies</u>
<ul style="list-style-type: none"> <li>National Laws</li> </ul>	<ul style="list-style-type: none"> <li>Needs strengthening in terms of implementation</li> </ul>

## VISION

Davao del Norte communities are safer, adaptive, and resilient towards equitable, inclusive, and sustainable development.

## GOALS AND OUTCOMES

<b>DISASTER PREVENTION AND MITIGATION</b>	
<b>GOAL</b>	Address current and reduce future risks of communities and government through mainstreaming integrated risk management into science, policy and practice
<b>OBJECTIVE</b>	<ol style="list-style-type: none"> <li>1. Improve access, understanding, and use of updated risk information, DRR-related statistics, and research;</li> <li>2. Apply integrated risk management assessment tools;</li> <li>3. Implement risk-centered national, sub-national and sectoral policies, plans and budgets;</li> <li>4. Institutionalize timely, responsive, context- and culture-specific early warning systems;</li> <li>5. Access to effective, responsive and inclusive risk financing and insurance mechanisms;</li> <li>6. Improve and protect ecosystem integrity;</li> <li>7. Build resilience of livelihoods and businesses; and</li> <li>8. Disaster-resilient human settlements</li> </ol>
<b>OUTCOME</b>	<ol style="list-style-type: none"> <li>1. Improved access, understanding and use of risk information, DRR related statistics, and research</li> <li>2. Implemented risk-centered national, sub-national and sectoral policies, plans, and budgets</li> <li>3. Increased structural integrity of housing, building and critical infrastructure</li> <li>4. Institutionalized timely, responsive, context- and culture-specific early warning systems reaching the last mile</li> <li>5. Communities have access to effective, responsive and inclusive social protection, risk financing, and insurance mechanisms</li> <li>6. Natural resources and ecosystem integrity are improved and sustained</li> <li>7. Disaster-resilient livelihoods and businesses</li> <li>8. Disaster-resilient human settlements</li> </ol>

<b>DISASTER PREPAREDNESS</b>	
<b>GOAL</b>	Establish and strengthen capacities of governments, communities, CSOs, and private sector to anticipate, cope, and recover from the adverse impacts of hazards and potential cascading disasters, and minimize losses and disruption of daily life.
<b>OBJECTIVE</b>	1. Increase the level of awareness and understanding of governments and communities of hazards, exposure, and vulnerabilities;
	2. Equip governments, institutions, communities, families, and individuals with the necessary skills to respond and cope with the adverse impacts of disasters;
	3. Increase the capacity of institutions for risk governance to avert loss of lives and assets;
	4. Strengthen partnership among all key actors and stakeholders; and,
	5. Develop and implement comprehensive and mutually reinforcing national and local disaster preparedness and response plans and systems.
<b>OUTCOME</b>	9. Enhanced risk awareness and risk-informed decisions and actions of governments and communities
	10. Increased institutional capacities of local disaster risk reduction and management (DRRM) councils and offices.
	11. Strengthened partnership and coordination among all key actors and stakeholders
	12. Implemented comprehensive and mutually reinforcing local preparedness and response policies, plans, and system

<b>DISASTER RESPONSE</b>	
<b>GOAL</b>	Provide risk-base, timely and anticipatory response actions to address basic, life-preservation and immediate needs of communities and government. Also, affected communities/population are able to continue life with dignity and prevent or minimize exacerbation of emergency situation.
<b>OBJECTIVE</b>	1. To activate emergency operations center equipped with response workforce and volunteers;
	2. To activate risk and forecast-based financing to forecasted affected communities
	3. To evacuate safely, pre-emptively and immediately, affected communities and ensure their safety
	4. To ensure the timely, effective and well-coordinated response action and humanitarian logistics among cluster members and other actors;
	5. To ensure adequate, prompt and well-coordinated assessment of needs and damages;
	6. To immediately and temporarily restore basic needs;
	7. To establish and implement an integrated system for early recovery
<b>OUTCOME</b>	13. Well-established disaster response operations with well-equipped and protected workforce and volunteers
	14. Appropriate early actions are provided to community
	15. Accurate, reliable and timely information management
	16. Affected communities are provided with gender-responsive, conflict, and culture-sensitive basic services
	17. Implemented an integrated system for early recovery

<b>DISASTER REHABILITATION AND RECOVERY</b>	
<b>GOAL</b>	Speed up recovery from disaster losses through rehabilitation and recovery programs that are aligned to sustainable development and “build back better” principle.
<b>OBJECTIVE</b>	<p>1. Assess damage, losses, and damage needs during disasters as basis for the formulation of rehabilitation and recovery program; and</p> <p>2. Develop short and medium and long-term rehabilitation and recovery plans, aligned with or contributing to the national medium- and long-term national, regional, or local development plan.</p>
<b>OUTCOME</b>	<p>18. Well-established disaster response operations with well-equipped and protected workforce and volunteers</p> <p>19. Appropriate early actions are provided to community</p> <p>20. Accurate, reliable and timely information management</p> <p>21. Affected communities are provided with gender-responsive, conflict, and culture-sensitive basic services</p> <p>22. Implemented an integrated system for early recovery</p>

**TARGET SETTING**

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
Panabo City	Storm Surge	Very High	Population	2053	Persons	30% of the exposed population to storm surge protected from the hazard	50% of the exposed population to storm surge protected from the hazard
			Critical Facilities	2	Hospitals	30% of hospitals safe from the impacts of storm surge	50% of hospitals safe from the impacts of storm surge
				4	Schools	30% of schools safe from the impacts of storm surge	50% of schools safe from the impacts of storm surge
			Lifelines (National Roads)	78669	meters	30% of national roads within Panabo City protected from the impacts of storm surge	50% of national roads within Panabo City protected from the impacts of storm surge
			Lifelines (City Roads)	187844	meters	30% of City roads reinforced to protect from the impacts of storm surge	50% of City roads reinforced to protect from the impacts of storm surge
			Lifelines (Power Facility)	600	meters	30% of power facility in Panabo City protected from the impacts of Storm Surge	50% of power facility in Panabo City protected from the impacts of Storm Surge
			Lifelines (Water Facility)	25	meters	30% of the water facility in Panabo City strengthened and protected from the impacts of storm surge	50% of the water facility in Panabo City strengthened and protected from the impacts of storm surge

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
			Natural Resources (Production Agriculture-Perennial)	485	meters	30% of areas planted with perennial agricultural crops protected from the impacts of storm surge	50% of areas planted with perennial agricultural crops protected from the impacts of storm surge
			Natural Resources (Production Forest-Perennial)	4	hectares	30% of areas with Forest Perennial Plants protected from the adverse impacts of storm surge	50% of areas with Forest Perennial Plants protected from the adverse impacts of storm surge
			Natural Resources (Production Water-Fishpond)	217	hectares	30% of areas with production water fish ponds protected from the impacts of storm surge	50% of areas with production water fish ponds protected from the impacts of storm surge
		High	Population	12	Persons	20% of the population exposed to storm surge safe from storm surge	40% of the population exposed to storm surge safe from storm surge
			Critical Facilities	1	Hospitals	20% of critical facilities exposed to storm surge safe from storm surge	40% of critical facilities exposed to storm surge safe from storm surge
			Lifelines (National Roads)	78669	meters	20% of national roads in Panabo City highly exposed to storm surge protected	40% of national roads in Panabo City highly exposed to storm surge protected
			Lifelines (City Roads)	187844	meters	20% of city roads highly exposed to storm surge protected	40% of city roads highly exposed to storm surge protected
			Natural Resources (Production Agriculture-Perennial)	485	meters	Reduced susceptibility of 20% of production agricultural areas with perennial plants highly exposed to storm surge	Reduced susceptibility of 40% of production agricultural areas with perennial plants highly exposed to storm surge

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
	Flooding	Very High	Population	387	Person	30% of population in Panabo City very highly exposed to flooding safe from the effects of flooding	50% of population in Panabo City very highly exposed to flooding safe from the effects of flooding
			Critical Facilities	1	School	Reduced susceptibility of 30% of schools very highly exposed to flooding	Reduced susceptibility of 50% of schools very highly exposed to flooding
			Lifelines (National Roads)	448	meters	Reduced susceptibility of 30% National Roads very highly exposed to flooding	Reduced susceptibility of 50% National Roads very highly exposed to flooding
			Lifelines (City Roads)	2581	meters	Reduced susceptibility of 30% of city roads very highly exposed to flooding	Reduced susceptibility of 50% of city roads very highly exposed to flooding
			Lifelines (Brgy. Roads)	2143	meters	Reduced susceptibility of 30% of Barangay Roads very highly exposed to flooding	Reduced susceptibility of 50% of Barangay Roads very highly exposed to flooding
			Natural Resources (Production Agriculture-Annual)	1977	hectares (barangay area allocation)	Reduced susceptibility of 30% of Production Agricultural areas with annual crops very highly exposed to flooding	Reduced susceptibility of 50% of Production Agricultural areas with annual crops very highly exposed to flooding
			Natural Resources (Production Agriculture-Perennial)	1977	hectares (barangay area allocation)	Reduced susceptibility of 30% Production Agricultural Areas with perennial crops very highly exposed to flooding	Reduced susceptibility of 50% Production Agricultural Areas with perennial crops very highly exposed to flooding
			Natural Resources (Production Forest-Perennial)	11	hectares (barangay area allocation)	Reduced susceptibility of 30% Production Forest Areas with perennial crops very highly exposed to flooding	Reduced susceptibility of 50% Production Forest Areas with perennial crops very highly exposed to flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Natural Resources (Production Water-Fishpond)	172	hectares (barangay area allocation)	Reduced susceptibility of 30% Production Water Areas with fish ponds very highly exposed to flooding	Reduced susceptibility of 50% Production Water Areas with fish ponds very highly exposed to flooding
			Population	585	Person	20% of population highly exposed to flooding safe from the impacts of the hazard	40% of population highly exposed to flooding safe from the impacts of the hazard
			Critical Facilities	1	School	20% of school highly exposed to flooding safe from the said hazard	40% of school highly exposed to flooding safe from the said hazard
				1	Hospital	Reduced susceptibility of 20% of hospital highly exposed to flooding	Reduced susceptibility of 40% of hospital highly exposed to flooding
			Lifelines (National Roads)	1025	meters	Reduced susceptibility of 20% national roads highly exposed to flooding	Reduced susceptibility of 40% national roads highly exposed to flooding
			Lifelines (City Roads)	7443	meters	Reduced susceptibility of 20% of City Roads highly exposed to flooding	Reduced susceptibility of 40% of City Roads highly exposed to flooding
			Lifelines (Brgy. Roads)	13521	meters	Reduced susceptibility of 20% of barangay roads highly exposed to flooding	Reduced susceptibility of 40% of barangay roads highly exposed to flooding
			Natural Resources (Production Agriculture-Annual)	1977	hectares (barangay area allocation)	Reduced susceptibility of 20% of Production agricultural areas with annual crops highly exposed to flooding	Reduced susceptibility of 40% of Production agricultural areas with annual crops highly exposed to flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
			Natural Resources (Production Forest-Perennial)	11	hectares (barangay area allocation)	Reduced susceptibility of 20% of Production agricultural areas with perennial crops highly exposed to flooding	Reduced susceptibility of 40% of Production agricultural areas with perennial crops highly exposed to flooding
			Natural Resources (Production Water-Fishpond)	172	hectares (barangay area allocation)	Reduced susceptibility of 20% of Production water areas with fish pond highly exposed to flooding	Reduced susceptibility of 40% of Production water areas with fish pond highly exposed to flooding
	Landslide	Very High	Lifeline Utilities (National Roads)	448	meters	Reduced susceptibility of 30% national roads very highly exposed to landslide	Reduced susceptibility of 50% national roads very highly exposed to landslide
			Lifeline Utilities (City Roads)	2581	meters	Reduced susceptibility of 30% of City Roads very highly exposed to landslide	Reduced susceptibility of 50% of City Roads very highly exposed to landslide
			Lifeline Utilities (Barangay Roads)	2143	meters	Reduced susceptibility of 30% of Barangay Roads very highly exposed to flooding	Reduced susceptibility of 50% of Barangay Roads very highly exposed to flooding
			Natural Resource (Production Agri - Annual Crops)	498	has	Reduced susceptibility of 30% of Production Agricultural areas with annual crops very highly exposed to landslide	Reduced susceptibility of 50% of Production Agricultural areas with annual crops very highly exposed to landslide
			Natural Resource (Production Agri - Perennial Crops)	128	has	Reduced susceptibility of 30% of Production Agricultural Areas with perennial crops very highly exposed to landslide	Reduced susceptibility of 50% of Production Agricultural Areas with perennial crops very highly exposed to landslide
			Natural Resource (Production Agri - Perennial Crops)	1	has	Reduced susceptibility of 30% of Production Agricultural Areas with perennial crops very highly exposed to landslide	Reduced susceptibility of 50% of Production Agricultural Areas with perennial crops very highly exposed to landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Production Water (Fish pond)	3	has	Reduced susceptibility of 30% of Production Water Areas with fish ponds very highly exposed to landslide	Reduced susceptibility of 50% of Production Water Areas with fish ponds very highly exposed to landslide
			Population	441	person	20% of population highly exposed to flooding safe from landslide	40% of population highly exposed to flooding safe from landslide
			Lifeline Utilities (National Roads)	1025	meters	Reduced susceptibility of 20% of national roads exposed to landslide highly exposed to landslide	Reduced susceptibility of 40% of national roads exposed to landslide highly exposed to landslide
			Lifeline Utilities (City Roads)	7443	meters	Reduced susceptibility of 20% of city roads highly exposed to landslide highly exposed to landslide	Reduced susceptibility of 40% of city roads highly exposed to landslide highly exposed to landslide
			Lifeline Utilities (Barangay Roads)	13521	meters	Reduced susceptibility of 20% of barangay roads highly exposed to landslide highly exposed to landslide	Reduced susceptibility of 40% of barangay roads highly exposed to landslide highly exposed to landslide
			Natural Resource (Production Agri - Perennial Crops)	286	has	Reduced susceptibility of 20% of Production Agricultural areas with perennial crops highly exposed to landslide	Reduced susceptibility of 40% of Production Agricultural areas with perennial crops highly exposed to landslide
			Natural Resource (Production Agri - Perennial Crops - Falcata, Ipillpil, Gmelina, Mahogany, Mangium)	11	has	Reduced susceptibility of 20% of Production Forest areas with perennial crops highly exposed to landslide	Reduced susceptibility of 40% of Production Forest areas with perennial crops highly exposed to landslide
			Production Water (Fish pond)	161	has	Reduced susceptibility of 20% of Production Water areas with fish ponds highly exposed to landslide	Reduced susceptibility of 40% of Production Water areas with fish ponds highly exposed to landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
			Urban Use (Agri-Industrial)	7	has	Reduced susceptibility of 20% Agri-industrial areas highly exposed to landslide	Reduced susceptibility of 40% Agri-industrial areas highly exposed to landslide
			Urban Use (Cemetery)	1	has	Reduced susceptibility of 20% of cemetery highly exposed to landslide	Reduced susceptibility of 40% of cemetery highly exposed to landslide
			Urban Use (Residential)	60	has	Reduced susceptibility of 20% of residential areas highly exposed to landslide	Reduced susceptibility of 40% of residential areas highly exposed to landslide
			Urban Use (Tourism Site)	6	has	Reduced susceptibility of 20% of tourist sites highly exposed to landslide	Reduced susceptibility of 40% of tourist sites highly exposed to landslide
<b>CARMEN</b>	<b>Flood</b>	<i>Very high</i>	Population	6316	Person	30% of population in Carmen very highly exposed to flooding safe from the impacts of the same hazard	50% of population in Carmen very highly exposed to flooding safe from the impacts of the same hazard
		<i>high</i>	Population	15199	Person	20% of population in Carmen very highly exposed to flooding safe from the impacts of the same hazard	40% of population in Carmen very highly exposed to flooding safe from the impacts of the same hazard
		<i>Very High</i>	Natural Resources-Production Agriculture	0		Reduced susceptibility of 30% Production Agricultural Areas very highly exposed to flooding	Reduced susceptibility of 50% Production Agricultural Areas very highly exposed to flooding
		<i>High</i>		0		Reduced susceptibility of 20% Production Agricultural Areas very highly exposed to flooding	Reduced susceptibility of 40% Production Agricultural Areas very highly exposed to flooding
		<i>Very High</i>	Natural Resources-Production Forest	7	hectares	Reduced susceptibility of 30% Production Forest Areas very highly exposed to flooding	Reduced susceptibility of 50% Production Forest Areas very highly exposed to flooding
		<i>High</i>		2	hectares	Reduced susceptibility of 20% Production Forest Areas very highly exposed to flooding	Reduced susceptibility of 40% Production Forest Areas very highly exposed to flooding
		<i>Very High</i>	Natural Resources-	22	hectares	Reduced susceptibility of 30% Production Water Areas very highly exposed to flooding	Reduced susceptibility of 50% Production Water Areas very highly exposed to flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets		
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)	
		High	Production Water	31	hectares	Reduced susceptibility of 20% Production Water Areas highly exposed to flooding	Reduced susceptibility of 40% Production Water Areas highly exposed to flooding	
		High	Critical point Facilities - Elementary	1	Facility	Reduced susceptibility of 20% Elementary School highly exposed to flooding	Reduced susceptibility of 40% Elementary School highly exposed to flooding	
			Critical point Facilities - Hospital	1	Facility	Reduced susceptibility of 20% hospital highly exposed to flooding	Reduced susceptibility of 40% hospital highly exposed to flooding	
		<b>Landslide</b>	high	Population	52	Person	20% of population in Carmen highly exposed to landslide safe from the impacts of the same hazard	40% of population in Carmen highly exposed to landslide safe from the impacts of the same hazard
	<b>Storm Surge</b>		Very High	Population	2954	Person	30% of population in Carmen very highly exposed to storm surge safe from the impacts of the same hazard	50% of population in Carmen very highly exposed to storm surge safe from the impacts of the same hazard
			High	Population	3217	person	20% of population in Carmen highly exposed to storm surge safe from the impacts of the same hazard	40% of population in Carmen highly exposed to storm surge safe from the impacts of the same hazard
			Very High	Natural Resources-Production Agriculture	0	hectares	0	0
			Very High	Natural Resources-Production Agriculture	0	hectares	0	0
			Very High	Natural Resources-Production Forest	12	hectares	Reduced susceptibility of 30% of Production Forest Areas in Carmen very highly exposed to storm surge	Reduced susceptibility of 50% of Production Forest Areas in Carmen very highly exposed to storm surge
			Vey High	Natural Resources-Production Water	151	hectares	Reduced susceptibility of 30% of Production Water Areas in Carmen very highly exposed to storm surge	Reduced susceptibility of 50% of Production Water Areas in Carmen very highly exposed to storm surge

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets		
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)	
		High		3	hectares	Reduced susceptibility of 20% of Production Water Areas in Carmen highly exposed to storm surge	Reduced susceptibility of 30% of Production Water Areas in Carmen highly exposed to storm surge	
		High	Critical point Facilities - Elementary	2	Facility	Reduced susceptibility of 20% of Elementary Schools in Carmen highly exposed to storm surge	Reduced susceptibility of 30% of Elementary Schools in Carmen highly exposed to storm surge	
Talaingod	Flood	High	Population	21955	Person	30% of population very highly exposed to flooding safe from the impacts of the hazard	50% of population very highly exposed to flooding safe from the impacts of the hazard	
						20% of population highly exposed to flooding safe from the impacts of the hazard	40% of population highly exposed to flooding safe from the impacts of the hazard	
		High	Natural Resources - Production Agriculture	0		0	0	
		High	Natural Resources - Production Forest	0		0	0	
	Landslide		Very High	Population	52	Person	30% of population very highly exposed to landslide in Talaingod safe from the impacts of the hazard	50% of population very highly exposed to landslide in Talaingod safe from the impacts of the hazard
			Very High	Natural Resources - Production Agriculture	1		Reduced susceptibility of 30% of Production Agricultural Areas very highly exposed to landslide	Reduced susceptibility of 50% of Production Agricultural Areas very highly exposed to landslide
					0		0	0
			Very High		0		0	0.
			High	Natural Resources - Production Forest	0		0	0

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Critical Points Facilities - ELEMENTARY	28	Facility	Reduced susceptibility of 20% of Elementary Schools in Talaingod highly exposed to Landslide	40% of Elementary Schools in Talaingod safe from the impacts of Landslide
			Critical Points Facilities - HIGH SCHOOL	9	Facility	Reduced susceptibility of 20% of High School Schools in Talaingod highly exposed to storm Landslide	40% of High School Schools in Talaingod safe from the impacts of Landslide
			Critical Points Facilities - INTEGRATED SCHOOL	4	Facility	Reduced susceptibility of 20% of Integrated School in Talaingod highly exposed to Landslide	40% of Integrated School in Talaingod safe from the impacts of Landslide
			Critical Points Facilities - HOSPITAL	2	Facility	Reduced susceptibility of 20% of Hospitals in Talaingod highly exposed to Landslide	40% of Hospitals in Talaingod safe from the impacts of Landslide
			Critical Points Facilities - EVACUATION CENTER	3	Facility	Reduced susceptibility of 20% of Evacuation Center in Talaingod highly exposed to Landslide	40% of Hospitals in Talaingod safe from the impacts of Landslide
			Critical Points Facilities - FIRE STATION	1	Facility	Reduced susceptibility of 20% of Fire Station in Talaingod highly exposed to Landslide	40% of Fire Station safe from the impacts of Landslide
			Critical Points Facilities - GOVERNMENT OFFICE	1	Facility	Reduced susceptibility of 20% of Government Office in Talaingod highly exposed to Landslide	40% of Government Office safe from the impact of Landslide
New Corella	Flood	High	Critical Facility	5	Elementary School	Reduced susceptibility of 20% of Elementary school highly exposed to flooding in New Corella	Reduced susceptibility of 40% of Elementary school highly exposed to flooding in New Corella
		Very High	Critical Facility	1	Elementary School	Reduced susceptibility of 30% of Elementary school very highly exposed to flooding in New Corella	Reduced susceptibility of 50% of Elementary school very highly exposed to flooding in New Corella

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		Very High	Natural Resources - Production Agriculture	831	Has	Reduced susceptibility of 30% Production Agricultural Areas with perennial crops very highly exposed to flooding	Reduced susceptibility of 50% Production Agricultural Areas with perennial crops very highly exposed to flooding
		High	Natural Resources - Production Agriculture	4160	Has	Reduced susceptibility of 20% Production Agricultural Areas with perennial crops highly exposed to flooding	Reduced susceptibility of 40% Production Agricultural Areas with perennial crops highly exposed to flooding
		Very High	Natural Resources - Production Forest	13	Has	Reduced susceptibility of 30% of Production Production Forest Areas with perennial crops that are very highly exposed to flooding	Reduced susceptibility of 50% of Production Production Forest Areas with perennial crops that are very highly exposed to flooding
		High	Natural Resources - Production Forest	33	Has	Reduced susceptibility of 20% of Production Production Forest Areas with perennial crops that are highly exposed to flooding	Reduced susceptibility of 40% of Production Production Forest Areas with perennial crops that are highly exposed to flooding
		Very High	Lifeline - Provincial Road	7799	m	Reduced susceptibility of 30% of the damaged provincial road that are very highly exposed to flooding	Reduced susceptibility of 50% of the damaged provincial road that are very highly exposed to flooding
		High	Lifeline - Provincial Road	35883	m	Reduced susceptibility of 20% of the damaged provincial road that are highly exposed to flooding	Reduced susceptibility of 40% of the damaged provincial road that are highly exposed to flooding
		Very High	Urban Use - Commercial	1	Hectares	Reduced susceptibility of 30% of commercial areas that are very highly exposed to flooding	Reduced susceptibility of 50% of commercial areas that are very highly exposed to flooding
		High		19	Hectares	Reduced susceptibility of 20% of commercial areas that are highly exposed to flooding	Reduced susceptibility of 40% of commercial areas that are highly exposed to flooding
		High	Urban Use - Institutional	1	Hectares	Reduced susceptibility of 20% of Institutional areas that are highly exposed to flooding	Reduced susceptibility of 40% of Institutional areas that are highly exposed to flooding
Very High	Urban Use - Residential	120	Hectares	Reduced susceptibility of 30% of residential areas that are very highly exposed to flooding	Reduced susceptibility of 50% of residential areas that are very highly exposed to flooding		

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High		263	Hectares	reduced susceptibility of 20% of residential areas that are highly exposed to flooding	reduced susceptibility of 10% of residential areas that are highly exposed to flooding
		Very High	Population	492	population	30% of the very highly affected population are safe from the impacts of flooding	50% of the very highly affected population are safe from the impacts of flooding
	Landslide	Very High	Population	233	person	30% of the very highly affected population are safe from the impacts of landslide	50% of the very highly affected population are safe from the impacts of landslide
		High		1284	person	20% of the highly affected population are safe from the impacts of landslide	40% of the highly affected population are safe from the impacts of landslide
		High	Critical Facility	5	Elementary School	Reduced susceptibility of 30% of Elementary Schools that are very highly exposed to landslide	Reduced susceptibility of 50% of Elementary Schools that are very highly exposed to landslide
		High	Critical Facility	1	High School	Reduced susceptibility of 20% of High Schools that are highly exposed to landslide	Reduced susceptibility of 40% of High Schools that are highly exposed to landslide
		Very High	Production Agriculture	170	Hectares	Reduced susceptibility of 30% Production Agricultural Areas that are very highly exposed to landslide	Reduced susceptibility of 50% Production Agricultural Areas that are very highly exposed to landslide
		High	Production Agriculture	2630	Hectares	Reduced susceptibility of 20% Production Agricultural Areas that are highly exposed to landslide	Reduced susceptibility of 40% Production Agricultural Areas that are highly exposed to landslide
		Very High	Natural Resources - Production Forest	919	Hectares	Reduced susceptibility of 30% of Production Forest Areas that are very highly exposed to landslide	Reduced susceptibility of 50% of Production Forest Areas that are very highly exposed to landslide
		High	Natural Resources - Production Forest	2625	Hectares	Reduced susceptibility of 20% of Production Forest Areas that are highly exposed to landslide	Reduced susceptibility of 40% of Production Forest Areas that are highly exposed to landslide
Very High	Lifeline - Provincial Road	5565	meters	Reduced susceptibility of 30% of Provincial Roads that are very highly exposed to landslide	Reduced susceptibility of 50% of Provincial Roads that are very highly exposed to landslide		

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Lifeline - Provincial Road	33265	meters	Reduced susceptibility of 20% of Provincial Roads that are highly exposed to landslide	Reduced susceptibility of 40% of Provincial Roads that are highly exposed to landslide
		Very High	Urban Use - Commercial	1	Hectares	Reduced susceptibility of 30% of Commercial Areas that are very highly exposed to landslide	Reduced susceptibility of 50% of Commercial Areas that are very highly exposed to landslide
		High		1	Hectares	Reduced susceptibility of 20% of Commercial Areas that are highly exposed to landslide	Reduced susceptibility of 40% of Commercial Areas that are highly exposed to landslide
		Very High	Urban Use - Residential	81	Hectares	Reduced susceptibility of 30% of Residential Areas that are very highly exposed to landslide	Reduced susceptibility of 50% of Residential Areas that are very highly exposed to landslide
		High		322	Hectares	Reduced susceptibility of 20% of Residential Areas that are highly exposed to landslide	Reduced susceptibility of 40% of Residential Areas that are highly exposed to landslide
KAPALONG	Flood	High	Critical Facility	3	College	Reduced susceptibility of 20% of Tertiary Schools in Kapalong that are highly exposed to Flooding	Reduced susceptibility of 40% of Tertiary Schools in Kapalong that are highly exposed to Flooding
		High		6	Elementary School	Reduced susceptibility of 20% of Elementary Schools in Kapalong that are highly exposed to Flooding	Reduced susceptibility of 40% of Elementary Schools in Kapalong that are highly exposed to Flooding
		High		5	High School	Reduced susceptibility of 20% of High Schools in Kapalong that are highly exposed to Flooding	Reduced susceptibility of 40% of High Schools in Kapalong that are highly exposed to Flooding
		High		2	Hospital	Reduced susceptibility of 20% of Hospitals that are highly exposed to flooding	Reduced susceptibility of 40% of Hospitals that are highly exposed to flooding
		High	Natural Resource - Production Agriculture	3560	Hectares	Reduced susceptibility of 20% Production Agricultural Areas that are highly exposed to flooding	Reduced susceptibility of 40% Production Agricultural Areas that are highly exposed to flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		Very High	Natural Resource - Production Forest	1	hectares	Reduced susceptibility of 30% Production Forest Areas that are very highly exposed to flooding	Reduced susceptibility of 50% Production Forest Areas that are very highly exposed to flooding
		High	Natural Resource - Production Forest	113	hectares	Reduced susceptibility of 20% Production Forest Areas that are highly exposed to flooding	Reduced susceptibility of 40% Production Forest Areas that are highly exposed to flooding
		High	Lifeline - National Road	8082	meters	Reduced susceptibility of 20% of National Road that are highly exposed to flooding	Reduced susceptibility of 40% of National Road that are highly exposed to flooding
		High	Lifeline - Provincial Road	16776	meters	Reduced susceptibility of 20% of Provincial Road that are highly exposed to flooding	Reduced susceptibility of 40% of Provincial Road that are highly exposed to flooding
		High	Lifeline -Water Facility	25	meters	Reduced susceptibility of 20% of Water Facilities that are highly exposed to Flooding	Reduced susceptibility of 40% of Water Facilities that are highly exposed to Flooding
		High	Urban Use - Commercial	1	hectares	Reduced susceptibility of 20% Airstrip Areas highly exposed to Flooding	Reduced susceptibility of 40% Airstrip Areas highly exposed to Flooding
		Very High	Urban Use - Residential	1	hectares	Reduced susceptibility of 30% Residential Areas very highly exposed to Flooding	Reduced susceptibility of 50% Residential Areas very highly exposed to Flooding
		High	Urban Use - Residential	17	hectares	Reduced susceptibility of 20% Residential Areas highly exposed to Flooding	Reduced susceptibility of 40% Residential Areas highly exposed to landslide
	Landslide	High	Population	1303	person	Reduced susceptibility of 20% population highly exposed to landslide	Reduced susceptibility of 40% of population that are highly exposed to landslide
		High	Critical Facility	6	Elementary School	Reduced susceptibility of 20% of elementary school exposed to landslide	Reduced susceptibility of 40% elementary school highly exposed to landslide
		High		2	High School	Reduced susceptibility of 20% of high school exposed to landslide	Reduced susceptibility of 40% of secondary school that are very highly exposed to landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Natural Resource - Production Agriculture	337	hectares	Reduced susceptibility of 20% of Production Agriculture Areas that are highly exposed to landslide	Reduced susceptibility of 40% of Production Agriculture Areas that are highly exposed to landslide
		Very High	Natural Resource - Production Forest	1	hectares	Reduced susceptibility of 30% of Production Forest that are very highly exposed to landslide	Reduced susceptibility of 50% of Production Forest that are very highly exposed to landslide
		High	Natural Resource - Production Forest	1479	hectares	Reduced susceptibility of 20% of Production Forest that are highly exposed to landslide	Reduced susceptibility of 40% of Production Forest that are highly exposed to landslide
		High	Lifeline - Provincial Road	17197	meters	Reduced susceptibility of 30% Provincial Road that are highly exposed to landslide	Reduced susceptibility of 40% Provincial Road that are highly exposed to landslide
		High	Lifeline -Water Facility	25	meters	Reduced susceptibility of 20% of Water Facility that are highly exposed to landslide	Reduced susceptibility of 40% Water Facility that are highly exposed to landslide
		High	Urban Use - Residential	4	hectares	Reduced susceptibility of 20% Residential Area that are highly exposed to Flooding	Reduced susceptibility of 40% Residential Area that are highly exposed to Flooding
SAN ISIDRO	Landslide	Very high	POPULATION	72	Person	30% of population very highly exposed to landslide safe from the impacts of the same hazard	50% of population very highly exposed to landslide safe from the impacts of the same hazard
		High		484	Person	20% of population very highly exposed to landslide safe from the impacts of the same hazard	40% of population highly exposed to landslide safe from the impacts of the same hazard
		Very High		3	Person	30% of population very highly exposed to landslide safe from the impacts of the same hazard	50% of population in San Isidro that are very highly exposed to landslide safe from the impacts of the same hazard

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High		103	Person	20% of population highly exposed to landslide safe from the impacts of the same hazard	40% of population highly exposed to landslide safe from the impacts of the same hazard
		Very High	Natural Resources- Production Agriculture ( Perenial Crops )	30	Hectares	Reduced susceptibility of 30% of Natural Resources - Production Agriculture Areas very highly exposed to landslide	50% of Natural Resources - Production Agriculture Areas protected from the impacts of Landslide.
		High		240	Hectares	Reduced susceptibility of 20% of Natural Resources - Production Agriculture Areas highly exposed to landslide	40% of Natural Resources - Production Agriculture Areas protected from the impacts of Landslide.
		Vey High	Natural Resources- Production Forest ( Perenial Crops )	10	Hectares	Reduced susceptibility of 30% of Natural Resources - Production Forest Areas very highly exposed to landslide	50% of Natural Resources - Production Forest Areas protected from the impacts of Landslide.
		High		1	Hectares	Reduced susceptibility of 20% of Natural Resources - Production Forest Areas highly exposed to landslide	Reduced susceptibility of 40% of Natural Resources - Production Forest Areas highly exposed to landslide
		High	Natural Resources- Production Agriculture ( Perenial Crops )	1112	Hectares	Reduced susceptibility of 20% of Natural Resources - Production Agriculture Areas highly exposed to landslide	Reduced susceptibility of 40% of Natural Resources - Production Agriculture Areas highly exposed to landslide
		High	Urban use Areas (Cemetery)	2	Hectares	Reduced susceptibility of 20% of cemetery that are highly exposed to landslide	Reduced susceptibility of 40% of cemetery that are highly exposed to landslide
		Very High	Urban use Areas (Commercial)	1	Hectares	Reduced susceptibility of 30% of Commercial very highly exposed to landslide	Reduced susceptibility of 50% of Commercial very highly exposed to landslide
		VeryHigh	Urban use Areas (Institutional)	1	Hectares	Reduced susceptibility of 30% of Institutional very highly exposed to landslide	Reduced susceptibility of 50% of Institutional very highly exposed to landslide
		Veryhigh	Urban use Areas (Residential)	2	Hectares	Reduced susceptibility of 30% of Residential very highly exposed to landslide	Reduced susceptibility of 50% of Residential very highly exposed to landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets		
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)	
		High	Urban use Areas (Residential)	6	Hectares	Reduced susceptibility of 30% of Residential highly exposed to landslide	Reduced susceptibility of 50% of Residential highly exposed to landslide	
		Very High	Lifeline Utilities - provincial Roads	904	kilometers	Reduced susceptibility of 30% of Lifeline Utilities - provincial Roads very highly exposed to landslide	Reduced susceptibility of 50% of Lifeline Utilities - provincial Roads very highly exposed to landslide	
		High		10141	kilometers	Reduced susceptibility of 20% of Lifeline Utilities - provincial Roads highly exposed to landslide	Reduced susceptibility of 40% of Lifeline Utilities - provincial Roads highly exposed to landslide	
	Flood		VeryHigh	Natural Resources-Production Agriculture ( Perenial Crops )	39	Hectares	Reduced susceptibility of 30% Natural Resources-Production Agriculture Areas very highly exposed to flooding	Reduced susceptibility of 50% Natural Resources-Production Agriculture Areas very highly exposed to flooding
			High		122	Hectares	Reduced susceptibility of 20% Natural Resources-Production Agriculture Areas very highly exposed to flooding	Reduced susceptibility of 40% Natural Resources-Production Agriculture Areas very highly exposed to flooding
			VeryHigh	Natural Resources-Production Forest ( Perenial Crops )	1	Hectares	Reduced susceptibility of 30% Natural Resources-Production Forest Areas very highly exposed to flooding	Reduced susceptibility of 50% Natural Resources-Production Forest Areas very highly exposed to flooding
			High		12	Hectares	Reduced susceptibility of 20% Natural Resources-Production Forest Areas highly exposed to flooding	Reduced susceptibility of 40% Natural Resources-Production Forest Areas highly exposed to flooding
			High	LIFELINE UTILITIES - provincial Roads	1419	kilometers	Reduced susceptibility of 20% Natural Resources-Production Forest Areas very highly exposed to flooding	Reduced susceptibility of 40% Natural Resources-Production Forest Areas very highly exposed to flooding
			High	Critical Point	1	ELEMENTARY SCHOOL	Reduced susceptibility of 20% of Elementary Schools in San Isidro highly exposed to Flooding	Reduced susceptibility of 40% of Elementary Schools in San Isidro highly exposed to Flooding
			High	Critical Point	1	HIGH SCHOOL	Reduced susceptibility of 20% of Elementary Schools in San Isidro highly exposed to Flooding	Reduced susceptibility of 40% of Elementary Schools in San Isidro highly exposed to Flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	URBAN USE AREAS (AGRI INDUSTRIAL)	2	Hectares	Reduced susceptibility of 20% Agri Industrial Areas highly exposed to flooding	Reduced susceptibility of 40% Agri Industrial Areas highly exposed to flooding
		High	URBAN USE AREAS (Commercial)	1	Hectares	Reduced susceptibility of 20% Commercial Areas highly exposed to flooding	Reduced susceptibility of 40% Commercial Areas highly exposed to flooding
		High	URBAN USE AREAS (Institutional)	4	Hectares	Reduced susceptibility of 20% Institutional Areas highly exposed to flooding	Reduced susceptibility of 40% Institutional Areas highly exposed to flooding
		Very High	URBAN USE AREAS (Residential)	1	Hectares	Reduced susceptibility of 30% Residential Areas very highly exposed to flooding	Reduced susceptibility of 50% residential Areas very highly exposed to flooding
		High	URBAN USE AREAS (Residential)	1	Hectares	Reduced susceptibility of 20% Residential Areas highly exposed to flooding	Reduced susceptibility of 40% residential Areas highly exposed to flooding
		High	URBAN USE AREAS (Tourism site)	2	Hectares	Reduced susceptibility of 20% Tourism Site highly exposed to flooding	Reduced susceptibility of 40% Tourism Site highly exposed to flooding
	Liquefaction	Yes	URBAN USE AREAS (Commercial)	1	Hectares	Reduced susceptibility of 20% Commercial Site highly exposed to Liquefaction	Reduced susceptibility of 40% Commercial Site highly exposed to Liquefaction
		Yes	URBAN USE AREAS (Institutional)	2	Hectares	Reduced susceptibility of 20% Institutional Areas highly exposed to Liquefaction	Reduced susceptibility of 40% Institutional Areas highly exposed to Liquefaction
		Yes	URBAN USE AREAS (Residential)	3	Hectares	Reduced susceptibility of 20% Residential Areas highly exposed to Liquefaction	Reduced susceptibility of 20% Residential Areas highly exposed to Liquefaction
		Yes	Natural Resources-Production Forest ( Perennial Crops )	232	Hectares	Reduced susceptibility of 20% Natural Resources-Production Forest Areas highly exposed to Liquefaction	Reduced susceptibility of 40% Natural Resources-Production Forest Areas highly exposed to Liquefaction

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		Yes	Natural Resources-Production Agriculture ( Perennial Crops )	3887	Hectares	Reduced susceptibility of 20% Natural Resources-Agriculture Areas highly exposed to Liquefaction	Reduced susceptibility of 40% Natural Resources-Production Agriculture Areas highly exposed to Liquefaction
	Flood	Very High	Urban Areas (Agri-Industrial)	1	hectares	Reduced susceptibility of 30% Agri-Industrial Areas very highly exposed to Flooding	Reduced susceptibility of 50% Agri-Industrial Areas very highly exposed to Flooding
		High	Urban Areas (Agri-Industrial)	84	hectares	Reduced susceptibility of 20% Agri-Industrial Areas highly exposed to Flooding	Reduced susceptibility of 40% Agri-Industrial Areas highly exposed to Flooding
		High	Urban Areas (Airstrip)	33	hectares	Reduced susceptibility of 20% Airstrip Areas highly exposed to Flooding	Reduced susceptibility of 40% Airstrip Areas highly exposed to Flooding
		Very High	Urban Areas (Cemetery)	1	hectares	Reduced susceptibility of 30% Cemetery very highly exposed to Flooding	Reduced susceptibility of 50% Cemetery very highly exposed to Flooding
		High	Urban Areas (Cemetery)	3	hectares	Reduced susceptibility of 20% Cemetery exposed to Flooding	Reduced susceptibility of 40% Cemetery highly exposed to Flooding
		High	Urban Areas (Commercial)	1	hectares	Reduced susceptibility of 20% Commercial Areas highly exposed to Flooding	Reduced susceptibility of 40% Commercial Areas highly exposed to Flooding
		High	Urban Areas (Industrial)	2	hectares	Reduced susceptibility of 20% Industrial Areas highly exposed to Flooding	Reduced susceptibility of 40% Industrial Areas highly exposed to Flooding
		Very High	Urban Areas (Institutional)	3	hectares	Reduced susceptibility of 30% Institutional very highly exposed to Flooding	Reduced susceptibility of 50% Institutional very highly exposed to Flooding
		High	Urban Areas (Institutional)	20	hectares	Reduced susceptibility of 20% Institutional exposed to Flooding	Reduced susceptibility of 40% Institutional highly exposed to Flooding
		Very High	Urban Areas (Parks)	1	hectares	Reduced susceptibility of 30% Parking Areas very highly exposed to Flooding	Reduced susceptibility of 50% Parking Areas very highly exposed to Flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Urban Areas (Parks)	2	hectares	Reduced susceptibility of 20% Parking Areas highly exposed to Flooding	Reduced susceptibility of 40% Parking Areas highly exposed to Flooding
		Very High	Urban Areas (Residential)	18	hectares	Reduced susceptibility of 30% Residential Areas very highly exposed to Flooding	Reduced susceptibility of 50% Residential Areas very highly exposed to Flooding
		High	Urban Areas (Residential)	378	hectares	Reduced susceptibility of 20% Residential Areas highly exposed to Flooding	Reduced susceptibility of 40% Residential Areas highly exposed to Flooding
		High	Urban Areas (Tourism Site)	1	hectares	Reduced susceptibility of 20% Tourism Site highly exposed to Flooding	Reduced susceptibility of 40% Tourism Site highly exposed to Flooding
		Very High	Population	414	person	30% of population very highly exposed to landslide safe from the impacts of the same hazard	50% of population in very highly exposed to landslide safe from the impacts of the same hazard
		Very High	Natural Resources (Production Agriculture)	716	hectares	Reduced susceptibility of 30% Production Agriculture very highly exposed to Flooding	Reduced susceptibility of 50% Production Agriculture very highly exposed to Flooding
		High	Natural Resources (Production Agriculture)	2893	hectares	Reduced susceptibility of 20% Production Agriculture very highly exposed to Flooding	Reduced susceptibility of 40% Production Agriculture very highly exposed to Flooding
		High	Natural Resources (Production forest)	1	hectares	Reduced susceptibility of 20% Production Forest highly exposed to Flooding	Reduced susceptibility of 40% Production Forest highly exposed to Flooding
		Very High	Lifeline(National Roads)	124	Kilometers	Reduced susceptibility of 30% National Roads very highly exposed to Flooding	Reduced susceptibility of 50% National Roads very highly exposed to Flooding
		High	Lifeline(National Roads)	3007	Kilometers	Reduced susceptibility of 20% National Roads highly exposed to Flooding	Reduced susceptibility of 40% National Roads highly exposed to Flooding
Very High	Lifeline(Provincial Roads)	7487	Kilometers	Reduced susceptibility of 30% Provincial Roads very highly exposed to Flooding	Reduced susceptibility of 50% Provincial Roads very highly exposed to Flooding		

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Lifeline( <b>Provincial Roads</b> )	18280	Kilometers	Reduced susceptibility of 20% Provincial Roads highly exposed to Flooding	Reduced susceptibility of 40% Provincial Roads highly exposed to Flooding
		High	Lifeline( <b>Water Facility</b> )	125	Kilometers	Reduced susceptibility of 20% Provincial Roads highly exposed to Flooding	Reduced susceptibility of 40% Provincial Roads highly exposed to Flooding
		Very High	Critical Points ( <b>Elementary</b> )	1	Facilities	Reduced susceptibility of 30% Elementary very highly exposed to Flooding	Reduced susceptibility of 50% Elementary very highly exposed to Flooding
		High	Critical Points ( <b>Elementary</b> )	2	Facilities	Reduced susceptibility of 20% Elementary highly exposed to Flooding	Reduced susceptibility of 40% Elementary highly exposed to Flooding
		Very High	Critical Points ( <b>Highschool</b> )	1	Facilities	Reduced susceptibility of 30% High School very highly exposed to Flooding	Reduced susceptibility of 50% High School very highly exposed to Flooding
		High	Critical Points ( <b>Highschool</b> )	1	Facilities	Reduced susceptibility of 20% High School highly exposed to Flooding	Reduced susceptibility of 40% High School highly exposed to Flooding
		High	Critical Points ( <b>Integrated</b> )	1	Facilities	Reduced susceptibility of 20% Integrated High School highly exposed to Flooding	Reduced susceptibility of 40% Integrated High School highly exposed to Flooding
	<b>Landslide</b>	High	Urban Areas ( <b>Agri-Industrial</b> )	1	hectares	Reduced susceptibility of 20% Agri Industrial highly exposed to Landslide	Reduced susceptibility of 40% Agri Industrial highly exposed to Landslide
		High	Urban Areas ( <b>Cemetery</b> )	16	hectares	Reduced susceptibility of 20% Cemetery highly exposed to Landslide	Reduced susceptibility of 40% Cemetery highly exposed to Landslide
		High	Urban Areas ( <b>Institution</b> )	1	hectares	Reduced susceptibility of 20% Institution highly exposed to Landslide	Reduced susceptibility of 40% Institution highly exposed to Landslide
		High	Urban Areas ( <b>Parks</b> )	1	hectares	Reduced susceptibility of 20% Parks highly exposed to Landslide	Reduced susceptibility of 40% Parks highly exposed to Landslide
		High	Urban Areas ( <b>Residential</b> )	14	hectares	Reduced susceptibility of 20% Residential highly exposed to Landslide	Reduced susceptibility of 40% Residential highly exposed to Landslide
		High	Lifeline( <b>Provincial Roads</b> )	6263	Kilometers	Reduced susceptibility of 20% Provincial Roads highly exposed to Landslide	Reduced susceptibility of 40% Provincial Roads highly exposed to Landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Lifeline(Water Facility)	5	Kilometers	Reduced susceptibility of 20% Water facility highly exposed to Landslide	Reduced susceptibility of 40% Water facility highly exposed to Landslide
		High	Population	497	person	20% of population highly exposed to landslide safe from the impacts of the same hazard	40% of population highly exposed to landslide safe from the impacts of the same hazard
		Very High	Natural Resources (Production Agriculture)	2	hectares	Reduced susceptibility of 30% production agriculture highly exposed to Landslide	Reduced susceptibility of 50% production agriculture highly exposed to Landslide
		High	Natural Resources (Production Agriculture)	400	hectares	Reduced susceptibility of 20% production agriculture highly exposed to Landslide	Reduced susceptibility of 40% production agriculture highly exposed to Landslide
		High	Natural Resources (Production Forest)	37	hectares	Reduced susceptibility of 20% production Forest highly exposed to Landslide	Reduced susceptibility of 40% production forest highly exposed to Landslide
IGACOS	Landslide	Very High	Population	3	person	30% of population very highly exposed to landslide safe from the impacts of the same hazard	50% of population very highly exposed to landslide safe from the impacts of the same hazard
		High	Population	952	person	20% of population highly exposed to landslide safe from the impacts of the same hazard	40% of population highly exposed to landslide safe from the impacts of the same hazard
		Very High	Lifeline	115	Kilometers	Reduced susceptibility of 30% lifeline very highly exposed to Landslide	Reduced susceptibility of 50% lifeline very highly exposed to Landslide
		High	Lifeline	2899	Kilometers	Reduced susceptibility of 20% lifeline highly exposed to Landslide	Reduced susceptibility of 40% lifeline highly exposed to Landslide
		Elementary High	Critical Facilities	1	facility	Reduced susceptibility of 20% Elementary highly exposed to Landslide	Reduced susceptibility of 40% Elementary highly exposed to Landslide
		Agri-Industrial High	Urban Use	1	hectares	Reduced susceptibility of 20% Agri-Industrial highly exposed to Landslide	Reduced susceptibility of 40% Agri-Industrial highly exposed to Landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		<i>Commercial High</i>	Urban Use	1	hectares	Reduced susceptibility of 20% Commercial highly exposed to Landslide	Reduced susceptibility of 40% Commercial highly exposed to Landslide
		<i>Institutional High</i>	Urban Use	1	hectares	Reduced susceptibility of 20% institutional highly exposed to Landslide	Reduced susceptibility of 40% institutional highly exposed to Landslide
		<i>Parks High</i>	Urban Use	1	hectares	Reduced susceptibility of 20% Parks highly exposed to Landslide	Reduced susceptibility of 40% Parks highly exposed to Landslide
		<i>Residential High</i>	Urban Use	8	hectares	Reduced susceptibility of 20% Residential highly exposed to Landslide	Reduced susceptibility of 40% Residential highly exposed to Landslide
		<i>Residential Very High</i>	Urban Use	1	hectares	Reduced susceptibility of 30% Residential highly exposed to Landslide	Reduced susceptibility of 50% Residential highly exposed to Landslide
		<i>Tourism</i>	Urban Use	8	hectares	Reduced susceptibility of 20% Tourism highly exposed to Landslide	Reduced susceptibility of 40% Tourism highly exposed to Landslide
		<i>Production Agriculture Very High</i>	Natural Resources	111	hectares	Reduced susceptibility of 30% Production Agriculture very highly exposed to Landslide	Reduced susceptibility of 50% Production Agriculture very highly exposed to Landslide
		<i>Production Agriculture High</i>	Natural Resources	3666	hectares	Reduced susceptibility of 20% Production Agriculture highly exposed to Landslide	Reduced susceptibility of 40% Production Agriculture highly exposed to Landslide
		<i>Production Forest Very High</i>	Natural Resources	1	hectares	Reduced susceptibility of 30% Production Forest very highly exposed to Landslide	Reduced susceptibility of 50% Production Forest very highly exposed to Landslide
	<i>Production Forest High</i>	Natural Resources	898	Hectares	Reduced susceptibility of 20% Production Forest highly exposed to Landslide	Reduced susceptibility of 40% Production Forest highly exposed to Landslide	
	<b>Flooding</b>	<i>City Road High</i>	Lifeline	535	Kilometers	Reduced susceptibility of 20% City Road highly exposed to Flooding	Reduced susceptibility of 40% City Road highly exposed to Flooding
<i>Agri-Industrial High</i>		Urban Use	1	hectares	Reduced susceptibility of 20% Agri-Industrial highly exposed to Flooding	Reduced susceptibility of 40% Agri-Industrial highly exposed to Flooding	

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		<i>Residential High</i>	Urban Use	1	hectares	Reduced susceptibility of 20% Residential highly exposed to Flooding	Reduced susceptibility of 40% Residential highly exposed to Flooding
		<i>Production Agriculture High</i>	Natural Resources	41		Reduced susceptibility of 20% Production Agriculture highly exposed to Flooding	Reduced susceptibility of 40% Production Agriculture highly exposed to Flooding
	<b>Storm Surge</b>	<i>Elementary Very High</i>	Critical Facilities	4	facility	Reduced susceptibility of 30% Elementary very highly exposed to Storm Surge	Reduced susceptibility of 50% Elementary very highly exposed to Storm Surge
		<i>High School Very High</i>	Critical Facilities	2	facility	Reduced susceptibility of 20% Elementary highly exposed to Storm Surge	Reduced susceptibility of 40% Elementary highly exposed to Storm Surge
		<i>National Roads Very High</i>	Lifeline	1072	Kilometers	Reduced susceptibility of 30% City Road very highly exposed to Storm Surge	Reduced susceptibility of 50% City Road very highly exposed to Storm Surge
		<i>National Roads High</i>	Lifeline	21570	Kilometers	Reduced susceptibility of 20% National Roads highly exposed to Storm Surge	Reduced susceptibility of 40% National Roads highly exposed to Storm Surge
		<i>City Road Very High</i>	Lifeline	113070	Kilometers	Reduced susceptibility of 30% City Road very highly exposed to Storm Surge	Reduced susceptibility of 50% City Road very highly exposed to Storm Surge
		<i>City Road High</i>	Lifeline	36476	Kilometers	Reduced susceptibility of 20% City Road highly exposed to Storm Surge	Reduced susceptibility of 40% City Road highly exposed to Storm Surge
		<i>Water Facility Very High</i>	Lifeline	5		Reduced susceptibility of 30% Water Facility very highly exposed to Storm Surge	Reduced susceptibility of 50% Water Facility very highly exposed to Storm Surge
		<i>Water Facility High</i>	Lifeline	15	Kilometers	Reduced susceptibility of 20% Water Facility highly exposed to Storm Surge	Reduced susceptibility of 40% Water Facility highly exposed to Storm Surge
		<i>Very High</i>	Natural Resources - Production Agriculture	162	hectares	Reduced susceptibility of 30% Production Agriculture very highly exposed to Storm Surge	Reduced susceptibility of 50% Production Agriculture very highly exposed to Storm Surge
		<i>High</i>	Natural Resources - Production Agriculture	49	hectares	Reduced susceptibility of 20% Production Agriculture highly exposed to Storm Surge	Reduced susceptibility of 40% Production Agriculture highly exposed to Storm Surge

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		<i>Very High</i>	Natural Resources - Production Forest	1	hectares	Reduced susceptibility of 30% Production Forest very highly exposed to Storm Surge	Reduced susceptibility of 50% Production Forest very highly exposed to Storm Surge
		<i>High</i>	Natural Resources - Production Forest	1	hectares	Reduced susceptibility of 20% Production Forest very highly exposed to Storm Surge	Reduced susceptibility of 40% Production Forest very highly exposed to Storm Surge
		<i>very high</i>	Natural Resources - Production water	49	hectares	Reduced susceptibility of 30% Production Water very highly exposed to Storm Surge	Reduced susceptibility of 50% Production Water very highly exposed to Storm Surge
		<i>high</i>	Natural Resources - Production water	1	hectares	Reduced susceptibility of 20% Production Water very highly exposed to Storm Surge	Reduced susceptibility of 40% Production Water very highly exposed to Storm Surge
		<i>Very High</i>	Population	2048	person	30% of population very highly exposed to landslide safe from the impacts of the same hazard	40% of population very highly exposed to landslide safe from the impacts of the same hazard
		<i>Very High</i>	Urban Use - Agri-Industrial	1	hectares	Reduced susceptibility of 30% Agri-Industrial very highly exposed to Storm Surge	Reduced susceptibility of 50% Agri-Industrial very highly exposed to Storm Surge
		<i>Very High</i>	Urban Use - Cemetery	21	hectares	Reduced susceptibility of 30% Cemetery very highly exposed to Storm Surge	Reduced susceptibility of 50% Cemetery very highly exposed to Storm Surge
		<i>High</i>	Urban Use - Cemetery	21	hectares	Reduced susceptibility of 20% Cemetery very highly exposed to Storm Surge	Reduced susceptibility of 40% Cemetery very highly exposed to Storm Surge
		<i>Very High</i>	Urban Use - Institutional	6	hectares	Reduced susceptibility of 30% Institutional very highly exposed to Storm Surge	Reduced susceptibility of 50% Institutional very highly exposed to Storm Surge
		<i>High</i>	Urban Use - Institutional	6	hectares	Reduced susceptibility of 20% Institutional highly exposed to Storm Surge	Reduced susceptibility of 40% Institutional highly exposed to Storm Surge

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		Very High	Urban Use - Parks and Recreation	16	hectares	Reduced susceptibility of 30% Parks and Recreation very highly exposed to Storm Surge	Reduced susceptibility of 50% Parks and Recreation very highly exposed to Storm Surge
		High	Urban Use - Parks and Recreation	16	hectares	Reduced susceptibility of 20% Parks and Recreation highly exposed to Storm Surge	Reduced susceptibility of 40% Parks and Recreation highly exposed to Storm Surge
		Very High	Urban Use - Residential	52	hectares	Reduced susceptibility of 30% Residential very highly exposed to Storm Surge	Reduced susceptibility of 50% Residential very highly exposed to Storm Surge
		High	Urban Use - Residential	52	hectares	Reduced susceptibility of 20% Residential very highly exposed to Storm Surge	Reduced susceptibility of 40% Residential very highly exposed to Storm Surge
		Very High	Urban Use - Tourism	324	hectares	Reduced susceptibility of 30% Tourism very highly exposed to Storm Surge	Reduced susceptibility of 50% Tourism very highly exposed to Storm Surge
		High	Urban Use - Tourism	324	hectares	Reduced susceptibility of 20% Tourism highly exposed to Storm Surge	Reduced susceptibility of 40% Tourism highly exposed to Storm Surge
Asuncion	Flood	very high	population	2048	persons	30% of population very highly exposed to Flooding safe from the impacts of the same hazard	50% of population very highly exposed to Flooding safe from the impacts of the same hazard
		very high	natural resource based (rice, corn, veges.)	587	hectares	Reduced susceptibility of 30% natural resource based very highly exposed to Flood	Reduced susceptibility of 50% natural resource based very highly exposed to Flood
		high	natural resource based (coconut.)	2135	hectares	Reduced susceptibility of 20% natural resource based highly exposed to Flood	Reduced susceptibility of 40% natural resource based highly exposed to Flood
		very high	Lifeline Utilities (National Roads)	11845	meters	Reduced susceptibility of 30% national roads based very highly exposed to Flood	Reduced susceptibility of 50% national roads based very highly exposed to Flood
		high	Lifeline Utilities (National Roads)	9616	meters	Reduced susceptibility of 20% national roads based highly exposed to Flood	Reduced susceptibility of 40% national roads based highly exposed to Flood
		very high	Lifeline Utilities (provincial road)	15243	meters	Reduced susceptibility of 30% provincial roads based very highly exposed to Flood	Reduced susceptibility of 50% provincial roads based very highly exposed to Flood

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		<i>very high</i>	Lifeline Utilities (power facility)	600	meters	Reduced susceptibility of 30% power facility based very highly exposed to Flood	Reduced susceptibility of 50% power facility based very highly exposed to Flood
		<i>very high</i>	Lifeline Utilities (water facility)	100	meters	Reduced susceptibility of 30% water facility very highly exposed to Flood	Reduced susceptibility of 50% water facility very highly exposed to Flood
		<i>high</i>	Lifeline Utilities (water facility)	25	meters	Reduced susceptibility of 20% water facility highly exposed to Flood	Reduced susceptibility of 40% water facility highly exposed to Flood
		<i>very high</i>	Critical Point (elementary school buildings)	5	schools buildings	Reduced susceptibility of 30% elementary school very highly exposed to Flood	Reduced susceptibility of 50% elementary school very highly exposed to Flood
		<i>very high</i>	Critical Point (high school buildings)	1	schools buildings	Reduced susceptibility of 30% high school very highly exposed to Flood	Reduced susceptibility of 50% high school very highly exposed to Flood
		<i>high</i>	Critical Point (school buildings)	10	schools buildings	Reduced susceptibility of 20% high school highly exposed to Flood	Reduced susceptibility of 40% high school highly exposed to Flood
		<i>high</i>	Critical Point (philippine benevolent MA)	1	building	Reduced susceptibility of 20% Philippine benevolent MA highly exposed to Flood	Reduced susceptibility of 40% Philippine benevolent MA highly exposed to Flood
		<i>high</i>	Critical Point (evacuation center)	1	building	Reduced susceptibility of 20% Evacuation highly exposed to Flood	Reduced susceptibility of 40% Evacuation highly exposed to Flood
		<i>very high</i>	Urban use (Agri-Industrial)	3	hectares	Reduced susceptibility of 30% Agri-industrial very highly exposed to Flood	Reduced susceptibility of 50% Agri-industrial very highly exposed to Flood
		<i>high</i>	Urban use (Agri-Industrial)	9	hectares	Reduced susceptibility of 20% Agri-industrial highly exposed to Flood	Reduced susceptibility of 40% Agri-industrial highly exposed to Flood
		<i>very high</i>	Urban use (Cemetery)	2	hectares	Reduced susceptibility of 30% cemetery very highly exposed to Flood	Reduced susceptibility of 50% cemetery very highly exposed to Flood
		<i>high</i>	Urban use (Cemetery)	4	hectares	Reduced susceptibility of 20% cemetery highly exposed to Flood	Reduced susceptibility of 40% cemetery highly exposed to Flood

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets		
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)	
		<i>very high</i>	Urban use (Commercial)	1	hectares	Reduced susceptibility of 30% Commercial very highly exposed to Flood	Reduced susceptibility of 50% Commercial very highly exposed to Flood	
		<i>high</i>	Urban use (Commercial)	2	hectares	Reduced susceptibility of 20% Commercial highly exposed to Flood	Reduced susceptibility of 40% Commercial highly exposed to Flood	
		<i>high</i>	Urban use (Industrial)	1	hectares	Reduced susceptibility of 20% Industrial highly exposed to Flood	Reduced susceptibility of 40% Industrial highly exposed to Flood	
		<i>very high</i>	Urban use (Infra-Utilities)	1	hectares	Reduced susceptibility of 30% Infra-Utilities very highly exposed to Flood	Reduced susceptibility of 50% Infra-Utilities very highly exposed to Flood	
	Landslide		<i>very high</i>	population	23	persons	30% of population very highly exposed to landslide safe from the impacts of the same hazard	50% of population very highly exposed to landslide safe from the impacts of the same hazard
			<i>high</i>	population	1227	persons	20% of population very highly exposed to landslide safe from the impacts of the same hazard	40% of population very highly exposed to landslide safe from the impacts of the same hazard
			<i>very high</i>	natural resource based (annual crops)	1	hectares	Reduced susceptibility of 30% Natural Resource based very highly exposed to Landslide	Reduced susceptibility of 50% Natural Resource based very highly exposed to Landslide
			<i>very high</i>	natural resource based (Perennial crops)	111	hectares	Reduced susceptibility of 30% Natural Resource very highly exposed to Landslide	Reduced susceptibility of 50% Natural Resource very highly exposed to Landslide
			<i>high</i>	natural resource based (annual crops)	20	hectares	Reduced susceptibility of 20% Natural Resource based (annual crops) very highly exposed to Landslide	Reduced susceptibility of 40% Natural Resource based (annual crops) very highly exposed to Landslide
			<i>high</i>	natural resource based (Perennial crops)	3637	hectares	Reduced susceptibility of 20% Natural Resource based (Perennial crops) highly exposed to Landslide	Reduced susceptibility of 40% Natural Resource based (Perennial crops) highly exposed to Landslide
			<i>very high</i>	natural resource based (Perennial trees)	652	hectares	Reduced susceptibility of 30% Natural Resource based (Perennial trees) very highly exposed to Landslide	Reduced susceptibility of 50% Natural Resource based (Perennial trees) very highly exposed to Landslide
			<i>very high</i>	natural resource based (Perennial trees)	3192	hectares	Reduced susceptibility of 30% Natural Resource based (Perennial trees) very highly exposed to Landslide	Reduced susceptibility of 50% Natural Resource based (Perennial trees) very highly exposed to Landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		high	Lifeline Utilities (National road)	1433	meters	Reduced susceptibility of 20% National Road highly exposed to Landslide	Reduced susceptibility of 40% National Road highly exposed to Landslide
		high	Lifeline Utilities (provincial road)	15533	meters	Reduced susceptibility of 20% Provincial Road highly exposed to Landslide	Reduced susceptibility of 40% Provincial Road highly exposed to Landslide
		high	Critical Point (elementary school buildings)	4	schools buildings	Reduced susceptibility of 20% Elementary School Buildings highly exposed to Landslide	Reduced susceptibility of 40% Elementary School Buildings highly exposed to Landslide
		high	Critical Point (high school buildings)	1	schools buildings	Reduced susceptibility of 20% High School Buildings highly exposed to Landslide	Reduced susceptibility of 50% High School Buildings highly exposed to Landslide
		high	Urban use (Agri-Industrial)	1	hectares	Reduced susceptibility of 20% Agri-Industrial highly exposed to Landslide	Reduced susceptibility of 40% Agri-Industrial highly exposed to Landslide
		high	Urban use (Cemetery)	4	hectares	Reduced susceptibility of 20% Cemetery highly exposed to Landslide	Reduced susceptibility of 40% Cemetery highly exposed to Landslide
		high	Urban use (Commercial)	1	hectares	Reduced susceptibility of 20% Commercial highly exposed to Landslide	Reduced susceptibility of 40% Commercial highly exposed to Landslide
		high	Urban use (Infra-Utilities)	1	hectares	Reduced susceptibility of 20% Infra-Utilities highly exposed to Landslide	Reduced susceptibility of 40% Infra-Utilities highly exposed to Landslide
		very high	Urban use (Institutional)	5	hectares	Reduced susceptibility of 30% Institutional very highly exposed to Landslide	Reduced susceptibility of 50% Institutional very highly exposed to Landslide
		high	Urban use (Institutional)	5	hectares	Reduced susceptibility of 20% Institutional highly exposed to Landslide	Reduced susceptibility of 40% Institutional highly exposed to Landslide
		high	Urban use (Waste Disposal Facility)	4	hectares	Reduced susceptibility of 20% Waste Disposal Facility highly exposed to Landslide	Reduced susceptibility of 40% Waste Disposal Facility highly exposed to Landslide
		high	Urban use (Parks)	2	hectares	Reduced susceptibility of 20% Parks highly exposed to Landslide	Reduced susceptibility of 40% Parks highly exposed to Landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		<i>very high</i>	Urban use (Residential)	41	hectares	Reduced susceptibility of 30% Residential very highly exposed to Landslide	Reduced susceptibility of 50% Residential very highly exposed to Landslide
		<i>high</i>	Urban use (Residential)	41	hectares	Reduced susceptibility of 20% Residential highly exposed to Landslide	Reduced susceptibility of 40% Residential highly exposed to Landslide
	<b>Liquefaction</b>	<i>very high (4)</i>	population	9541	persons	30% of population very highly exposed to Liquefaction safe from the impact of the same hazard	50% of population very highly exposed to Liquefaction safe from the impact of the same hazard
		<i>very high (4)</i>	natural resource based (annual crops)	4850	hectares	Reduced susceptibility of 30% Annual crops very highly exposed to Liquefaction	Reduced susceptibility of 50% Annual crops very highly exposed to Liquefaction
		<i>very high (4)</i>	natural resource based (Perennial crops)	15162	hectares	Reduced susceptibility of 30% Annual crops very highly exposed to Liquefaction	Reduced susceptibility of 50% Annual crops very highly exposed to Liquefaction
<b>Tagum City</b>	<b>Fire</b>	<i>high</i>	Population	296202	persons	20% of population very highly exposed to Fire safe from the impact of the same hazard	40% of population very highly exposed to Fire safe from the impact of the same hazard
		<i>high</i>	Critical Point (Establishments)	6000	building	Reduced susceptibility of 20% establishments highly exposed to Fire	Reduced susceptibility of 40% establishments highly exposed to Fire
<b>B.E. DUJALI</b>	<b>Flooding</b>	<i>High</i>	Critical Facilities - Elementary	4	FACILITY	Reduced susceptibility of 20% Elementary School buildings highly exposed to Flooding	Reduced susceptibility of 40% Elementary School buildings highly exposed to Flooding
		<i>High</i>	Critical Facilities- High School	1	FACILITY	Reduced susceptibility of 20% High School buildings highly exposed to Flooding	Reduced susceptibility of 40% High School buildings highly exposed to Flooding
		<i>High</i>	Lifeline - National Road	1819	Kilometers	Reduced susceptibility of 20% National Road highly exposed to Flooding	Reduced susceptibility of 40% National Road highly exposed to Flooding
		<i>Very high</i>	Lifeline - Provincial Road	6017	Kilometers	Reduced susceptibility of 20% Provincial Road very highly exposed to Flooding	Reduced susceptibility of 40% Provincial Road very highly exposed to Flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Lifeline - Provincial Road	35411	Kilometers	Reduced susceptibility of 20% Provincial Road highly exposed to Flooding	Reduced susceptibility of 40% Provincial Road highly exposed to Flooding
		High	Lifeline - Water Facility	25		Reduced susceptibility of 20% Water Facility highly exposed to Flooding	Reduced susceptibility of 40% Water Facility highly exposed to Flooding
		Very High	Natural Resources - Production Agriculture	93187	Hectares	Reduced susceptibility of 20% Water Facility very highly exposed to Flooding	Reduced susceptibility of 40% Water Facility very highly exposed to Flooding
		High	Natural Resources - Production Agriculture	1643	Hectares	Reduced susceptibility of 20% Production Agriculture highly exposed to Flooding	Reduced susceptibility of 40% Production Agriculture highly exposed to Flooding
		High	Natural Resources - Production Water	229	Hectares	Reduced susceptibility of 20% Production Water highly exposed to Flooding	Reduced susceptibility of 40% Production Water highly exposed to Flooding
		Very High	Population	254	Person	20% of population very highly exposed to Flooding safe from the impact of the same hazard	40% of population very highly exposed to Flooding safe from the impact of the same hazard
		High	Urban Use - Cemetery	1	Hectares	Reduced susceptibility of 20% Cemetery highly exposed to Flooding	Reduced susceptibility of 40% Cemetery highly exposed to Flooding
		Very High	Urban Use - Commercial	1	Hectares	Reduced susceptibility of 30% Commercial building highly exposed to Flooding	Reduced susceptibility of 50% Commercial building highly exposed to Flooding
		High	Urban Use - Commercial	1	Hectares	Reduced susceptibility of 20% Commercial building highly exposed to Flooding	Reduced susceptibility of 40% Commercial building highly exposed to Flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Urban Use - Industrial	2	Hectares	Reduced susceptibility of 20% Commercial building highly exposed to Flooding	Reduced susceptibility of 40% Commercial building highly exposed to Flooding
		Very High	Urban Use - Institutional	1	Hectares	Reduced susceptibility of 30% Institutional very highly exposed to Flooding	Reduced susceptibility of 50% Institutional very highly exposed to Flooding
		High	Urban Use - Institutional	2	Hectares	Reduced susceptibility of 20% Institutional very highly exposed to Flooding	Reduced susceptibility of 40% Institutional very highly exposed to Flooding
		Very High	Urban Use - Residential	3	Hectares	Reduced susceptibility of 30% Residential very highly exposed to Flooding	Reduced susceptibility of 50% Residential very highly exposed to Flooding
		High	Urban Use - Residential	30	Hectares	Reduced susceptibility of 30% Residential highly exposed to Flooding	Reduced susceptibility of 50% Residential highly exposed to Flooding
		Very High	Urban Use - Tourism	1	Hectares	Reduced susceptibility of 30% Tourism Site very highly exposed to Flooding	Reduced susceptibility of 50% Tourism Site very highly exposed to Flooding
		High	Urban Use - Tourism	1	Hectares	Reduced susceptibility of 20% Tourism Site highly exposed to Flooding	Reduced susceptibility of 40% Tourism Site highly exposed to Flooding
		Very High	Lifeline	115	Kilometers	30% of lifelines protected from flooding	50% of lifelines protected from flooding
		High	Lifeline	2899	Kilometers	20% of landslide prone lifelines protected from flooding	40% of landslide prone lifelines protected from flooding
		High	Critical Facilities - Elementary	1	Facility	Reduced susceptibility of 20% Elementary schools highly exposed to Flooding	Reduced susceptibility of 40% Elementary schools highly exposed to Flooding
		High	Urban Use - Agri-Industrial	1	Hectares	Reduced susceptibility of 20% Agri-industrial highly exposed to Flooding	Reduced susceptibility of 40% Agri-industrial highly exposed to Flooding
		High	Urban Use - Commercial	1	Hectares	Reduced susceptibility of 20% commercial highly exposed to Flooding	Reduced susceptibility of 40% commercial highly exposed to Flooding
		High	Urban Use - Institutional	1	Hectares	Reduced susceptibility of 20% institutional highly exposed to Flooding	Reduced susceptibility of 40% institutional highly exposed to Flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Urban Use - Parks	1	Hectares	Reduced susceptibility of 20% Parks highly exposed to Flooding	Reduced susceptibility of 40% Parks highly exposed to Flooding
		High	Urban Use - Residential	8	Hectares	Reduced susceptibility of 20% Residential highly exposed to Flooding	Reduced susceptibility of 40% Residential highly exposed to Flooding
		Very High	Urban Use - Residential	1	Hectares	Reduced susceptibility of 20% Residential very highly exposed to Flooding	Reduced susceptibility of 40% Residential very highly exposed to Flooding
		Tourism	Urban Use	8	Hectares	Reduced susceptibility of 20% Tourism Site highly exposed to Flooding	Reduced susceptibility of 40% Tourism Site highly exposed to Flooding
		Very High	Natural Resources - Production Agriculture	111	Hectares	Reduced susceptibility of 30% Production agriculture very highly exposed to Flooding	Reduced susceptibility of 50% Production agriculture very highly exposed to Flooding
		High	Natural Resources - Production Agriculture	3666	Hectares	Reduced susceptibility of 20% Production agriculture highly exposed to Flooding	Reduced susceptibility of 40% Production agriculture highly exposed to Flooding
		Very High	Natural Resources - Production Forest	1	Hectares	Reduced susceptibility of 30% Production Forest very highly exposed to Flooding	Reduced susceptibility of 50% Production Forest very highly exposed to Flooding
		High	Natural Resources - Production Forest	898	Hectares	Reduced susceptibility of 20% Production Forest highly exposed to Flooding	Reduced susceptibility of 40% Production Forest highly exposed to Flooding
		High	Lifeline - City Road	535	Kilometers	Reduced susceptibility of 20% City Road highly exposed to Flooding	Reduced susceptibility of 40% City Road highly exposed to Flooding
		High	Urban Use - Agri-Industrial	1	hectares	Reduced susceptibility of 20% Agri-Industrial highly exposed to Flooding	Reduced susceptibility of 40% Agri-Industrial highly exposed to Flooding
		High	Urban Use - Residential	1	hectares	Reduced susceptibility of 20% Residential highly exposed to Flooding	Reduced susceptibility of 40% Residential highly exposed to Flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Natural Resources - Production Agriculture	41		Reduced susceptibility of 20% Production Agriculture highly exposed to Flooding	Reduced susceptibility of 40% Production Agriculture highly exposed to Flooding
Sto. Tomas	flood	VH	Population	414	person	20% of population very highly exposed to Flooding safe from the impact of the same hazard	40% of population very highly exposed to Flooding safe from the impact of the same hazard
			Natural Resources (Production Agriculture)	716	hectares	Reduced susceptibility of 30% Production agriculture very highly exposed to Flooding	Reduced susceptibility of 50% Production agriculture very highly exposed to Flooding
		High	Natural Resources (Production Agriculture)	2893	hectares	Reduced susceptibility of 20% Production agriculture highly exposed to Flooding	Reduced susceptibility of 40% Production agriculture highly exposed to Flooding
		High	Natural Resources (Production forest)	1	hectares	Reduced susceptibility of 20% Production Forest highly exposed to Flooding	Reduced susceptibility of 40% Production Forest highly exposed to Flooding
		Very High	Urban Areas (Agri-Industrial)	1	hectares	Reduced susceptibility of 30% Agri industrial very highly exposed to Flooding	Reduced susceptibility of 50% Agri industrial very highly exposed to Flooding
		High	Urban Areas (Agri-Industrial)	84	hectares	Reduced susceptibility of 20% Agri industrial highly exposed to Flooding	Reduced susceptibility of 40% Agri industrial highly exposed to Flooding
		High	Urban Areas (Airstrip)	33	hectares	Reduced susceptibility of 20% Airstrip highly exposed to Flooding	Reduced susceptibility of 40% Airstrip highly exposed to Flooding
		Very High	Urban Areas (Cemetery)	1	hectares	Reduced susceptibility of 30% cemetery very highly exposed to Flooding	Reduced susceptibility of 50% cemetery very highly exposed to Flooding
		High	Urban Areas (Cemetery)	3	hectares	Reduced susceptibility of 20% cemetery highly exposed to Flooding	Reduced susceptibility of 40% cemetery highly exposed to Flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Urban Areas (Commercial)	1	hectares	Reduced susceptibility of 20% Commercial highly exposed to Flooding	Reduced susceptibility of 40% Commercial highly exposed to Flooding
		High	Urban Areas (Industrial)	2	hectares	Reduced susceptibility of 20% Industrial highly exposed to Flooding	Reduced susceptibility of 40% Industrial highly exposed to Flooding
		Very High	Urban Areas (Institutional)	3	hectares	Reduced susceptibility of 30% Institutional very highly exposed to Flooding	Reduced susceptibility of 50% Institutional very highly exposed to Flooding
		High	Urban Areas (Institutional)	20	hectares	Reduced susceptibility of 20% Institutional highly exposed to Flooding	Reduced susceptibility of 40% Institutional highly exposed to Flooding
		Very High	Urban Areas (Parks)	1	hectares	Reduced susceptibility of 30% Parks very highly exposed to Flooding	Reduced susceptibility of 50% Parks very highly exposed to Flooding
		High	Urban Areas (Parks)	2	hectares	Reduced susceptibility of 20% Parks highly exposed to Flooding	Reduced susceptibility of 40% Parks highly exposed to Flooding
		Very High	Urban Areas (Residential)	18	hectares	Reduced susceptibility of 30% Residential very highly exposed to Flooding	Reduced susceptibility of 50% Residential very highly exposed to Flooding
		High	Urban Areas (Residential)	378	hectares	Reduced susceptibility of 20% Residential highly exposed to Flooding	Reduced susceptibility of 40% Residential highly exposed to Flooding
		High	Urban Areas (Tourism Site)	1	hectares	Reduced susceptibility of 20% Tourism highly exposed to Flooding	Reduced susceptibility of 40% Tourism highly exposed to Flooding
		Very High	Lifeline(National Roads)	124	Kilometers	Reduced susceptibility of 30% National roads very highly exposed to Flooding	Reduced susceptibility of 50% National roads very highly exposed to Flooding
		High	Lifeline(National Roads)	3007	Kilometers	Reduced susceptibility of 20% National roads highly exposed to Flooding	Reduced susceptibility of 40% National roads highly exposed to Flooding
		Very High	Lifeline(Provincial Roads)	7487	Kilometers	Reduced susceptibility of 30% Provincial Roads very highly exposed to Flooding	Reduced susceptibility of 50% Provincial Roads very highly exposed to Flooding
		High	Lifeline(Provincial Roads)	18280	Kilometers	Reduced susceptibility of 20% Provincial Roads highly exposed to Flooding	Reduced susceptibility of 40% Provincial Roads highly exposed to Flooding

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Lifeline( <b>Water Facility</b> )	125	Kilometers	Reduced susceptibility of 20% Water Facility highly exposed to Flooding	Reduced susceptibility of 40% Water Facility highly exposed to Flooding
		Very High	Critical Points ( <b>Elementary</b> )	1	Facilities	Reduced susceptibility of 30% Elementary School very highly exposed to Flooding	Reduced susceptibility of 50% Elementary School very highly exposed to Flooding
		High	Critical Points ( <b>Elementary</b> )	2	Facilities	Reduced susceptibility of 20% Elementary School very highly exposed to Flooding	Reduced susceptibility of 40% Elementary School very highly exposed to Flooding
		Very High	Critical Points ( <b>Highschool</b> )	1	Facilities	Reduced susceptibility of 30% High School School very highly exposed to Flooding	Reduced susceptibility of 50% High School School very highly exposed to Flooding
		High	Critical Points ( <b>Highschool</b> )	1	Facilities	Reduced susceptibility of 20% High School School highly exposed to Flooding	Reduced susceptibility of 40% High School School highly exposed to Flooding
		High	Critical Points ( <b>Integrated</b> )	1	Facilities	Reduced susceptibility of 20% Integrated School School highly exposed to Flooding	Reduced susceptibility of 40% Integrated School School highly exposed to Flooding
	<b>Landslide</b>	Very High	Natural Resources (Production Agriculture)	2	hectares	Reduced susceptibility of 30% Production agriculture very highly exposed to Landslide	Reduced susceptibility of 50% Production agriculture very highly exposed to Landslide
		High	Natural Resources (Production Agriculture)	400	hectares	Reduced susceptibility of 20% Production agriculture highly exposed to Landslide	Reduced susceptibility of 40% Production agriculture highly exposed to Landslide
		High	Natural Resources (Production Forest)	37	hectares	Reduced susceptibility of 20% Production Forest highly exposed to Landslide	Reduced susceptibility of 40% Production Forest highly exposed to Landslide
		High	Urban Areas ( <b>Agri-Industrial</b> )	1	hectares	Reduced susceptibility of 20% Agri-Industrial highly exposed to Landslide	Reduced susceptibility of 40% Agri-Industrial highly exposed to Landslide

Areas Affected	Hazard	Susceptibility (high, medium, low)	Elements at Risk	Number of Elements at Risk exposed to Hazard	Unit of the Number of Elements at Risk	DRRM Targets	
						Short-Term Target (2024-2025)	Medium Term Target (2026-2028)
		High	Urban Areas (Cemetery)	16	hectares	Reduced susceptibility of 20% Cemetery highly exposed to Landslide	Reduced susceptibility of 40% Cemetery highly exposed to Landslide
		High	Urban Areas (Institution)	1	hectares	Reduced susceptibility of 20% Institution highly exposed to Landslide	Reduced susceptibility of 40% Institution highly exposed to Landslide
		High	Urban Areas (Parks)	1	hectares	Reduced susceptibility of 20% Parks highly exposed to Landslide	Reduced susceptibility of 40% Parks highly exposed to Landslide
		High	Urban Areas (Residential)	14	hectares	Reduced susceptibility of 20% Residential highly exposed to Landslide	Reduced susceptibility of 40% Residential highly exposed to Landslide
		High	Lifeline(Provincial Roads)	6263	Kilometers	Reduced susceptibility of 20% Provincial Roads highly exposed to Landslide	Reduced susceptibility of 40% Provincial Roads highly exposed to Landslide
		High	Lifeline(Water Facility)	5	Kilometers	Reduced susceptibility of 20% Water Facility highly exposed to Landslide	Reduced susceptibility of 40% Water Facility highly exposed to Landslide
		High	Population	497	person	20% of population highly exposed to Landslide safe from the impact of the same hazard	40% of population highly exposed to Landslide safe from the impact of the same hazard

**PROGRAMS, PROJECTS AND ACTIVITIES (PPAs)**

**Disaster Prevention and Mitigation**

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Flood, Landslide	Relocation of identified exposed families to flood hazard	100 families relocated (B.E. Dujali, Carmen, New Corella, Talaingod)	PDRRMO, PSWDO, HOUSING DIVISION-PADO, PEO, PENRO	DHSUD, NHA	✓				
Flood	De-siltation /excavation of rivers and creeks	2,160 Ln. m. desilted in the first year 1000 In. m. desilted in the second year 1,000 In.m. in the preceeding years until the fifth year	PEO/PAGRO	DPWH				✓	
Flood	Improvement of roads, drainage and canals in Asuncion, New Corella, Carmen, Dujali	400 In.m. drainages constructed second year 400 linear meter in the third year and in the fourth year	PEO	DPWH		✓	✓	✓	

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Flood	Revetment of dikes and slope protection in Sto. Tomas, Kapalong, San Isidro, Carmen	2 dikes construction (100m and 150m)	PEO	DPWH				✓	
Flood	Tagum-Libuganon Watershed Management Program	No. of watershed activity conducted	PENRO	DENR			✓		
Flood	Installation of Long Range Flood Monitoring Camera	6 stations of Flood Monitoring Camera installed	PDRRMO	LGU	✓				
Flood	Installation of Emergency Mass Warning Siren	6 stations emergency mass warning siren installed	PDRRMO	LGU	✓				
Flood, Tsunami, Storm Surge	Installation of Warning Signages	50 units of installed warning signages	PDRRMO	LGU	✓				
Flood	Installation of Flood Staff Gauges	50 units of installed staff gauges	PDRRMO	LGU	✓				
Flood	Purchase of River Cross-section Survey Equipment (RTK) 2.5	3 units of River Cross-section Survey Equipment (RTK) purchased	PDRRMD-EWS		✓				
Earthquake	Installation of warning signages	50 units of installed signages	PDRRMO	LGU & DepEd	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Hydro-meteorological and Geological Hazard	Maintenance and Monitoring of Early Warning System, Equipment, Facilities and Management Services	100% of the monitoring equipment maintained and repaired	PDRRMO		✓				
Flood	Riverbank Rehabilitation	No of sites (meters at strips) of riverbank planted with forest trees	PENRO-LGU	DENR, City/Municipal ENRO			✓		
Flood Rain Induced Landslide	Promotion of climate smart agriculture	No. of training conducted on climate smart agriculture  No. of hectares planted with flood tolerance varieties	PAGRO	DA, PhilRice, BPI			✓		
All Hazard	Installation of "Batingaw" as emergency warning	250 units of installed Batingaw	PDRRMO	LGU & DepEd	✓				
All Hazard	Installation of Alarm Sirens in Provincial Offices with Public Address	250 units of alarm siren with Public Address installed at identified offices	PDRRMO		✓				
Landslide	Construction of Slope Protection	No. of slope protection constructed (Talaingod, Kapalong, San Isidro)	PEO	DPWH			✓	✓	
All Hazard	Installation of Warning Signages	50 units of warning signages	PDRRMO	LGU	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Landslide	Promotion and Implementation of Sloping Agricultural land Technology (SALT) and Agro-forestry system	No. of hectare demonstration farm established	PAGRO	DA, SUC		✓			
Storm Surge/Tsunami	Coastal Management	No. of Hectares of Mangrove Site enriched/rehabilitated (planted with No. of mangrove seedlings)	PENRO-LGU	DENR, City/Municipal ENRO			✓		
Storm Surge/Tsunami	Installation of Storm Surge Monitoring Camera	6 stations of monitoring camera installed	PDRRMO	LGU	✓				
All Hazard	Installation of Warning Signages	50 units installed warning signages	PDRRMO	LGU	✓				
Climate Change, Landslides and Earthquake	Upland Rehabilitation	No. of hectares of open/denuded areas planted with No. of forest trees	PENRO-LGU	DENR, City/Municipal ENRO, Tribal Leaders			✓		

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Climate Change related Hazards (Increase in Temperature, Precipitation, Extreme weather events)	Enhancement of Local Climate Change Action Plan - Greenhouse Gas (GHG) Inventory	3 LGUs assisted in the conduct of Greenhouse Gas (GHG) Inventory - community level for integration to the enhanced LCCAP	PENRO-LGU	Climate Change Commission			✓		
Climate Change related Hazards (Increase in Temperature, Precipitation, Extreme weather events)	Development of Green or Renewable Energy Utilization within the Provincial Government Center		PEO				✓		
	Establishment of Tree Nursery	No. of Tree Nursery Constructed	PENRO, PEO				✓		

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Earthquake	Purchase of high-end computer desktop for REDAS monitoring & data processing (2/yr)150k	3 units of high-end computer desktop for REDAS monitoring & data processing purchased	PDRRMD-EWS						✓
All Hazard	Facilitate formulation of Provincial Ordinance for Preemptive Evacuation	1 Ordinance crafted and adopted by the Sangguniang Panlalawigan	PDRRMD, PNP, AFP, BFP, LGU, M/CDRRMO, PSWDO, PHO, PEO						✓
All Hazard	Facilitate crafting DavNor Emergency and Disaster Hotline Dispatch Ordinance	1 Ordinance crafted and approved by the Sangguniang Panlalawigan	P/C/MDRRMO						✓
All Hazards including EREID	Conduct Quarterly Health Consultative meeting on Health Programs - Nutrition in Emergency -Disaster Risk Reduction Management for Health - Epidemiology and Surveillance -Dengue program -HIV-AIDS -TB coordinating council	4 meetings	PHO, C/MHO	DOH			✓		
All Hazards including EREID	Conduct health services on preventive and control of disease-related morbidities (communicable disease) TB Leprosy HIV/AIDS	No. of actual client catered and increase 10 % yearly as increment for 5 years	PHO/ PEEDO Hospital	DOH,C/MHO	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
	Conduct health services on preventive and control of non- communicable diseases Hypertension Diabetes Mellitus	No. of actual client catered and increase 10 % yearly as increment for 5 years	PHO/ PEEDO Hospital	DOH,C/MHO	✓				
	Conduct health services on preventive and control of vaccine preventable disease	No. of actual client catered and increase 10 % yearly as increment for 5 years	PHO/ PEEDO Hospital	DOH,C/MHO	✓				
	Conduct bi-annual program implementation review of LDRRM-H system and other health contingency plans -Nutrition in Emergency -DRRM-H - Epidemiology and Surveillance -Pubic Health in emergency and Disaster	2 PIR conducted	PHO,PEEDO HOSPITALS	DOH,C/MHO	✓				
	Revisiting of policies on LDRRM-H system	No. of health policies revisited	PHO,PEEDO HOSPITALS	DOH,C/MHO	✓				
	Formulation of Health Risk Communication Plan	No. of health risk communication develop	PHO,PEEDO HOSPITALS	DOH,C/MHO	✓				
	Develop coordination network and partnership among government agencies ,NGO, CSO , and other stakeholders	No. of approved commitments and agreements.	PHO,PEEDO HOSPITALS	DOH,C/MHO	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
	Hiring of health personnel to conduct Province wide DRRM-H for monitoring and disease surveillance	8 No. of Hired personnel	PHO	DOH,C/MHO	✓				
	Conduct of MESUs/ CESUs/ HESUs Functionality Assessment	100% Conducted Functionality assessment	PHO,C/MHO	DOH,HEMB	✓				
	Conduct of Retrospective Review on notifiable diseases in MESUs/ CESUs/ HESUs	100% Conducted of retrospective review on notifiable diseases.	PHO,C/MHO	DOH,HEMB	✓				
	Transport of specimen sample for examination and disease confirmation	No. of specimen examined	PHO,PEEDO HOSPITALS	DOH,C/MHO	✓				
	Conduct Nutritional intervention to the identified vulnerable eligible population	No. of identified vulnerable eligible population for nutrition	PHO,PEEDO HOSPITALS	DOH,RNC,C/MHO	✓				
	Conduct family profiling and identification vulnerable population for health (Health data banking program - PHIMS)	No. of family profile and identified	PHO,PEEDO HOSPITALS	DOH,C/MHO	✓				
	Procurement of dedicated vehicle for DRRM-H and Provincial Epidemiologic Disease Surveillance Unit	1 unit vehicle	PHO,PEEDO HOSPITALS	DOH,C/MHO	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
EREID	Conduct STI/HIV program awareness campaign	60 identified participants	PHO,C/MHO	DOH,HEMB	✓				
EREID	Procure logistics for STI and HIV prevention	15374 No. of affected population	PHO,C/MHO	DOH,PSFI, ALAGAD MINDANAO, TAHAS	✓				
EREID	Procure medicine for treatment and management of Sexually Transmitted infections and prophylaxis for Opportunistic Infections	15374 No. of affected population	PHO,C/MHO	DOH,PSFI, ALAGAD MINDANAO, TAHAS	✓				
All Hazard	Purchase of Emergency Back-up Power Supply 3KVA( 1 st and 4th yr.)250k	3 units of Emergency Back-up Power Supply 3KVA purchased	PDRRMD-EWS						✓
Armed Conflict/Terrorism	Conduct Enhanced Managing Police Operation (EMPO)	Weekly and Monthly (R-EMPO)	PRO, RMFB, PPO, DNPMFCs, CPS/MPS		✓				
Armed Conflict/Terrorism	Conduct of Operational and Tactical Situation Awareness	Weekly/Monthly	PPO, DNPMFCs, CPS/MPS, EOD/K9		✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Armed Conflict/Terrorism	Conduct Coordinating Meeting with AFP	Monthly and Quarterly	PPO, DNPMFCs, CPS/MPS		✓				✓
Banana Fusarium Wilt	Research on Banana Fusarium Wilt Management	No. of research conducted	PAGRO	DA, BPI		✓			
Biological Hazard	Establishment of demonstration farm showcasing fusarium wilt management	No. of hectare of demonstration farm	PAGRO	DA, BPI		✓			
Drought	Provision of irrigation facilities	No. of irrigation facilities	PAGRO	DA, PhilMech, NIA				✓	
Drought, El Niño	Provision of drought tolerant varieties	No. of hectares planted with drought tolerant varieties	PAGRO	DA, PHIRice		✓			
Agricultural Pollution	Promotion of organic agriculture	No. of bio-control agent	PAGRO	DA			✓		
Biological Hazard	Border Control Strict Veterinary Checkpoints Measures Implemented.	Eight key point of entry established in Panabo City, Mun. of Sto.Tomas, Mun. of Talaingod, San Miguel, Pagsabangan, Apokon, Madaum and Magdum (All of Tagum City).	PVO	DA		✓			
Biological Hazard	Banning of Imported & Local Pork Products from infected areas.	Identified areas by the Bureau of Animal Quarantine (DA)	PVO	BUREAU OF ANIMAL INDUSTRY		✓			

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Biological Hazard	Recall of pork & pork products manufactured after disease outbreak (local & imported).	Inspected Market and Supermarket Outlets	PVO	BUREAU OF ANIMAL INDUSTRY		✓			
Biological Hazard	Disease Monitoring/ Progression Movement & Spread from Affected Areas.	Daily monitoring of disease incidence in affected areas	PVO	BUREAU OF ANIMAL INDUSTRY		✓			
Biological Hazard	Animal Health Care and Disease management	Veterinary Drugs and Medicines procured to prevent spread of ASF	PVO	BUREAU OF ANIMAL INDUSTRY		✓			
Biological Hazard	Intensification of inspections of passenger luggage in seaports	Mitigated spread of ASF, AIV	PVO		✓	✓			
Biological Hazard	Information Education Campaign	Awareness of Men, Women, Elderly and Children on Biological Hazards to animals	PVO		✓				
Biological Hazard	Orientation on Proper Biosecurity Measures	Awareness of Men, Women, Elderly and Children in the community on Biological Hazards to animals	PVO		✓				
Biological Hazard	Disease Monitoring/Progress Movement and Spread from affected Areas	Prevented entry of infected meat/animals and spread of disease	PVO		✓	✓			

## Disaster Preparedness

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Flood, Earthquake, Landslide, Terrorism, EREID, Biological Hazard, Fire	Updating of Provincial DRRM Plan	1 Provincial DRRM Plan Updated	PDRRMC						✓
All Hazard	Updating of standard manual of operations of Operation Center	1 standard manual of operation for Operation Center updated							✓
All Hazard	Provision for insurance of responders	100% Responders were provided with accident insurance policy	PDRRMD						✓
All Hazard	Stockpiling of Food and Non Food Items	100% of Food and Non-Food Items are prepositioned	PSWDO	DSWD	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Viability Assessment of Evacuation Centers	100% Evacuation Centers assessed	PDRRMO, PSWDO	DSWD				✓	
All Hazard	Capacity building of PDRRMC Technical Working Group on DRRM Budgeting Processes	40 members of the PDRRMC Technical Working Group capacitated on DRRM budgeting process	PDRRMD, PBO						✓
All Hazard	Capacity building of PDRRMC Member agencies on various DRRM Trainings	53 PDRRMC Member Agencies capacitated on Exercise Design Course, Emergency Operation Center, ICS Executive Course, Response Cluster Approach	PDRRMD	OCD XI					✓
All Hazard	Provision of technical assistance to LGUs for their compliance in the LDRRM Council/Office Assessment	11 LGUs assisted provided with technical assistance	PDRRMD	OCD XI					✓
All Hazard	Maintain a directory of key actors and stakeholders (e.g. Humanitarian Assistance Actors)	1 directory of key actors and stakeholders maintained	PDRRMD						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Maintain a central data information system to manage and harmonize non-sensitive information from all stakeholders and develop mechanisms to cascade the system to the C/M/BDRRMO	1 central data information system managed 11 LGUs adapted to the information system	PDRRMD						✓
All Hazard	Update existing agreements with DRRM Actors and Support Agencies	MOA with DRRM Actors and suppliers updated	PDRRMD, PSWDO, PHO, PAGRO, PEO						✓
All Hazard	Conduct capacity building on warehouse management	225 personnel increased capacity on warehouse management for 5 years	PSWDO, MSWDO	DSWD					✓
All Hazard	Prepositioning of tools, equipment and accessories for Search Rescue and Retrieval	100% of tools, equipment and accessories prepositioned	PDRRMD						✓
All Hazard	Facilitate membership of farmers to the insurance protection program of Philippine Crop Insurance Corporation	80% farmers enrolled in the insurance program of PCIC	PAGRO		✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Stockpiling of planting materials	100% planting materials stockpiled (rice, corn, vegetables)	PAGRO	DA		✓			
All Hazard	Stockpiling of Forage and Pasture Materials (Feeds)	100% of animal feeds are stockpiled and prepositioned	PVO	DA		✓			
All Hazard	Provision of training for children on emergency relief and management act to ECCD workers	225 trained ECCD workers increased capacity and knowledge on Children On Emergency Relief and Management Act for 5 years	PSWDO						✓
All Hazard	Capacitate service providers on Mental Health and Psychosocial Support Training	225 personnel of PSWDO trained on Mental Health Psychosocial Support Services for 5 years	PSWDO	DOH					✓
All Hazard	Conduct Training on Camp Coordination and Camp Management Training to the LGUs	225 personnel from LGUS trained on Camp Coordination and Camp Management	PSWDO	DSWD	✓				✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector					
					(Checklist)					
					Social	Economic	Environment	Infra	Institutional	
All Hazard	Conduct Training on Women and Child Friendly Space Training to the LGUs	225 personnel of LGUs increased capacity on Women and Child Friendly Space for 3 years	PSWDO	DSWD	✓					
All Hazard	Conduct of Basic Life Support Training to LCPC Child Representatives	225 LCPC child representatives are trained on Basic Life Support for 3 years	PSWDO		✓					
All Hazard	Conduct Trauma Informed Care During Disaster and Emergency Situations Training to LGU service providers and partner stakeholders	225 personnel of LGUs and partner stakeholders trained on Trauma Informed Care during disasters and emergency situation trainings	PSWDO		✓					✓
All Hazard	Mainstreaming DRRM-CCA in educational system through School-based prevention Education on Early warning before Disaster (SPEED Advocacy)	2,500 of participants from schools attended SPEED Advocacy Programs for 5 years	PDRRMD	DEPED	✓					
All Hazard	Training on Saktong Impormasyon Tabang panahon sa Emerhensiya (SITE Advocacy) for communities	2,500 of participants from communities attended SITE Orientation for 5 years	PDRRMD	LGUs	✓					

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Training on Standard First Aid	100 trained personnel increased capacity on Standard First Aid	PDRRMD						✓
All Hazard	Training Rescue Vehicle Maintenance & Operation	100 trained personnel increased capacity on Rescue Vehicle Maintenance & Operation	PDRRMD						✓
All Hazard	Training on Basic Life Support & Cardiopulmonary Resuscitation	100 trained personnel increased on Basic Life Support & Cardiopulmonary Resuscitation	PDRRMD						✓
All Hazard	Training on Emergency Medical Dispatch	50 trained personnel on Emergency Medical Dispatch	PDRRMD						✓
All Hazard	Training on Dispatch Protocol Implementation Management	50 personnel attended Dispatch Protocol Management	PDRRMD						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Training on Proper Call handling for emergency call incidents	50 trained personnel on Proper Call handling	PDRRMD	CENTRAL 911					✓
All Hazard	Training on Communication Hub/Call Center Management	50 trained personnel on Communication Center Management	PDRRMD	IT					✓
All Hazard	Training on Proper Dispatching Emergency and Disaster Calls	50 trained personnel on Communication Center Management	PDRRMD	PNP, CENTRAL 911					✓
All Hazard	Training on Patient Referral System for Emergency Telecommunicators	50 trained personnel on Patient Referral System	PDRRMD	DRMC					✓
All Hazard	Annual Psychological First Aid for Emergency Telecommunicators	150 personnel participated Psychological First Aid	PDRRMD	PHO, DEPED					✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	DavNor 911 Emergency Hotline Awareness Campaign	2,500 participants from communities attended Emergency Hotline Awareness Campaign	PDRRMD	DEPED, LGUs	✓				
All Hazard	Enhancement of DavNor 911 Operating System	100% DavNor 911 Operating System enhanced	PDRRMD	IT					✓
All Hazard	Improvement of DavNor 911 Call Center Office	100% improvement of Davnor 911 Call Center Office	PDRRMO				✓		
All Hazard	Training on Rescue Medical Emergency Vehicle Operations	100 trained personnel on Rescue Medical Emergency Vehicle Operations	PDRRMO						✓
All Hazard	Procurement of Emergency Medical Vehicle	3 units of procured Emergency Medical Vehicle	PDRRMO						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Procurement of All-Weather Rescue Drone	1 set of procured All-Weather Rescue Drone	PDRRMO						✓
All Hazard	Procurement of Rescue Equipment Cabinets	6 units of Rescue Equipment Cabinets procured	PDRRMO						✓
All Hazard	Procurement and distribution of emergency preparedness kit	No. of recipient availed	PDRRMO, PSWDO						✓
All Hazard	Training of Trainers on Standard First Aid for LGUs and stakeholders	100 personnel trained on Standard First Aid	PDRRMO						✓
All Hazard	Training on Medical First Responder for LGUs and stakeholders	100 personnel trained on Medical First Responder	PDRRMO						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Training on Rescue Emergency Vehicle Operation LGUs and stakeholders	100 personnel trained on Rescue Emergency Vehicle Operation	PDRRMO						✓
All Hazard	Enhancement training on Early Warning System	200 personnel trained on Rescue Emergency Vehicle Operation	PDRRMD-EWS						✓
All Hazard	Enhancement training on DavNor 911 Emergency Dispatch System	150 personnel trained on DavNor 911 Emergency Dispatch System	PDRRMD-911						✓
All Hazard	Knowledge Sharing on Emergency Telecommunication to LGUs with Existing 911 Emergency Hotline	90 personnel participated on Knowledge Sharing on Emergency Telecommunication	PDRRMD-911						✓
All Hazard	Enhancement Training on Search, Rescue and Retrieval Operations	250 personnel trained on Search, Rescue and Retrieval Operations	PDRRMO						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Coordination meeting with other response agencies and stakeholders	500 participants attended the coordination meeting	PDRRMO						✓
All Hazard	Purchase of Rescue Kayak (2pcs per year)	10 Rescue Kayak purchased	PDRRMO						✓
All Hazard	Purchase of Rescue Speedboat	4 Rescue Kayak purchased	PDRRMO						✓
All Hazard	Purchase of Rescue Jetski	4 Rescue Jetski purchased	PDRRMO						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
Flooding	Update Contingency Plan for Flooding	1 Updated Contingency Plan for flooding	PDRRMO						✓
Flooding	Conduct of Family/Community Flood drills with ICS simulation; Conduct of scenario-based testing and drill for Flood	375 Families actively participated on the conduct of community/family drill for 5 years; 11 municipalities supported in the conduct of flood drill	PDRRMO, PSWDO, MDRRMO, MSWDO, PICKMO,	OCD XI, DSWD	✓				✓
Flooding	Conduct of Flood drills to Vulnerable sectors with ICS simulation (PWD,elderly, children, women, public and private sectors)	375 PWD, IP, Elderly, Women, Men, Children, public and private sectors participated on the conduct of the flood drill for 5 years	PDRRMO, PSWDO, MDRRMO, MSWDO, PICKMO,	OCD XI, DSWD	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
Flooding	Conduct Training for BDRRM personnel on WASAR	No. of Barangay Responders participated on the conduct of WASAR training	PDRRMO, BFP, BDRRMC, MDRRMO	DPWH	✓			✓	
Flooding	Production of updated and localized IEC materials for flood hazard	No. of IEC materials produced distributed to	PDRRMO, PICKMO		✓				
Flooding	Dissemination of updated Flood Hazard maps result to the local government unit	11 LGUs received updated result of Flood hazard maps	PDRRMO, PPDO						✓
Flooding	Training on Swift Water Rescue for LGUs & Stakeholders	100 trained personnel increased capacity on Swift Water Rescue	PDRRMO						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
Flooding	Training on Water Search & Rescue for LGUs & Stakeholders	100 trained personnel increased capacity on Water Search & Rescue	PDRRMO						✓
Flooding	Training on Flood Monitoring & Forecasting for LGUs & Stakeholders	100 trained personnel from 11 LGUs and Stakeholders on Flood Monitoring & Forecasting	PDRRMO						✓
Flooding	Procurement of Rubber Boat Outdoor Motor 40HP	3 units of Rubber Boat Outdoor Motor 40HP procured	PDRRMO						✓
Flooding	Procurement of Stainless Rubber Boat Trailer with hydraulic mechanism	4 units of Rubber Boat Trailer with hydraulic mechanism procured	PDRRMO						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Flooding	Procurement of Rubber Boat Outdoor Motor Stainless Carrier Stand	Boat Outdoor Motor Stainless Carrier Stand procured	PDRRMO						✓
Emerging and Re-emerging Infectious Disease	Capability building development on LDRRM-H System Program	No. of trained personnel	PHO, PEEDO HOSPITALS and C/MHO	DOH	✓				
Emerging and Re-emerging Infectious Disease	Development of IEC materials on Emerging and Re-emerging Infectious Disease and conduct advocacies for public safety and community awareness	No. of recipient availed	PHO, PEEDO HOSPITALS and C/MHO	DOH	✓				
Earthquake	Capacity building and training for Public and Private sectors in participating in the Nationwide Simultaneous Earthquake Drill	100% of identified public and private sectors participated in the Nationwide Simultaneous Earthquake Drill	PDRRMO		✓				
Earthquake	Updating of Contingency Plan for Earthquake	1 Updated Contingency Plan for Earthquake	PDRRMO	OCD					✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Earthquake	Formulation of Disaster Response Plan on Earthquake Hazard	1 Disaster Response Plan on Earthquake Hazard	PSWDO, PDRRMO and Response Clusters						✓
Earthquake	Training on the use of Rapid Earthquake Damage Assessment System Software	100 trained personnel on GeoRisk	PDRRMO						✓
Earthquake	Procurement of Collapsed Structure Life Detector Equipment	1 set of Collapsed Structure Life Detector Equipment procured	PDRRMO						✓
Landslide	Training on Single Rope Rescue for LGUs & Stakeholders	100 trained personnel increased capacity on Single Rope Rescue	PDRRMO						✓
Landslide	Training on Mountain Search & Rescue for LGUs & Stakeholders	100 trained personnel increased capacity on Mountain Search & Rescue	PDRRMO						✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Hydrometeorological Hazards	Training on Early Warning System for LGUs & Stakeholders	100 trained personnel from LGUs and Stakeholders increased capacity on Early Warning System	PDRRMO						✓
Hydrometeorological Hazards	Training on Climatological Data Management for LGUs & Stakeholders	100 trained personnel from LGUs and Stakeholders increased capacity on Climatological Data Management for LGUs	PDRRMO						✓
Hydrometeorological Hazards	Dissemination of warning advisories and real time reporting	100% of warning advisories and real time reporting were disseminated to affected LGUs	PDRRMO		✓				✓
Fire	Conduct fire safety seminar/training	No. of communities, public and private entities trained on fire safety	PDRRMO	BFP	✓				
Fire	Community Learning on El Niño induced forest fire	No. Recipients informed	PENRO	DENR, BFP	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
Vehicular Accident	Training on Vehicular crash Extrication for LGUs & Stakeholders	100 trained personnel increased capacity on Vehicular crash Extrication	PDRRMO		✓				
African Swine Fever	Creation of Quick Response Team / Identification of team members / - Provision of PPEs & logistical supplies.	1 Quick Response Team established and members identified	PVO	BAI		✓			
African Swine Fever	Technical skills training on livestock emergency guidelines through workshops, seminars and simulation.	BLGUS trained on the mechanisms provided in the livestock emergency guidelines	PVO	BAI		✓			
African Swine Fever	Creation of ASF Council & Task Force	1 Provincial ASF Council and Task Force established	PVO	BAI		✓			
African Swine Fever	Conduct orientation for Meat inspectors & Meat Handlers.	Capacitated meat inspectors and handlers on detecting ASF infected pork	PVO	BAI		✓			

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
African Swine Fever	Identify location for the burial of dead animals	11 LGUs have identified burial sites for dead animals			✓	✓	✓		
African Swine Fever	Procurement of veterinary drugs and medicines	Specify drugs and meds procured				✓			
All Hazard	Basic Life Support Training (2days live-in)	80% of 150 HERT members trained on BLS	PHO, C/MHO	DOH-HEMB	✓				
All Hazard	Standard First Aid Training (2 Days live-in)	80% of 150 HERT members trained on SFA	PHO, C/MHO	DOH-HEMB	✓				
All Hazard	Health Emergency Response Operation (5days live-in)	20% of 150 HERT members trained on HERO	PHO, C/MHO	DOH-HEMB	✓				
All Hazard	Sub National PHEMAP (5days live-in)	20% of 150 HERT members trained on Sub National PHEMAP	PHO, C/MHO	DOH-HEMB	✓				
All Hazard	Mass Casualty Incident Management (5 days live-in)	20% of 150 HERT members trained on MCIM	PHO, C/MHO	DOH-HEMB,OCD	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Emergency Operation Center Training(3 days live -in )	20% of 150 HERT members trained on EOC	PHO, C/MHO	DOH-HEMB, OCD	✓				
All Hazard	Conduct Basic Incident Management System ICS for Health (3 days live-in)	all C/MHO , PHO and Hospitals with Total Participants of 50	PHO, C/MHO, PEEDO Hospitals	DOH-HEMB, OCD	✓				
All Hazard	Conduct Basic EPI and Cold Chain Management Training (5 days live out )	100% of 105 EPI and Cold Chain Manager to be trained	PHO, C/MHO	DOH	✓				
All Hazard	Conduct Basic EPI and Cold Chain Management Training (5 days live in )	100% of 105 EPI and Cold Chain Manager to be trained	PHO, C/MHO	DOH	✓				
All Hazard	Conduct Supportive Supervision Training	100% of 20 C/MHO Supervisors (5 days live in)	PHO, C/MHO	DOH	✓				
All Hazard	Training of Trainers on Maternal Nutrition and Infant and Young Child Feeding in Emergency (5 days live-in)	30 participants	PHO, C/MHO	DOH ,NIE	✓				
All Hazard	Training of Trainers on Nutrition in Emergency Management (5 days live-in)	30 participants	PHO, C/MHO	DOH ,NIE	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Training of Trainers on Management of Acute Malnutrition in Emergency (community HRH)(5 days live-in)	30 participants	PHO, C/MHO	DOH ,NIE	✓				
All Hazard	Training of Trainers on Management of Acute Malnutrition in Emergency (hospital personnel)(5 days live-in)	30 participants	PHO, C/MHO	DOH ,NIE	/				
All Hazard	Water Safety Plan training on City/ Municipal Health Offices (live- in)	100% of DDN CHO, MHO,coordinators	PHO, C/MHO	DOH	✓				
All Hazard	Food and waterborne outbreak investigation training (live-in)	90 % of 33 DDN Sanitation Inspectors	PHO, C/MHO	DOH	✓				
All Hazard	Food safety training course	90 % of 33 DDN Sanitation Inspectors(live-in)	PHO, C/MHO	DOH	✓				
All Hazard	MHPSS training	NO. 60 of RN,RM,RSW,MD (4 DAYS live -in)	PHO, C/MHO	DOH	✓				
All Hazard	MHGAP training (5 DAYS live -in)	NO. 60 of RN,RM,RSW,MD	PHO, C/MHO	DOH	✓				
All Hazard	Psychological first aid training (4 DAYS live-in)	NO. 60 of RN,RM,RSW,MD	PHO, C/MHO	DOH	✓				
All Hazard	Dengue Vector Surveillance Training (3 days live in )	260 Vbsi's	PHO, C/MHO	DOH	✓				
All Hazard	Refresher Course for SI's DVS ( 3 days live -in)	18 SI's	PHO, C/MHO	DOH	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Training for Dengue Spraymen ( 2 days live-in)	30 spraymen	PHO, C/MHO	DOH	✓				
All Hazard	Procurement of training materials and equipments for DRRM-H system		PHO, C/MHO	DOH	✓				
All Hazard	Adult Training Dummy Mannequin Simulators	6 items	PHO, C/MHO	DOH	/				
All Hazard	Infant CPR Mannequin Simulators	6 items	PHO, C/MHO	DOH	✓				
All Hazard	AED(Automated External Defibrillation) Device (Trainer) with remote	6 items	PHO, C/MHO	DOH	✓				
All Hazard	Pedia ambu bag BVM with carry bag	6 items	PHO, C/MHO	DOH	✓				
All Hazard	Large 1000ml ambu bag BVM / Bag Valve mask emergency resuscitation with carry bag	6 items	PHO, C/MHO	DOH	✓				
	Updating and equipping functional Health Emergency Operation center and local epidemiologic surveillance unit		PHO, C/MHO	DOH	✓				
All Hazard	Fixed and Furniture for health emergency operation center	1 glass board,2 filling cabinet , 2 long table with chair, 10 monoblock chairs, glass	PHO, C/MHO	DOH	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Communication equipment for health emergency operation center	1 tablet, 2 cellularphone, 2 sets hand radio	PHO, C/MHO	DOH	✓				
All Hazard	PC for health emergency data banking	2 PC with complete accessories , 2 printer with scanner	PHO, C/MHO	DOH	✓				
All Hazard	Capability building development on Local EREID Program on Infection Prevention Control		PHO, C/MHO	DOH	/				
	Stockpiling of Drug and Medicine health emergency commodities of th 4 clusters	100% available health emergency commodities	PHO, C/MHO	DOH	✓				
Forest Fire	Community Learning on El Niño induced forest fire	10 project sites geotagged	PENRO	DENR, BFP			✓		

## DISASTER RESPONSE

ALL HAZARD (Flood, Landslide-Human Induced, Landslide-Rain Induced, Storm Surge, Tsunami)

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Implementation of temporary livelihood and or income generating projects (i.e. food for work, cash for work)	100% disaster affected households provided with temporary livelihood	PSWDO	DOLE	✓	✓			
All Hazard	Cash for Work	100% disaster affected households provided with temporary livelihood	PSWDO		✓	✓			
All Hazard	Livelihood Assistance Grant		PSWDO						
All Hazard	Assistance grants (hot meals, BA, ESA, Domestic Items)		PSWDO		✓				
Flooding Weather System	Issue timely, accurate and reliable information, protocols and public advisories during response operations	100% of Early Alert Warning Messages disseminated to stakeholders and public, and situation report disseminated vertically and horizontally - (within the prescribe timeline/period); reflect percentage of communities/ barangays receiving the EAWM;	PDRRMO	OCD, PAG-ASA-DOST	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Activation of IMT using ICS	100% IMT activated within the timeline	P/LDRRMO	OCD, PRC					✓
Flooding	Activation of Assessment Teams (PDRA, RDANA)	100% of assessment teams activated within the timeline	P/LDRRMO	OCD, PRC, PNP, AFP, BFP	✓	✓			✓
Weather System	Conduct of PDRA	100% of incidents requiring PDRA conducted with the prescribed period	PDRRMO, PEO, PAGRO, PSWDO, PVO	PRC, PNP, AFP, BFP					✓
All Hazard	Conduct of RDANA	100% of incidents requiring RDANA conducted within the timeline	PDRRMO, PEO, PAGRO, PSWDO, PVO	PRC, PNP, AFP, BFP	✓				✓
Weather System Flooding	Conduct of pre-emptive evacuation	100% of the affected population evacuated;	P/LDRRMO, PNP, AFP	OPRC, PNP, AFP, BFP	✓				
All Hazard	Distribution of relief goods and assistance grants (ESA, BA, Domestic Items)	100% of affected families provided with relief goods within the prescribed period/ timeline	P/LSWDO, PEO, P/LDRRMO	DSWD	✓				
All Hazard	Conduct of SRR Operation	100% of families/individuals covered by SRR operation within the prescribed timeline/period	P/LDRRMO	PNP, AFP, PRC	✓				
All Hazard	Implementation of Disaster Response Plans: · Provincial Disaster Response Plan · CCCM Plan	100% of the required response cluster members participated	PSWDO, PDRRMO	DSWD, OCD					✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Activation of evacuation system/camp management, set of procedures for affected families	100% of evacuation system/camp management activated at the city/municipal level	P/LSWDO, P/LDRRMO	DSWD					✓
All Hazard	Activation/establishment of women and children friendly spaces	100% WFS and CFS established within the city/municipal level	PSWDO, PDRRMO, Dep-Ed, PEO, PHO , GAD, LSWDO	DSWD					✓
All Hazard	Provision Basic Health Services	100% Basic Health Services			✓				
All Hazard	Implementation of temporary livelihood and or income generating projects (i.e. food for work, cash for work)	100% cash for work/food for work services implemented; No. of affected population	PSWDO, PESO/EWDD	DSWD, DOLE	✓				
All Hazard	Conduct of MHPSS/PFA to affected families/individuals and responders	100% Mental Health and Psychosocial Support/Psychological First Aid services conducted	PHO, PSWDO, Dep-Ed, LSWDO	DOH, DSWD	✓				
All Hazard	Provision of augmentation support to the implementation CCCM to affected LGU	100% of the affected LGU provided with CCCM augmentation	PSWDO	DSWD					✓
All Hazard	Collection,validation,and submission health emergency and disaster reports(post mission report,field reports,final report)	No. of personnel deployed during disease outbreak and pandemic	PHO, PEEDO HOSPITALS	DOH, C/MHO					✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
Animal Disease	Mobilize Quick Response Mechanism for Animal Rescue and Management.	MLGUs to establish QRM in their respective jurisdiction.	PVO		✓				✓
	Conduct treatment of swine in outbreak zones (Identify and administer veterinary drugs and medicines to infected animals)	Infected animals treated	PVO			✓			
	Burial of infected swine		PVO		✓	✓			
	Decontamination and mandatory closure of infected farms	Affected farms disinfected and operation closed.	PVO		✓				
All Hazard	Procurement and allocation of essential health and nutrition emergency commodities (drugs, medicines and others .)	30% Of the affected population	PHO	DOH	✓				
All Hazard	Mental Health Emergency Drugs and Medicines	30% OF 1150 Mentally Ill	PHO	DOH	✓				
All Hazard	Procurement of prepositioned Breastfeeding Kits during disaster and/or emergencies	30% Of the affected population	PHO	DOH	✓				
All Hazard	Procurement of Medicines and others supplies for WASH in Emergency and disaster.	30% Of the affected population	PHO	DOH	✓				

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					Social	Economic	Environment	Infra	Institutional
Emerging and Re-emerging Infectious Disease	Procurement of Medicines and others supplies for EREID Dengue in Emergency and disaster.	30% Of the affected population	PHO	DOH	✓				
Emerging and Re-emerging Infectious Disease	Collection, validation, and submission health emergency and disaster reports (post mission report, field reports, final report and other EREID reports)	100% Collected, validated and submitted health emergency and disaster reports.	PHO	DOH	✓				
Emerging and Re-emerging Infectious Disease	Mobilization of HERT, DSO, ERID focal person during disease outbreak and pandemic.	100% Mobilization of HERT, DSO, ERID focal person during disease outbreak and pandemic.	PHO	DOH	✓				

## Disaster Rehabilitation and Recovery

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Conduct Post-Disaster Damage and Needs Assessment	100% damaged Urban Infrastructure, Critical facilities, lifelines, Natural Resources assessed	PEO, PAGRO, PVO, PSWDO, PHO, CEO, MEO, CAGRO, MAGRO, CVO, MVO, CSWDO, MSWDO, CHO, MHO, BPLO	DOLE, DTI, POWER SERVICE PROVIDER, AFP, CSO, BLGU, DEPED, DPWH, BFP	✓	✓	✓	✓	✓
All Hazard	Development and implementation of comprehensive plan for the restoration of local economic activities	Implemented necessary rehabilitation and recovery activities for the restoration of local economy	PESO, BPLO,PBO	DOLE, DTI		✓			
All Hazard	Identification and mobilization of funding resources		PBO, PACO, PTO, MBO, OMA, MTO	OCD, DILG		✓			
All Hazard	Identification of safe and secured relocation sites	Identified sites for relocation of affected population	PEO, PSWDO, PDRRMO, PPDO, MEO, MSWDO, MDRRMO	DHSUD, DILG, AFP	✓		✓		

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
All Hazard	Relocation of affected persons/households	Relocated affected families to safer sites	PSWDO, PEO, MDRRMO, PNP	AFP	✓				
All Hazard	Provide standards designs for houses or shelters	100% of houses or shelter with standard design	PEO, CEO, MEO	OCD, DILG, DPWH, BFP	✓				
All Hazard	Restored/repair Infrastructure, agricultural and social facilities & utilities following the standards of safety & resiliency	100% damaged infrastructure, agricultural and social facilities & utilities restored/repared	PEO, CEO, MEO	OCD, DILG, DPWH, BFP				✓	
All Hazard	Strengthen collaboration and partnerships with concerned institutions in the provision of psychosocial and debriefing services to affected persons	- Debriefing and psychosocial activities conducted	PHO, PSWDO, MSWD	DSWD	✓				
All Hazard	Procurement of medicine, drugs and supplies for sustainable health service to the identified affected individuals	-100% of health supplies and service procured	PHO, MHO/CHO, PEEDO (hospitals)	DOH	✓				
All Hazard	Conduct Post-Disaster Damage and Needs Assessment	- 100% of damaged Infrastructure conducted - 100 % of damaged facilities conducted - 100% of damaged houses conducted - 100% of Agricultural damaged conducted - 100% of damaged establishment conducted	PEO, MAGRO, PAGRO, MEO, MSWDO, PSWDO, MDRRMO, PDRRMO, BPLO, BLGU	DOLE, DTI, POWER SERVICE PROVIDER, AFP, CSO, DEPED, DPWH, BFP		✓	✓	✓	✓

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
	Development and implementation of comprehensive plan for the restoration of local economic activities	-100% of required recovery plan develop and implemented	PESO, BPLO,PBO	DOLE, DTI		✓			
	Identification and mobilization of funding resources	- Total cost of damage have secured funding	PBO, PACO, PTO, MBO, OMA, MTO	OCD, DILG		✓			
	Identification of safe and secured relocation sites	- 50% of identified affected household relocated	PEO, PSWDO, PDRRMO, PPDO, MEO, MSWDO, MDRRMO	DHSUD, DILG, AFP			✓		
	Designing and reconstruction of disaster-ready housing	- 100% of resilient housing constructed (target_recipient)	PEO, CEO, MEO, DPWH, BFP	OCD, DILG				✓	
	Relocation of affected persons/households	- 100% of identified for relocation household relocated	PSWDO, PEO, MDRRMO, PNP	AFP	✓				
	Re-organization of peace keeping forces	- 100% of rehabilitated damaged infrastructure	PNP, LEGAL OFFICE	AFP, BLGU, CSO	✓				
	Undertake necessary repair, rehabilitation and development of damaged public infrastructures facilities and utilities	- Debriefing and psychosocial activities conducted	PEO, CEO, MEO	OCD, DILG, DPWH, BFP				✓	

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
	Strengthen collaboration and partnerships with concerned institutions in the provision of psychosocial and debriefing services to affected persons	-100% of health supplies and service procured	PHO, MSWD		✓				
All Hazard	Procurement of medicine, drugs and supplies for sustainable health service to the identified affected individuals	- Number of recipients	PHO, MHO/CHO, PEEDO (hospitals)	DOH	✓				
Storm Surge	Conduct Post-Disaster Damage and Needs Assessment	- 100% of damaged Infrastructure conducted - 100 % of damaged facilities conducted - 100% of damaged houses conducted - 100% of Agricultural damaged conducted - 100% of damaged establishment conducted	COASTGUARD ,PEO, MAGRO, PAGRO, MEO, MSWDO, PSWDO, MDRRMO, PDRRMO, BPLO	DOLE, DTI, POWER SERVICE PROVIDER, AFP, CSO, BLGU, DEPED, DPWH, BFP, BFAR		✓	✓	✓	✓
	Development and implementation of comprehensive plan for the restoration of local economic activities	-100% of required recovery plan develop and implemented	PESO, BPLO,PBO	DOLE, DTI		✓			
	Identification and mobilization of funding resources	- Total cost of damage have secured funding	PBO, PACO, PTO, MBO, OMA, MTO	OCD, DILG		✓			
	Identification of safe and secured relocation sites	- 50% of identified affected household relocated	PEO, PSWDO, PDRRMO, PPDO, MEO,	DHSUD, DILG, AFP			✓		

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
			MSWDO, MDRRMO						
	Designing and reconstruction of disaster-ready housing	- 100% of resilient housing constructed (target_recipient)	PEO, CEO, MEO	OCD, DILG, DPWH, BFP				✓	
	Relocation of affected persons/households	- 100% of identified for relocation household relocated	PSWDO, PEO, MDRRMO, PNP	AFP	✓				
	Re-organization of peace keeping forces	- 100% of rehabilitated damaged infrastructure	PNP, LEGAL OFFICE	AFP, BLGU, CSO	✓				
	Undertake necessary repair, rehabilitation and development of damaged public infrastructures facilities and utilities	- Debriefing and psychosocial activities conducted	PEO, CEO, MEO	OCD, DILG, DPWH, BFP				✓	
	Strengthen collaboration and partnerships with concerned institutions in the provision of psychosocial and debriefing services to affected persons	-100% of health supplies and service procured	PHO, MHO, MSWD	DSWD	✓				
	Procurement of medicine, drugs and supplies for sustainable health service to the identified affected individuals	- Number of recipients	PHO, MHO/CHO, PEEDO (hospitals)	DOH	✓				
Armed Conflict	Reorganization of members of Bagani for deployment on identified armed conflict areas.	- 100% of organized individuals deployed - 100% of identified areas for deployment	PNP, AFP	AFP	✓		✓		

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
	Training of additional members of CAA for deployment on identified armed conflict areas.	- 100% of trained individuals deployed - 100% of identified areas for deployment	PNP, AFP	AFP	✓		✓		
	Regular conduct of focused military operations, intel operations and CMO Operations	- All Operations are conducted on a regular basis - 100% of checkpoints conducted - 100% of patrols conducted - 100% of intelligence and counter-intelligence operations conducted - 100% of ISA, CA, PA conducted	PNP	AFP	✓		✓		
Armed Conflict	Re-organization of peace keeping forces	-100% of Peace and Order implemented	PNP, LEGAL OFFICE	AFP, BLGU, CSO	✓				
Terrorist Attack	Reorganization of members of Bagani for deployment on identified armed conflict areas.	- 100% of organized individuals deployed - 100% of identified areas for deployment	PNP	AFP	✓		✓		
	Training of additional members of CAA for deployment on identified armed conflict areas.	- No. of trained individuals deployed - No. of identified areas for deployment	PNP	AFP	✓		✓		

Hazards	PPA Description	Output	Implementing Office	Partner Agencies	Development Sector				
					(Checklist)				
					Social	Economic	Environment	Infra	Institutional
	Regular conduct of focused military operations, intel operations and CMO Operations	- All Operations are conducted on a regular basis - 100% of checkpoints conducted - 100% of patrols conducted - 100% of intelligence and counter-intelligence operations conducted - 100% of ISA, CA, PA conducted	PNP	AFP	✓		✓		
Armed Conflict	Re-organization of peace keeping forces	-100% of Peace and Order implemented	PNP, LEGAL OFFICE	AFP, BLGU, CSO	✓				
Fire	Relief Operations Assistance	- 100% of Relief Operations Conducted - 100% of household assisted	PEO, MEO, PSWDO, PDRRMO, MDRRMO	BFP, PNP	✓		✓	✓	
Animal Diseases	Conduct Post-Disaster Damage and Needs Assessment	Standardized template on data gathering.	PVO	PDRRMO	✓	✓			
	Establishment of containment zone free ASF areas	Negative Results / 100% sentinel pigs free from ASF disease.	PVO	BAI	✓	✓			
	Dispersal program and restocking activity	List of Affected farmers and numbers of damage animals	PVO	DA Livestock	✓	✓			
Animal Disease	Capacity Development on Livestock Animal Care	Improved husbandry practices	PVO			✓	✓		
Animal Disease	Implementation of animal health program	Disease incidence reduced	PVO			✓	✓		

## Local Disaster Risk Reduction and Management Fund Investment Program (LDRRMFIP)

### Disaster Prevention and Mitigation

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																	Funding Source	2028				Funding Source
					2024				2025				2026				2027				2028						
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	Funding Source		
Talaingod	Prevention and Mitigation	Relocation of identified exposed families to flood hazard	PDRRMO, PSWDO, HOUSING DIVISION-PADO, PEO, PENRO		6.5 M (Houses) 2M (Site Dev't.																LDRRMF					LDRRMF	
Kapalong, Braulio E. Dujali, Asuncion, Carmen, New Corella	Prevention and Mitigation	Desiltation /excavation of rivers and creeks	PEO/PAGRO		3.5 M		3.5 M					3,932,600.00					4,168,556.00					LDRRMF	4,418,669.30				LDRRMF









Areas Affected	DRRM Measures Planning				LDRRM Investment Program																			2028				Funding Source
					2024				2025				2026				2027				MOOE	CO	Others					
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total				MOOE	CO	Others	Total	Funding Source
San Isidro, Kapalong, Talaingod, New Corella, Santo Tomas	Prevention and Mitigation	Upland Rehabilitation	PENRO-LGU		1M	0.00	0.00	1M	1,050,000.00	0.00	0.00	0.00	1,050,000.00	1,100,000.00	0.00	0.00	1,100,000.00	1,150,000.00	0.00	0.00	1,150,000.00		1,200,000.00	0.00	0.00	1,200,000.00	LDRRMF	
Provincewide	Prevention and Mitigation	Enhancement of Local Climate Change Action Plan - Greenhouse Gas (GHG) Inventory	PENRO-LGU		1.8M	0.00	0.00	1,800,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	LDRRMF	
Provincewide	Prevention and Mitigation	Development of Green or Renewable Energy Utilization within the PG Center	PEO																								LDRRMF	
Provincewide	Prevention and Mitigation	Establishment of Tree Nursery	PENRO	PEO	0.00	3,000,000.00	0.00	3,000,000.00	1.5M	0.00	0.00	1.5M	1.5M	0.00	0.00	1.5M	1.5M	0.00	0.00	1.5M		1.5M	0.00	0.00	1.5M	LDRRMF		
Provincewide	Prevention and Mitigation	Purchase of high-end computer desktop for REDAS monitoring & data processing (2/yr)150k	PDRRMO	PDRRMO		1.5M				1.5M																LDRRMF		

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																			Funding Source		
					2024				2025				2026				2027				2028					
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others		Total	
Provincewide	Prevention and Mitigation	Facilitate formulation of Provincial Ordinance for Preemptive Evacuation	PDRR MO	PD RR MO	500,000.00																				LDRRMF	
Provincewide	Prevention and Mitigation	Facilitate crafting of DavNor Emergency and Disaster Hotline Dispatch Ordinance	PDRR MO		500,000.00																				LDRRMF	
Provincewide	Prevention and Mitigation	Conduct Quarterly Health Consultative meeting on Health Programs - Nutrition in Emergency -Disaster Risk Reduction Management for Health - Epidemiology and Surveillance -Dengue program -HIV-AIDS -TB coordinating council	PHO, C/MHO, PEE DO HOSPITALS	DOH	660K				660K				660K				660K							660K		LDRRMF

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																				Funding Source	
					2024				2025				2026				2027				2028					Funding Source
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		
Provincewide		Conduct health services on preventive and control of disease-related morbidities (communicable disease) TB Leprosy, HIV/AIDS	PHO, C/MHO, PEE DO HOSPITALS	DOH	150 K				660 K				660 K				660K								660K	LDRRMF
Provincewide	Prevention and Mitigation	Conduct health services on preventive and control of non-communicable diseases Hypertension Diabetes Mellitus	PHO, C/MHO, PEE DO HOSPITALS	DOH	2M				2M				2M				2M								2M	LDRRMF
Provincewide	Prevention and Mitigation	Conduct health services on preventive and control of vaccine preventable disease	PHO, C/MHO, PEE DO HOSPITALS	DOH	300 K				300 K				300 K				300K								300K	LDRRMF

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																			Funding Source			
					2024				2025				2026				2027				Funding Source	2028					
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	Funding Source	MOOE	CO		Others	Total	
Provincewide	Prevention and Mitigation	Conduct bi-annual program implementation review of LDRRM-H system and other health contingency plans - Nutrition in Emergency - DRRM-H - Epidemiology and Surveillance -Public Health in emergency and Disaster	PHO, C/MHO, PEE DO HOSPITALS	DOH	350,000					350,000						350,000											LDRRMF
Provincewide	Prevention and Mitigation	Revisiting of policies on LDRRM-H system	PHO, C/MHO, PEE DO HOSPITALS	DOH	50K					50K						50K										LDRRMF	
Provincewide	Prevention and Mitigation	Formulation of Health Risk Communication Plan	PHO, C/MHO, PEE DO HOSPITALS	DOH	100K					100K						100K										LDRRMF	
Provincewide	Prevention and Mitigation	Develop coordination network and partnership among government agencies ,NGO, CSO ,	PHO, C/MHO, PEE DO HOSPITALS	DOH	50K					50K						50K										LDRRMF	

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																Funding Source				
					2024				2025				2026				2027					2028			
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total
		and other stakeholders																							
Provincewide	Prevention and Mitigation	Crafting and updating of EREID Plan	PHO, C/MHO, PEE DO HOSPITALS	DOH	250K				250K				250K				250K							250K	LDRRMF
Provincewide	Prevention and Mitigation	Hiring of health personnel to conduct Province wide DRRM-H for monitoring and disease surveillance	PHO, C/MHO, PEE DO HOSPITALS	DOH			3.1M			3.1M			3.1M						3.1M					3.1M	LDRRM
Provincewide	Prevention and Mitigation	Conduct of MESUs/ CESUs/ HESUs Functionality Assessment	PHO, C/MHO, PEE DO HOSPITALS	DOH	50K				50K																LDRRMF
Provincewide	Prevention and Mitigation	Conduct of Retrospective Review on notifiable diseases in MESUs/ CESUs/ HESUs	PHO, C/MHO, PEE DO HOSPITALS	DOH	50K				50K																LDRRMF
Provincewide	Prevention and Mitigation	Transport of specimen sample for examination and disease confirmation	PHO, C/MHO, PEE DO HOSPITALS	DOH	50K				50K																LDRRMF

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																			Funding Source	
					2024				2025				2026				2027				2028				
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others		Total
Provincewide	Prevention and Mitigation	Conduct Nutritional intervention to the identified vulnerable eligible population	PHO, C/MHO, PEE DO HOSPITALS	DOH	500K				500K																LDRRMF
Provincewide	Prevention and Mitigation	Conduct family profiling and identification vulnerable population for health (Health data banking program - PHIMS)	PHO, C/MHO, PEE DO HOSPITALS	DOH	500K				500K																LDRRMF
Provincewide	Prevention and Mitigation	Procurement of dedicated vehicle for DRRM-H and Provincial Epidemiologic Disease Surveillance Unit	PHO, C/MHO, PEE DO HOSPITALS	DOH		3M																			LDRRMF
Provincewide	Prevention and Mitigation	Improvement of PHO Warehouse for health emergency commodities and other supplies	PHO, C/MHO, PEE DO HOSPITALS	DOH	1M				1M				1M				1M								LDRRMF

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																2028				Funding Source	
					2024				2025				2026				2027									
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MOOE	CO	Others	Total	Funding Source	MOOE	CO	Others	Total	
Provincewide	Prevention and Mitigation	Conduct STI/HIV program awareness campaign	PHO, C/MHO, PEE DO HOSPITALS	DOH	60K				60K				60K				60K					60K				LDRRMF
Provincewide	Prevention and Mitigation	Procure logistics for STI and HIV prevention	PHO, C/MHO, PEE DO HOSPITALS	DOH	420K				420K				420K				420K					420K				LDRRMF
Provincewide	Prevention and Mitigation	Procure medicine for treatment and management of Sexually Transmitted infections and prophylaxis for Opportunistic Infections	PHO, C/MHO, PEE DO HOSPITALS	DOH	680K				680K				680K				680K					680K				LDRRMF
Provincewide	Prevention and Mitigation	Purchase of Emergency Back-up Power Supply 3KVA(1st and 4th yr.)250k	PDRRMO		250K																					LDRRMF
Provincewide	Prevention+B57:160 and Mitigation	Research on Banana Fusarium Wilt Management	PAGRO		TBD				TBD																	LDRRMF









Area Affected	DRRM Measures Planning				LDRRM Investment Program																						
					2024				2025				2026				2027				Funding Source	2028				Funding Source	
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total		
	Disaster Preparedness	Stockpiling of Food and Non Food Items	PSWDO	LGUs	4M				4M				4M				4M					4M					LD RRM FUND
	Disaster Preparedness	Viability Assessment of Evacuation Centers			50K																						LD RRM FUND
		Capacity building of PDRRMC Technical Working Group on DRRM Budgeting Processes	PDRRMO		50K				50K				50K				50K					50K					LD RRM FUND
		Capacity building of PDRRMC Member agencies on various DRRM Trainings	PDRRMO		90K				90K				90K				90K					90K					LD RRM FUND
		Provision of technical assistance to LGUs for their compliance in the LDRRM Council/Office	PDRRMO		110K				110K				110K				110K					110K					LD RRM FUND

Area s Affected	DRRM Measures Planning				LDRRM Investment Program																						
					2024				2025				2026				2027				Fund ing Source	2028				Fund ing Source	
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total		
		Assessment																									
		Maintain a directory of key actors and stakeholders (e.g. Humanitarian Assistance Actors)	PDRRMO	LGUs																							
		Maintain a central data information system to manage and harmonize non-sensitive information from all stakeholders and develop mechanisms to cascade the system to the C/M/BDRRMO	PDRRMO	LGUs	500K				500K				500K														

Area Affected	DRRM Measures Planning				LDRRM Investment Program																						
					2024				2025				2026				2027				Funding Source	2028				Funding Source	
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total		
	Disaster Preparedness	Conduct capacity building on warehouse management	PSWDO		225K				225K				225K				225K										
	Disaster Preparedness	Prepositioning of tools, equipment and accessories for Search Rescue and Retrieval	PDRRMO		900K	1M			900K	1M			900K	1M			900K	1M									LD RRM FUND
	Disaster Preparedness	Facilitate membership of farmers to the insurance protection program of Philippine Crop Insurance Corporation	PAGRO		TBD				TBD				TBD				TBD										LD RRM FUND
		Stockpiling of planting materials	PAGRO		2M				2M				2M				2M										LD RRM FUND

Area s Affected	DRRM Measures Planning				LDRRM Investment Program																					
					2024				2025				2026				2027				Funding Source	2028				Funding Source
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total	
	Disaster Preparedness	Stockpiling of Forage and Pasture Materials	PVO	MLGUs	150K	500K	170K	820K	150K	500K	170K	820K	150K	500K	170K	820K	150K	500K	170K	820K	LDRRMF	150K	500K	170K	820K	LDRRMF
	Disaster Preparedness	Stockpiling of Animal Feeds and Clean Water provision	PVO		3.5M			3.5M	4M			4M	4.5M			4.5M	5K			5K	PVOMOE	5.5K				PVOMOE
	Disaster Preparedness	Establishment of Provincial Veterinary checkpoints	PVO	MLGUs			6.85M	6.85M			6.85M	6.85M			10M	10M			10M	10M	LDRRMF			10M		LDRRMF
	Disaster Preparedness	Provision of training for children on emergency relief and management act to ECCD workers	PSWDO		340K				357K				374,850.00									413,272.13				LDRRMF
	Disaster Preparedness	Capacitate service providers on Mental Health and Psychosocial Support Training	PSWDO		340K				340K				340K													LDRRMF



Area s Affected	DRRM Measures Planning				LDRRM Investment Program																				Fundin g Source	
					2024				2025				2026				2027				Fundi ng Source	2028				
	Thematic Area	PPA Code and Description	Impleme nting Office	Partne r Agencies	MOO E	CO	Ot he rs	To tal	MO OE	CO	Other s	To ta l	MO OE	CO	Othe rs	Total	MOO E	CO	Oth ers	To ta l		MOO E	CO	O th ers		Total
		and partner stakeholders																								
	Disaster Preparedness	Mainstreaming DRRM-CCA in educational system through School-based prevention Education on Early warning before Disaster (SPEED Advocacy)	PDRRMO		150K				150K				150K													LD RR MF
	Disaster Preparedness	Saktong Impormasy on Tabang panahon sa Emerhensi ya (SITE Advocacy) Orientatio n for communiti es	PDRRMO		150K				150K				150K													LD RR MF
	Disaster Preparedness	Training on Standard First Aid	PDRRMO		330K								330K													LD RR MF





Area Affected	DRRM Measures Planning				LDRRM Investment Program																				
					2024				2025				2026				2027				Funding Source	2028			
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total
		Operating System																							
	Disaster Preparedness	Improvement of DavNor 911 Call Center Office	PDRRMO			3M												3M							LD RR MF
	Disaster Preparedness	Training on Rescue Medical Emergency Vehicle Operations	PDRRMO					550K									550K								LD RR MF
	Disaster Preparedness	Procurement of Emergency Medical Service Vehicle	PDRRMO			2.8M			2.8M					2.8M				3M						3M	LD RR MF
	Disaster Preparedness	Procurement of All-Weather Rescue Drone	PDRRMO			500K																			LD RR MF
	Disaster Preparedness	Procurement of Rescue Equipment Cabinets	PDRRMO			500K																			LD RR MF
	Disaster Preparedness	Procurement and distribution of emergency	PDRRMO																						LD RR MF

Area Affected	DRRM Measures Planning				LDRRM Investment Program																						
					2024				2025				2026				2027				Funding Source	2028				Funding Source	
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total		
		preparedness kit																									
	Disaster Preparedness	Training of Trainers on Standard First Aid for LGUs and stakeholders	PDRRMO		385K							385K															LD RRMF
	Disaster Preparedness	Training on Medical First Responder for LGUs and stakeholders	PDRRMO		550K							550K															LD RRMF
	Disaster Preparedness	Training on Rescue Emergency Vehicle Operation for LGUs and stakeholders	PDRRMO					550K									550K										LD RRMF
	Disaster Preparedness	Enhancement training on Early Warning System	PDRRMO		265K			265K				265K					280K										LD RRMF
	Disaster Preparedness	Enhancement training on DavNor 911	PDRRMO		235K			235K				235K					250K										LD RRMF







Area Affected	DRRM Measures Planning				LDRRM Investment Program																						
					2024				2025				2026				2027				Funding Source	2028				Funding Source	
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total		
Asuncion, Dujali, Carmen, Panabo City, Tagum City, New Corella		& Stakeholders																									
	Disaster Preparedness	Procurement of Rubber Boat Outdoor Motor 40HP	PDRRMO			2.5 M																					LDRRMF
	Disaster Preparedness	Procurement of Stainless Rubber Boat Trailer with hydraulic mechanism	PDRRMO			800K																					LDRRMF
	Disaster Preparedness	Procurement of Rubber Boat Outdoor Motor Stainless	PDRRMO		50K																						LDRRMF

Area Affected	DRRM Measures Planning				LDRRM Investment Program																				
					2024				2025				2026				2027				Funding Source	2028			
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total
		Carrier Stand																							
	Disaster Preparedness	Capability building development on LDRRM-H System Program	PHO, C/MHO		150K				150K				150K												LD RR MF
	Disaster Preparedness	Development of IEC materials on EREID and conduct advocacies for public safety and community awareness	PHO		50K				50K				50K												LD RR MF
	Disaster Preparedness	Capacity building and training for Public and Private sectors in participating in the Nationwide Simultaneous Earthquake Drill	PDRRMO		100K				100K				100K												LD RR MF





Area s Affected	DRRM Measures Planning				LDRRM Investment Program																						
					2024				2025				2026				2027				Fundin g Source	2028				Fundin g Source	
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total		
	Disaster Preparedness	Training on Vehicular crash Extrication for LGUs & Stakeholders	PDRRMO		550K												550K										
	Disaster Preparedness	Creation of Quick Response Team / Identification of team members / - Provision of PPEs & logistical supplies.	PDRRMO																								
	Disaster Preparedness	Technical skills training on livestock emergency guidelines through workshops , seminars, and simulations. (Provision of Projector)	PVO	MLGUs	100K	70K	170K	100K				100K					100K	150K			150K	LDRRM Fund	150,000.00			150,000.00	LD RRM Fund
	Disaster Preparedness	Creation of ASF Council & Task Force	PVO		100K		100K	100K				100K				100K	100K			100K	PVO GEN FUND	100K			100K	PV O GEN	



Area Affected	DRRM Measures Planning				LDRRM Investment Program																					
					2024				2025				2026				2027				Funding Source	2028				Funds Source
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total	
	Disaster Preparedness	Sub National PHEMAP (5days live-in)	PHO, C/MHO	DOH-HEMB	480K				440K				440K				440K					440K				
	Disaster Preparedness	Mass Casualty Incident Management (5 days live-in)	PHO, C/MHO	DOH-HEMB, OCD	440K				440K				440K				440K					440K				
	Disaster Preparedness	Hospital safe from Disaster( 5 days live-in)	PHO, C/MHO	DOH	440K				440K				440K				440K					440K				
	Disaster Preparedness	Emergency Operation Center Training(3 days live-in)	PHO, C/MHO	DOH-HEMB, OCD	264K								264K													
	Disaster Preparedness	Conduct Basic Incident Command System ICS (3 days live-in)	PHO, C/MHO	DOH-HEMB, OCD	440K																					
	Disaster Preparedness	Conduct Basic EPI and Cold Chain Management Training (5 days live out)	PHO, C/MHO	DOH	264K				175K				150K				150K					150K				

Area Affected	DRRM Measures Planning				LDRRM Investment Program																						
					2024				2025				2026				2027				Funding Source	2028				Funding Source	
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total		
	Disaster Preparedness	Conduct Basic EPI and Cold Chain Management Training (5 days live in)	PHO, C/MHO	DOH	288,750				567K				472K				472K										
	Disaster Preparedness	Conduct Supportive Supervision Training	PHO, C/MHO	DOH	945K				180K				180K				180K										
	Disaster Preparedness	Training of Trainers on Maternal Nutrition and Infant and Young Child Feeding in Emergency (5 days live-in)	PHO, C/MHO	DOH, NIE	375K				375K				375K				375K										
	Disaster Preparedness	Training of Trainers on Nutrition in Emergency Management (5 days live-in)	PHO, C/MHO	DOH, NIE	375K				375K				375K				375K										
	Disaster Preparedness	Training of Trainers on Management of Acute Malnutrition in Emergency	PHO, C/MHO	DOH, NIE	375K				375K				375K				375K										

Area s Affected	DRRM Measures Planning				LDRRM Investment Program																					
					2024				2025				2026				2027				Fundi ng Sourc e	2028				Fundi ng Sourc e
	Themati c Area	PPA Code and Descriptio n	Impleme nting Office	Partne r Agenci es	MOO E	CO	Ot hers	To tal	MO OE	CO	Other s	To ta l	MO OE	CO	Othe rs	Total	MOO E	CO	Oth ers	To ta l		MOO E	CO	O th ers	Total	
		(communit y HRH)(5 days live-in)																								
	Disaster Preparedn ess	Training of Trainers on Manageme nt of Acute Malnutritio n in Emergency (hospital personnel) (5 days live-in)	PHO, C/MHO	DOH ,NIE	375K				375K				375K				375K								375K	
	Disaster Preparedn ess	Water Safety Plan training on City/ Municipal Health Offices (live- in)	PHO, C/MHO	DOH	468K				468K				468K				468K								468K	
	Disaster Preparedn ess	Food and waterborn e outbreak investigatio n training (live-in)	PHO, C/MHO	DOH	168K				168K				168K				168K								168K	
	Disaster Preparedn ess	Food safety training course	PHO, C/MHO	DOH	168K				168K				168K				168K								168K	
	Disaster Preparedn ess	MHPSS training	PHO, C/MHO	DOH	576K				576K				576K				576K								576K	

Area Affected	DRRM Measures Planning				LDRRM Investment Program																				
					2024				2025				2026				2027				Funding Source	2028			
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total		MOOE	CO	Others	Total
	Disaster Preparedness	MHGAP training (5 DAYS live-in)	PHO, C/MHO	DOH	720K				720K				720K				720K					720K			
	Disaster Preparedness	Psychological first aid training (4 DAYS live-in)	PHO, C/MHO	DOH	576K				576K				576K				576K					576K			
	Disaster Preparedness	Dengue Vector Surveillance Training (3 days live-in)	PHO, C/MHO	DOH	114,400				114,400				114,400				114,400					114,400			
	Disaster Preparedness	Refresher Course for SI's DVS (3 days live-in)	PHO, C/MHO	DOH					118K																
	Disaster Preparedness	Training for Dengue Spraymen (2 days live-in)	PHO, C/MHO	DOH					132K																
	Disaster Preparedness	Procurement of training materials and equipments for DRRM-H system	PHO, C/MHO	DOH																					
	Disaster Preparedness	Adult Training Dummy Mannequin	PHO, C/MHO	DOH	100K				100K				100K				100K					100K			

Area s Affected	DRRM Measures Planning				LDRRM Investment Program																				Fundin Source	
					2024				2025				2026				2027				Fundi ng Sourc e	2028				
	Themati c Area	PPA Code and Descriptio n	Impleme nting Office	Partne r Agenci es	MOO E	CO	Oth ers	To tal	MO OE	CO	Other s	To ta l	MO OE	CO	Othe rs	Total	MOO E	CO	Oth ers	To ta l		MOO E	CO	O th ers		Total
	Disaster Preparedn ess	Infant CPR Mannequi n Simulators	PHO, C/MHO	DOH	100K				100K				100K				100K					100K				
	Disaster Preparedn ess	AED(Auto mated External Defibrillati on) Device (Trainer) with remote	PHO, C/MHO	DOH	70K				70K				70K				70K					70K				
	Disaster Preparedn ess	Pedia mbu bag BVM with carry bag	PHO, C/MHO	DOH	10K				10K				10K				10K					10K				
	Disaster Preparedn ess	Large 1000ml ambu bag BVM / Bag Valve mask emergency resuscitati on with carry bag	PHO, C/MHO	DOH	10K				10K				10K				10K					10K				
	Disaster Preparedn ess	Updating and equipping functional Health Emergency Operation Center and local epidemiolo	PHO, C/MHO	DOH																						

		gic surveillance unit																							
	Disaster Preparedness	Furniture and Fixtures for health emergency operation center	PHO, C/MHO	DOH	100K																				
	Disaster Preparedness	ICT for Health Emergency Operation	PHO, C/MHO	DOH		300K																			
	Disaster Preparedness	Capability building development on Local EREID Program on Infection Prevention Control	PHO, C/MHO	DOH	200K																				
	Disaster Preparedness	Procurement of ancillary drugs, medical & laboratory supplies and other supplies and	PHO, C/MHO	DOH	100K			100K			100K				100K										

Area Affected	DRRM Measures Planning				LDRRM Investment Program																				Funding Source
					2024				2025				2026				2027				2028				
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	
		equipment for PESU																							
	Disaster Preparedness	Procurement of drugs, medicines, medical supplies and other supplies for EREID	PHO, C/MHO	DOH	100K				100K				100K												
	Disaster Preparedness	Stockpiling of Drug and Medicine health emergency commodities of th 4 clusters	PHO, C/MHO	DOH	500K				500K				500K												

Disaster Response

Area s Affected	DRRM Measures Planning				LDRRM Investment Program																								
					2024				2025				2026				2027				2028				Total		Funding Source		
	Them atic Area	PPA Code and Description	Implem enting Office	Partn er Agencies	MO OE	CO	Other s	Tota l	MO OE	CO	Othe rs	Tota l	MO OE	CO	Other s	Total	MOOE	CO	Ot hers	Total	MO OE	CO	Ot hers	Total	MO OE	CO	Othe rs	Total	
11 LGUs	Response	Implementation of temporary livelihood and or income generating projects (i.e. food for work, cash for work)	PSW DO	DSW D, DOL E	1M		1M	1M	1.2 M			1.2 M	1.5 M			1.5M	1.7 M			1.7 M	2M			2M	7.4 M				LD RR MF
	Response	Cash for Work	PSW DO, PDR RMD	DSW D	1M			1M	1.2 M			1.2 M	1.5 M			1.5M	2M			2M	2.5 M			2.5 M	8.2 M			8.2 M	LD RR MF
	Response	Livelihood Assistance Grant	PSW DO, PDR RMD	DSW D	500 K			500 K	600 K			600 K	700 K			700K	900 K			900K	1M			1M	3.7 M			3.7 M	LD RR MF
	Response	Assistance grants (hot meals, BA, ESA, Domestic Items)	PSW DO	DSW D	1.5 M			1.5 M	1.7 M			1.7 M	1.8 M			1.7M	1.9 M			1.9 M	2M			2M	8.9 M			8.9 M	LD RR MF
11 LGUs		Activation of IMT using ICS	P/LD RRM O	OCD , PRC	500 K			500 K	500 K			500 K	500 K			500K	500 K			500K	500 K			500 K	500K			500K	LD RR MF

Area s Affec ted	DRRM Measures Planning				LDRRM Investment Program																								
					2024				2025				2026				2027				2028				Total		Funding Source		
	Them atic Area	PPA Code and Description	Imple menti ng Office	Partn er Agenc ies	MO OE	CO	Other s	Tota l	MO OE	CO	Othe rs	Tota l	MO OE	CO	Other s	Tota l	MO OE	CO	Ot he rs	Tot al	MO OE	CO	Ot h er s	Tot al	MO OE	CO	Othe rs	Tot al	
11 LGUs		Activation of Assessmen t Teams (PDRA, RDANA)	P/LD RRM O	OCD , PRC																									LD RR MF
11 LGUs		Conduct of PDRA	P/LD RRM O	OCD , PRC																								LD RR MF	
11 LGUs		Conduct of RDANA	PDR RMO , PEO, PAG RO, PSW DO, PVO	PRC, PNP, AFP, BFP	100 K		100 K	150 K			150 K	170 K			170K	290 K			29 0K	310 K			310 K					LD RR MF	
11 LGUs		Conduct of Pre- emptive evacuation	P/LD RRM O, PNP, AFP	PRC, PNP, AFP, BFP	500 K		500 K	500 K			500 K	500 K			500K	500 K			50 0K	500 K			500 K					LD RR MF	
11 LGUs		Conduct of SRR Operation	P/LD RRM O	PNP, AFP, PRC	500 K		500 K	500 K			500 K	500 K			500K	500 K			50 0K	500 K			500 K					LD RR MF	
11 LGUs		Implemen tation of Disaster Response Plans: · Provincial Disaster Response Plan · CCCM Plan	PSW DO, PDR RMO	DSW D, OCD	100 K		100 K	150 K			150 K	200 K			200K	250 K			25 0K	300 K			300 K					LD RR MF	

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																								
					2024				2025				2026				2027				2028				Total		Funding Source		
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	
11 LGUs		Activation of evacuation system/camp management, set of procedures for affected families,	P/LSWDO, P/LDRRMO	DSWD	200K		200K	250K		250K	300K		300K	350K		350K			350K	400K			400,000.00	1,500,000.00				1,500,000.00	LDRRMF
11 LGUs		Activation/establishment of Women Friendly Spaces, Children Friendly Spaces	PSWDO, PDRRMO, DEP-ED, PEO, PHO, GAD, LSWDO	DSWD	50K		50K	100K		100K	150K		150K	200K		200K			200K	250K			250K	750K				750K	LDRRMF
11 LGUs		Provision of basic health services	PSWDO, PESO, EWD	DSWD, DOLE	500K		500K	550K		550K	600K		600K	650K		650K			650K	700K			700K	3M				3M	LDRRMF
11 LGUs		Implementation of Temporary livelihood and or income generating projects	PSWDO																										

Areas Affected	DRRM Measures Planning				LDRRM Investment Program																								
					2024				2025				2026				2027				2028				Total		Funding Source		
	Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	
11 LGUs		Conduct of MHPSS/PFA	PHO, PSW DO, DEPED, LSW DO	DOH, DSW D	100 K			100 K	150 K			150 K	200 K			200K	250 K			250K	300 K			300 K	1M			1M	LD RR MF
11 LGUs		Provision of augmentation support to the implementation CCCM to affected LGU	PSW DO	DSW D	50K			50K	70 K			70 K	90 K			90K	110 K			1.99M	130 K			130 K	2,330,000.00			2,330,000.00	LD RR MF
11 LGUs		Collection, validation and submission health and emergency																											
11 LGUs		Mobilize Quick Response Mechanism for Animal Rescue and Management.	PVO	C/ML GUs	50K			50K	70 K			70 K	80 K			80K	80K			80 K	90 K			90K	370K			370K	LD RR MF
11 LGUs		Conduct treatment of swine in outbreak zones (Identify and	PVO	C/ML GUs	200 K			200 K	200 K			200 K	300 K			300K	300 K			300K	350 K			350 K	1,350,000.00			1,350,000.00	LD RR MF



Area S Affec ted	DRRM Measures Planning				LDRRM Investment Program																								
					2024				2025				2026				2027				2028				Total		Funding Source		
	Them atic Area	PPA Code and Description	Imple menti ng Office	Partn er Agenc ies	MO OE	CO	Other s	Tota l	MO OE	CO	Othe rs	Tota l	MO OE	CO	Other s	Total	MO OE	CO	Ot he rs	Tot al	MO OE	CO	Ot h er s	Total	MO OE	CO	Othe rs	Tot al	
11 LGUs		Procurement of prepositioned Breastfeeding Kits during disaster and/or emergencies	PHO, C/MHO	DOH	250 K				250 K				250 K				300 K				250 K				30 0K				
11 LGUs		Procurement of Medicines and others supplies for WASH in Emergency and disaster.	PHO, C/MHO	DOH																									
11 LGUs		Procurement of Medicines and others supplies for EREID Dengue in Emergency and disaster.	PHO, C/MHO	DOH	200 K				200 K				200 K				200 K				200 K				20 0K				

Area S Affec ted	DRRM Measures Planning				LDRRM Investment Program																								
					2024				2025				2026				2027				2028				Total		Funding Source		
	Them atic Area	PPA Code and Description	Imple menti ng Office	Partn er Agenc ies	MO OE	CO	Other s	Tota l	MO OE	CO	Othe rs	Tota l	MO OE	CO	Other s	Tota l	MO OE	CO	Ot he rs	Tota l	MO OE	CO	Ot h er s	Tota l	MO OE	CO	Othe rs	Tot al	
11 LGUs		Collection, validation, and submission health emergency and disaster reports(post mission report,field reports,final report and other EREID reports)	PHO, C/MH O	DOH	100 K				100 K				100 K				100 K				100 K				10 0K				
11 LGUs		Mobilization of HERT, DSO, ERID focal person during disease outbreak and pandemic.	PHO, C/MH O	DOH	100 K				100 K				100 K				100 K				100 K				10 0K				

**Disaster Rehab and Recovery**

DRRM Measures Planning				LDRRM Investment Program																				Funding Sources	
				2024				2025				2026				2027				2028					
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MO OE	CO	Others	Total		
Disaster Rehabilitation and Recovery	Conduct Post-Disaster Damage and Needs Assessment	PEO, PAGRO, PVO, PSWDO, PHO, CEO, MEO, CAGRO, MAGRO, CVO, MVO, CSWDO, MSWDO, CHO, MHO, BPLO	DOLE, DTI, POWER SERVICE PROVIDER, AFP, CSO, BLGU, DEPED, DPWH, BFP	200K			200K	200k			200K				200K				200K				200K		5% CF,20% Dev't Fund/General Fund

DRRM Measures Planning				LDRRM Investment Program																				Funding Sources	
				2024				2025				2026				2027				2028					
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total		
Disaster Rehabilitation and Recovery	Development and implementation of comprehensive plan for the restoration of local economic activities	PESO, BPLO, PBO, CBO, MBO	DOLE, DTI		1M		1M				1M		LDRRMF												
Disaster Rehabilitation and Recovery	Identification of safe and secured relocation sites	PEO, PSWDO, PDRRMO, PPDO, CEO, MEO, CSWDO, MSWDO, CDRRMO, MDRRMO, MPDC	DHSD, DILG, AFP		30M		30M				20M				10M								60M		20% Dev't fund/5% CF/General fund
Disaster Rehabilitation and	Relocation of affected persons/households	PSWDO, PEO, MDRRMO, PNP	AFP	200K											150K										

DRRM Measures Planning				2024				2025				2026				2027				2028				Funding Sources	
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MOOE	CO	Others	Total	MOOE	CO	Others	Total	MO OE	CO	Others	Total		
Recovery																									
Disaster Rehabilitation and Recovery	Restored/repair Infrastructure, agricultural and social facilities & utilities following the standards of safety & resiliency	PEO, CEO, MEO, PAGRO	OCD, DILG, DPWH, BFP	2M	10M		12M	2M	10M		12M	2M	10M		12M	6M	30M		36M						20% Dev't fund/5% CF/General fund
	Procurement of medicine, drugs and supplies for sustainable health service to the identified affected individuals	PHO, MHO/CHO, PEEDO (hospitals)	DOH	500K			500K	500K			500K	500K			500K										LDRRMF
Disaster Rehabilitation and	Establishment of containment zone free ASF areas	PVO	DA	100K			100k	100K			100K	100K			100K				100K						LDRRMF

DRRM Measures Planning				LDRRM Investment Program																				Funding Sources	
				2024				2025				2026				2027				2028					
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total	MO OE	CO	Others	Total		
Recovery	Dispersal Program and Restocking				5 M		5 M		5 M		5M		5 M		5M		5M		5M						LDRRMF
	Capacity Development			250 K			250 K	25 OK			25 OK	300K			30 OK	300 K				300K					LDRRMF
	Procure and distribute biologics/vaccines			5 M			5M	5M			5M	5M			5M	5M				5M					LDRRMF

## Monitoring and Evaluation

### Disaster Prevention and Mitigation

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Relocation of identified exposed families to flood hazard				22 Families in Talaingod										PDRR MC		LDRR MF
Desiltation /excavation of rivers and creeks			Rivers and creekc	2,160 Ln.m.	1000 Ln. m.	1000 Ln. m.	1000 Ln. m.	1000 Ln. m.						PDRR MC		LDRR MF
Improvement of roads, drainage and canals in Asuncion, New Corella, Carmen, Dujali	PEO		Earth and narrow canal		400 ln.m. drainages constructed second year	400 linear meter in the third year and fourth year			In. meter of drainage constructed	Completion Report, Monitoring Report	PEO and PDRRMD	Actual Inspection, Photo Documentation	Quarterly, 1 month before the PDRR MC Meeting	PPDO, PACC O, OCD, PDRR MC, COA	Transport, personnel, meals and snacks, computer,	LDRR MF
Revetment of dikes and slope protection in Sto. Tomas, Kapalong, San Isidro, Carmen	PEO				100 m	150 m								PDRR MC		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Tagum-Libuganon Watershed Management Program	PENRO	DENR	No. of watershed activity conducted	TBD	TBD	TBD	TBD	TBD						PDRRMC		LDRR MF
Installation of Long Range Flood Monitoring Camera	PDRRMO		6 Long range flood monitoring cameras	2 Ultrasonic Flood Sensors						PDRRMC		LDRR MF				
Installation of Emergency Mass Warning Siren	PDRRMO		6 Emergency Mass Warning Siren	2	2	2	2	2						PDRRMC		LDRR MF
Installation of Flood Staff Gauges	PDRRMO		6 Installation of Flood Staff Gauges	2	2	2	2	2						PDRRMC		LDRR MF
Installation of warning signages	PDRRMO			50		50		50						PDRRMC		LDRR MF
Riverbank Rehabilitation	PENRO	LGU	10 of sites (meters at strips) of riverbank planted with 5,000 forest	10	10	10	10	10	sites	Geotag Photos, Aerial Map, Terminal Report, List of Recipients	PENRO	Kobo-collect app	quarterly	PDRRMC	geotagging device, drone	LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indica tor	Means of Verifica tion	In- Charge of Monitori ng / Data Gatherin g	Method of Gathe ring	Frequ ency	M&E data users	Reso urces need ed	Source of Funds to condu ct M&E
PPA Code and Description	Implem enting Office	Partner Agenci es	For Outputs	2024	2025	2026	2027	2028								
			trees and bamboo													
Promotion of climate smart agriculture	PAGRO		Techno- clinic	20	20	20	20	20						PDRRMC		LDRR MF LDRR MF
Installation of "Batingaw" as emergency warning	PDRRMO			100		100		100		AIR				PDRRMC		LDRR MF
Installation of Alarm Sirens in Provincial Offices with Public Address	PDRRMO				1					AIR				PDRRMC		LDRR MF
Purchase of River Cross- section Survey Equipment (RTK) 2.5	PDRRMO				1					AIR				PDRRMC		LDRR MF
Construction of Slope Protection	PDRRMO			80 ln. m.	80 ln. m.	80 ln. m.	80 ln. m.	80 ln. m.		DED,P OW				PDRRMC		LDRR MF
Installation of Warning Signages	PDRRMO		Warning signage		50		50			AIR				PDRRMC		LDRR MF
Promotion and Implementation of Sloping Agricultural land Technology (SALT) and Agro-forestry system	PAGRO			50 ha						Termina l Report				PDRRMC		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Coastal Management	PENRO	LGU	3 Hectares of Mangrove Site enriched/rehabilitated (planted with 6,000 mangrove seedlings)	3	3	3	3	3	hectares	Geotag Photos, Aerial Map, Terminal Report, List of Recipients	PENRO	Using kobo-collect app	quarterly	PDRRMC	geotagging device, drone	LDRR MF
Installation of Storm Surge Monitoring Camera	PDRRMO		3	1	1	1				AIR	PDRRMO	Inspection		PDRRMC		LDRR MF
Installation of Warning Signages	PDRRMO									AIR	PDRRMO	Inspection		PDRRMC		LDRR MF
Installation of Tsunami Monitoring Camera	PDRRMO		3	1	1	1				AIR	PDRRMO	Inspection		PDRRMC		LDRR MF
Installation of Warning Signages	PDRRMO									AIR	PDRRMO	Inspection		PDRRMC		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Upland Rehabilitation	PENRO		50 hectares of open/denuded areas planted with 56,000 various fruits, forest, production trees	50	50	50	50	50	hectares	Geotag Photos, Aerial Map, Terminal Report, List of Recipients	PENRO	Using kobo-collect app	quarterly	PDRRMC	geotagging device, drone	LDRR MF
Enhancement of Local Climate Change Action Plan - Greenhouse Gas (GHG) Inventory	PENRO	CCC	3 LGUs assisted in the conduct of Greenhouse Gas (GHG) Inventory - community level for integration to the enhanced LCCAP	3	0	0	0	0	No. of LGUs assisted	GHG Inventory Report, Survey Tool	PENRO			PDRRMC		LDRR MF
Development of Green or Renewable Energy Utilization within the PG Center	PEO				1					DED,	PEO			PDRRMC		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Establishment of Tree Nursery	PENRO	LGU, DENR	3 Tree Nursery Established	3 Tree Nursery Constructed	3 Tree Nursery Fully operated and maintained	Constructed, Operated and Maintained	Geotag photos, Site Development Plan,	PENRO			PDRRMC		LDRR MF			
Purchase of high-end computer desktop for REDAS monitoring & data processing (2/yr)150k	PDRRMO		0	2	2	2				Procurement Documents	PDRRMO	Inspection of Equipment		PDRRMC		LDRR MF
Facilitate formulation of Provincial Ordinance for Preemptive Evacuation	PDRRMO		1 Executive Order		1					Approved EO				PDRRMC		LDRR MF
Facilitate crafting of DavNor Emergency and Disaster Hotline Dispatch Ordinance	PDRRMO		1 Executive Order		1					Approved Ordinance	PDRRMO			PDRRMC		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Conduct Quarterly Health Consultative meeting on Health Programs - Nutrition in Emergency -Disaster Risk Reduction Management for Health - Epidemiology and Surveillance - Dengue program -HIV-AIDS -TB coordinating council	PHO	DOH	4 meetings	4	4	4	4	4	Attendance, terminal report, pictures	PHO	Quarterly	PDRRMC	venue, snacks, meals	LDRR MF		
Conduct health services on preventive and control of disease-related morbidities (communicable disease) TB Leprosy HIV/AIDS	PHO	DOH,C/MHO	1381/4601 affected population									PDRRMC		LDRR MF		

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Conduct health services on preventive and control of disease-related morbidities (communicable disease) TB Leprosy, HIV/AIDS	PHO													PDRRMC		LDRR MF
Conduct health services on preventive and control of non-communicable diseases Hypertension Diabetes Mellitus	PHO	DOH,C/MHO	No. of actual client catered and increase 10 % yearly as increment for 5 years											PDRRMC		LDRR MF
Conduct health services on preventive and control of vaccine preventable disease	PHO	DOH,C/MHO	No. of actual client catered and increase 10 % yearly as increment for 5 years											PDRRMC		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Conduct bi-annual program implementation review of LDRRM-H system and other health contingency plans -Nutrition in Emergency - DRRM-H - Epidemiology and Surveillance -Pubic Health in emergency and Disaster	PHO	DOH,C/MHO	2 PIR conducted											PDRRM C		LDRR MF
Revisiting of policies on LDRRM-H system	PHO	DOH,C/MHO	No. of health policies revisited											PDRRM C		LDRR MF
Formulation of Health Risk Communication Plan	PHO	DOH,C/MHO	No. of health risk communication develop											PDRRM C		LDRR MF
Develop coordination network and partnership among government agencies ,NGO, CSO , and other stakeholders	PHO	DOH,C/MHO	No. of approved commitments and agreements.											PDRRM C		LDRR MF
Crafting of EREID Plan	PHO	DOH-EREID	100% crafted											PDRRM C		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
			EREID Plan													
Hiring of health personnel to conduct Province wide DRRM-H for monitoring and disease surveillance	PHO	DOH,C/MHO	8 No. of Hired personnel	8										PDRRMC		LDRR MF
Conduct of MESUs/ CESUs/ HESUs Functionality Assessment	PHO	DOH,H EMB	100% Conducted Functionality assessment											PDRRMC		LDRR MF
Conduct of Retrospective Review on notifiable diseases in MESUs/ CESUs/ HESUs	PHO	DOH,H EMB	100% Conducted of retrospective review on notifiable diseases											PDRRMC		LDRR MF
Transport of specimen sample for examination and disease confirmation	PHO	DOH,C/MHO	No. of specimen examined											PDRRMC		LDRR MF
Conduct Nutritional intervention to the identified vulnerable eligible population	PHO	DOH,R NC,C/MHO	No. of identified vulnerable eligible population for nutrition											PDRRMC		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Conduct family profiling and identification vulnerable population for health (Health data banking program - PHIMS)	PHO	DOH,C/MHO	No. of family profile and identified											PDRRM C		LDRR MF
Procurement of dedicated vehicle for DRRM-H and Provincial Epidemologic Disease Surveillance Unit	PHO	DOH,C/MHO	1 unit vehicle											PDRRM C		LDRR MF
Improvement of PHO Warehouse for health emergency commodities and other supplies	PHO	DOH	100% improved Warehouse for health emergency commodities and other supplies											PDRRM C		LDRR MF
Conduct STI/HIV program awareness campaign	PHO	DOH,H EMB	60 identified participants											PDRRM C		LDRR MF
Procure logistics for STI and HIV prevention	PHO	DOH,PS FI, ALAGAD MINDA	15374 No. of affected population											PDRRM C		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
		NAO, TAHAS														
Procure medicine for treatment and management of Sexually Transmitted infections and prophylaxis for Opportunistic Infections	PHO	DOH,PSFI, ALAGAD MINDA NAO, TAHAS	15,374 No. of affected population											PDRRM C		LDRR MF
Purchase of Emergency Back-up Power Supply 3KVA( 1 st and 4th yr.)250k	PDRRMO		3 units of Emergency Back-up Power Supply 3KVA purchased		1	1	1							PDRRM C		LDRR MF
Research on Banana Fusarium Wilt Management	PAGRO													PDRRM C		LDRR MF
Provision of irrigation facilities	PAGRO			5	5	5	5	5						PDRRM C		LDRR MF
Provision of drought tolerant varieties	PAGRO													PDRRM C		LDRR MF
Promotion of organic agriculture	PAGRO													PDRRM C		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Border Control and Strict Veterinary Checkpoints Measures Implemented.	PVO			100%	100%	100%	100%	100%		Report				PDRRMC		LDRR MF
Banning of Imported & Local Pork Products from infected areas.	PVO													PDRRMC		LDRR MF
Recall of pork & pork products manufactured after disease outbreak (local & imported).	PVO													PDRRMC		LDRR MF
Disease Monitoring/ Progression Movement & Spread from Affected Areas.	PVO													PDRRMC		LDRR MF
Animal Health Care and Disease management	PVO													PDRRMC		LDRR MF
Intensification of inspections of passenger luggage in seaports	PVO													PDRRMC		LDRR MF
Information Education Campaign	PVO													PDRRMC		LDRR MF
Orientation on Proper Biosecurity Measures	PVO													PDRRMC		LDRR MF

DRRM Measures Planning			Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
Disease Monitoring/Progress Movement and Spread from affected Areas	PVO			100%	100%	100%	100%	100%						PDRRMC		LDRR MF

## Disaster Preparedness

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
Davao del Norte	1 Provincial DRRM Plan Updated		Updating of Provincial DRRM Plan	PDRR MO						1 PDRR M Plan Updated		SP Approved SOP	PDR RMO	Assessment	On the year of Approval	PDRRM C		LDRRMF	
Davao del Norte	1 standard manual of operation for Operation Center updated		Updating of standard manual of operations of Operation Center	PDRR MO				1 SOP Updated		1 SOP Updated		LDR RMF	SP Approved SOP	PDR RMO	Assessment	On the year of approval	PDRRM C	LDRRMF	

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
Davao del Norte	100% Responders were provided with accident insurance policy	Disaster Preparedness	Provision for insurance of Provincial DRRM Responders	PDRRMO			Insured Job Order and Casual Personnel/Responder		Insurance Document	PDRRMO	Inspection	Annualy	PDRRMC		LDRRMF				
Davao del Norte	100% of Food and Non-Food Items are prepositioned	Disaster Preparedness	Stockpiling of Food and Non Food Items	PSWDO			1,500 FNFI stockpiled	1,500 FNFI stockpiled	1,500 FNFI stockpiled	1,500 FNFI stockpiled			AIR	PSWDO		Quarterly	PDRRMC		LDRRMF
Davao del Norte	100% Evacuation Centers assessed	Disaster Preparedness	Viability Assessment of Evacuation Centers	PSWDO									Terminal Report	PDRRMO			PDRRMC		LDRRMF
Davao del Norte	40 members of the PDRRM C Technical Working Group capacita	Disaster Preparedness	Capacity building of PDRRMC Technical Working Group on DRRM Budgeting Processes	PDRRMO			40 Members of TWG capacitated						Terminal Report	PDRRMO			PDRRMC		LDRRMF

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	ted on DRRM budgeting process																		
Davao del Norte	53 PDRRM C Member Agencies capacitated on Exercise Design Course, Emergency Operation Center, ICS Executive Course, Response Cluster Approach	Disaster Preparedness	Capacity building of PDRRM C Member agencies on various DRRM Trainings	PDRRM MO			53 PDRRM MC Members capacitated			53 PDRRM MC Members capacitated			Terminal Report	PDR RMO	At the end of the training	PDRRM MC			LDRRMF

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
11 LGUs	11 LGUs assisted provided with technical assistance	Disaster Preparedness	Provision of technical assistance to LGUs for their compliance in the LDRRM Council/Office Assessment	PDRR MO			11 LGUs		Terminal Report	PDRR MO	Meeting	Annually	PDRR MC, OCD		LDRRMF				
Davao del Norte	1 directory of key actors and stakeholders maintained	Disaster Preparedness	Maintain a directory of key actors and stakeholders (e.g. Humanitarian Assistance Actors)	PDRR MO			1 Directory updated		Directory	PDRR MO					LDRRMF				
11 LGUs	1 central data information system managed 11 LGUs adapted to the informati	Disaster Preparedness		PDRR MO			1 Central Data maintained and updated			PDRR MO		Annually	PDRR MC, LGU		LDRRMF				

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	on system																		
Davao del Norte	225 personnel increased capacity on warehouse management for 5 years	Disaster Preparedness	Conduct capacity building on warehouse management	PSWDO									Terminal Report		Annually	PDRR MC			LDRRMF
Davao del Norte	100% of tools, equipment and accessories prepositioned	Disaster Preparedness	Prepositioning of tools, equipment and accessories for Search Rescue and Retrieval	PDRR MO, PEO									AIR			PDRR MC			LDRRMF

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
Davao del Norte	80% farmers enrolled in the insurance program of PCIC	Disaster Preparedness	Facilitate membership of farmers to the insurance protection program of Philippine Crop Insurance Corporation	PAGRO									List of Beneficiaries	Data Gathering	Annually				LDRRMF
Davao del Norte	100% planting materials stockpiled (rice, corn, vegetables)	Disaster Preparedness	Stockpiling of planting materials	PAGRO			500 bags		AIR						LDRRMF				
Davao del Norte	100% of animal feeds are stockpiled and prepositioned	Disaster Preparedness	Stockpiling of Forage and Pasture Materials	PVO			100% animal feeds prepositioned								LDRRMF				
Davao del Norte	100% of animal feeds are	Disaster Prepa	Stockpiling of Animal Feeds and	PVO															LDRRMF

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	stockpiled and prepositioned	redness	Clean Water provision																
Davao del Norte		Disaster Preparedness	Establishment of Provincial Veterinary checkpoints	PVO			8 Veterinary checkpoints established		Report	Inspection	Quarterly	PDRR MC			LDRRMF				
11 LGUs	225 trained ECCD workers increased capacity and knowledge on Children On Emergency Relief and Management Act for 5 years	Disaster Preparedness	Provision of training for children on emergency relief and management act to ECCD workers	PSWDO			225 ECCD workers Trained		Terminal Report		After the Training	PDRR MC			LDRRMF				

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
Davao del Norte	225 personnel of PSWDO trained on Mental Health Psychosocial Support Services for 5 years	Disaster Preparedness	Capacitate service providers on Mental Health and Psychosocial Support Training	PSWDO			225 PSWDO personnel trained		Terminal Report	PSWDO		After the training	PDRR MC		LDRRMF				
11 LGUs	225 personnel from LGUS trained on Camp Coordination and Camp Management	Disaster Preparedness	Conduct Training on Camp Coordination and Camp Management Training to the LGUs	PSWDO			225 LGU personnel trained		Terminal Report	PSWDO		After the training	PDRR MC		LDRRMF				
11 LGUs	225 personnel of LGUs increased capacity on Women	Disaster Preparedness	Conduct Training on Women and Child Friendly Space Training	PSWDO			225 LGU personnel trained		Terminal Report	PSWDO		After the training	PDRR MC		LDRRMF				

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	and Child Friendly Space for 3 years		ning to the LGUs																
11 LGUs	225 LCPC child representatives are trained on Basic Life Support for 3 years	Disaster Preparedness	Conduct of Basic Life Support Training to LCPC Child Representatives	PDRR MO, PSWDO			225 LCPC child representatives are trained		Terminal Report	PSWDO		After the Training	PDRR MC		LDRRMF				
11 LGUs	225 personnel of LGUs and partner stakeholders trained on Trauma Informed Care during disasters and emergency	Disaster Preparedness	Conduct Trauma Informed Care During Disaster and Emergency Situations Training to LGU service providers and partner	PSWDO, PDRRMO			225 LGU personnel and partner stakeholders trained		Terminal Report	PSWDO		After the training	PDRR MC		LDRRMF				

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	situation trainings		stakeholders																
11 LGUs	2,500 of participants from schools attended SPEED Advocacy Programs for 5 years	Disaster Preparedness	Mainstreaming DRRM-CCA in educational system through School-based prevention Education on Early warning before Disaster (SPEED Advocacy)	PDRR MO	DEPED		2,500 participants from schools attended		Terminal Report	PDRR MO		After the training	PDRR MC		LDRRMF				
11 LGUs	2,500 of participants from communities attended SITE Orientation for 5 years	Disaster Preparedness	Saktong Impormasyon Tabang panahon sa Emerhensya (SITE Advocacy) Orientation for communities	PDRR MO			2,500 participants from schools attended			PDRR MO		After the training	PDRR MC		LDRRMF				

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
Davao del Norte	100 trained personnel increased capacity on Standard First Aid	Disaster Preparedness	Training on Standard First Aid	PDRR MO			100 personnel trained on SFA		100 personnel trained on SFA		100 personnel trained on SFA		Terminal Report	PDRR MO		After the Training	PDRR MC		LDRRMF
Davao del Norte	100 trained personnel increased capacity on Rescue Vehicle Maintenance & Operation	Disaster Preparedness	Training Rescue Vehicle Maintenance & Operation	PDRR MO			100 personnel trained on Operation and Maintenance of Rescue Vehicle		100 personnel trained on Operation and Maintenance of Rescue Vehicle		100 personnel trained on Operation and Maintenance of Rescue Vehicle		Terminal Report	PDRR MO		After the Training	PDRR MC		LDRRMF
Davao del Norte	100 trained personnel increased on Basic Life Support &	Disaster Preparedness	Training on Basic Life Support & Cardiopulmonary Resuscitation	PDRR MO				100 personnel trained on BLS-CPR		100 personnel trained on BLS-CPR			Terminal Report	PDRR MO		After the Training	PDRR MC		LDRRMF

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	Cardiopulmonary Resuscitation																		
Davao del Norte	50 trained personnel on Emergency Medical Dispatch	Disaster Preparedness	Training on Emergency Medical Dispatch	PDRR MO			50 personnel trained on EMD	50 personnel trained on EMD	50 personnel trained on EMD			Terminal Report	PDR RMO		After the Training	PDRR MC			
Davao del Norte	50 personnel attended Dispatch Protocol Management	Disaster Preparedness	Training on Dispatch Protocol Implementation Management	PDRR MO			50 personnel trained on DPIM	50 personnel trained on DPIM	50 personnel trained on DPIM			Terminal Report	PDR RMO		After the Training	PDRR MC			
Davao del Norte	50 trained personnel on Proper Call handling	Disaster Preparedness	Training on Proper Call handling for emergency call incidents	PDRR MO			50 personnel trained on PCH	50 personnel trained on PCH	50 personnel trained on PCH			Terminal Report	PDR RMO		After the Training	PDRR MC			

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agency		For Outputs	2024	2025	2026	2027								
Davao del Norte	50 trained personnel on Communication Center Management	Disaster Preparedness	Training on Communication Hub/Call Center Management	PDRR MO				50 personnel trained on CCM		50 personnel trained on CCM			Terminal Report	PDRR MO		After the Training	PDRR MC		
Davao del Norte	50 trained personnel on Communication Center Management	Disaster Preparedness	Training on Proper Dispatching Emergency and Disaster Calls	PDRR MO				50		50			Terminal Report	PDRR MO		After the Training	PDRR MC		
Davao del Norte	50 trained personnel on Patient Referral System	Disaster Preparedness	Training on Patient Referral System for Emergency Telecommunicators	PDRR MO				50		50			Terminal Report	PDRR MO		After the Training	PDRR MC		
Davao del Norte	150 personnel participated Psychological First Aid	Disaster Preparedness	Annual Psychological First Aid for Emergency Telecommunicators	PDRR MO					150		150		Terminal Report	PDRR MO		After the Training	PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
11 LGUS	2,500 participants from communities attended Emergency Hotline Awareness Campaign	Disaster Preparedness	DavNor 911 Emergency Hotline Awareness Campaign	PDRR MO			500	500	500	500	500		Terminal report	PDR RMO			PDRR MC		
Davao del Norte	100% DavNor 911 Operating System enhanced	Disaster Preparedness	Enhancement of DavNor 911 Operating System	PDRR MO									Acceptance Inspection Report	PDR RMO	Quarterly		PDRR MC		
Davao del Norte	100% improvement of Davnor 911 Call Center Office	Disaster Preparedness	Improvement of DavNor 911 Call Center Office	PDRR MO									Acceptance Inspection Report	PDR RMO			PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
11 LGUs	100 trained personnel on Rescue Medical Emergency Vehicle Operations	Disaster Preparedness	Training on Rescue Medical Emergency Vehicle Operations	PDRR MO			100		100			Terminal Report	PDR RMO				PDRR MC		
Davao del Norte	3 units of procured Emergency Medical Vehicle	Disaster Preparedness	Procurement of Emergency Medical Service Vehicle	PDRR MO			1	1	1			Acceptance Inspection Report	PDR RMO	Inspection			PDRR MC		
Davao del Norte	1 set of procured All-Weather Rescue Drone	Disaster Preparedness	Procurement of All-Weather Rescue Drone	PDRR MO					1			Acceptance Inspection Report	PDR RMO	Inspection			PDRR MC		
Davao del Norte	6 units of Rescue Equipment Cabinets procured	Disaster Preparedness	Procurement of Rescue Equipment Cabinets	PDRR MO			2	2	2			Acceptance Inspection Report	PDR RMO	Inspection			PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
Davao del Norte	No. of recipient availed	Disaster Preparedness	Procurement and distribution of emergency preparedness kit	PDRR MO								Acceptance Inspection Report	PDRRMO	Inspection		PDRRMC			
Davao del Norte	100 personnel trained on Standard First Aid	Disaster Preparedness	Training of Trainers on Standard First Aid for LGUs and stakeholders	PDRR MO			30	30	40			Terminal Report	PDRRMO		After the Training	PDRRMC			
Davao del Norte	100 personnel trained on Medical First Responder	Disaster Preparedness	Training on Medical First Responder for LGUs and stakeholders	PDRR MO			30	30	40			Terminal Report	PDRRMO		After the Training	PDRRMC			
Davao del Norte	100 personnel trained on Rescue Emergency Vehicle	Disaster Preparedness	Training on Rescue Emergency Vehicle Operation for LGUs and	PDRR MO			40	30	30			Terminal Report	PDRRMO		After the Training	PDRRMC			

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	Operation		stakeholders																
Davao del Norte	200 personnel trained on Rescue Emergency Vehicle Operation	Disaster Preparedness	Enhancement training on Early Warning System	PDRR MO			50	50	50	50			Terminal Report	PDR RMO		After the Training	PDRR MC		
Davao del Norte	150 personnel trained on DavNor 911 Emergency Dispatch System	Disaster Preparedness	Enhancement training on DavNor 911 Emergency Dispatch System	PDRR MO									Terminal Report	PDR RMO		Quarterly	PDRR MC		
Davao del Norte	90 personnel participated on Knowledge Sharing	Disaster Preparedness	Knowledge Sharing on Emergency Telecommunication to LGUs	PDRR MO									Terminal Report	PDR RMO		After Activity	PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	on Emergency Telecommunication		with Existing 911 Emergency Hotline																
Davao del Norte	250 personnel trained on Search, Rescue and Retrieval Operations	Disaster Preparedness	Enhancement Training on Search, Rescue and Retrieval Operations	PDRR MO			50	50	50	50	50		Terminal Report	PDRRMO	Evaluation	After the training	PDRRMC		
	500 participants attended the coordination meeting	Disaster Preparedness	Coordination meeting with other response agencies and stakeholders	PDRR MO									Terminal Report	PDRRMO	Evaluation		PDRRMC		
	10 Rescue Kayak purchased	Disaster Preparedness	Purchase of Rescue Speedboat	PDRR MO									AIR	PDRRMO	Inspection		PDRRMC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	4 Rescue Jetski purchased	Disaster Preparedness	Purchase of Rescue Jetski	PDRR MO								AIR	PDRRMO, PGSO	Inspection		PDRRMC, PACC O			
	1 Updated Contingency Plan for flooding	Disaster Preparedness	Update Contingency Plan for Flooding	PDRR MO								Terminal Report	PDRRMO	Review of document		PDRRMC, LGUs			
	375 Families actively participated on the conduct of community/family drill for 5 years; 11 municipalities supported in the conduct of flood drill	Disaster Preparedness	Conduct of Family/Community Flood drills with ICS simulation ; Conduct of scenario-based testing and drill for Flood	PDRR MO			1	1	1	1	1	Terminal Report	PDRRMO	Evaluation		PDRRMC			

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	375 PWD, IP, Elderly, Women, Men, Children, public and private sectors participated on the conduct of the flood drill for 5 years	Disaster Preparedness	Conduct of Flood drills to Vulnerable sectors with ICS simulation (PWD, elderly, children, women, public and private sectors)	PDRR MO			1	1	1	1	1		After Activity Report	PDRRMO	Evaluation	Annually	PDRRMC		
	No. of Barangay Responders participated on the conduct of WASAR training	Disaster Preparedness	Conduct Training for BDRRM personnel on WASAR	PDRR MO			1	1	1	1	1		Terminal Report	PDRRMO		After the training	PDRRMC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	No. of IEC materials produced distributed to	Disaster Preparedness	Production of updated and localized IEC materials for flood hazard	PDRR MO			500	500	500	500	500		IEC materials	PDR RMO	Inspection		PDRR MC		
	11 LGUs received updated result of Flood hazard maps	Disaster Preparedness	Dissemination of updated Flood Hazard maps result to the local government unit	PDRR MO			11	11	11	11	11		Email Received document	PDR RMO			PDRR MC, OCD		
	100 trained personnel increased capacity on Swift Water Rescue	Disaster Preparedness	Training on Swift Water Rescue for LGUs & Stakeholders	PDRR MO			25	25	25	25			Terminal Report	PDR RMO	Evaluation	After Training	PDRR MC		
	100 trained personnel increased	Disaster Preparedness	Training on Water Search & Rescue for LGUs &	PDRR MO			25	25	25	25			Terminal Report	PDR RMO	Evaluation	After Training	PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	capacity on Water Search & Rescue		Stakeholders																
	100 trained personnel from 11 LGUs and Stakeholders on Flood Monitoring & Forecasting	Disaster Preparedness	Training on Flood Monitoring & Forecasting for LGUs & Stakeholders	PDRR MO			30	30	30	30	30		Terminal Report	PDR RMO	Evaluation	After the Training	PDRR MC		
	3 units of Rubber Boat Outdoor Motor 40HP procured	Disaster Preparedness	Procurement of Rubber Boat Outdoor Motor 40HP	PDRR MO				1	1	1			AIR	PDR RMO	Inspection	During Delivery	PDRR MC		
	4 units of Rubber Boat Trailer with hydraulics	Disaster Preparedness	Procurement of Stainless Rubber Boat Trailer with	PDRR MO				1	1	1	1		AIR	PDR RMO , PGS O	Inspection	During Delivery	PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	mechanism procured		hydraulic mechanism																
	3 units of Rubber Boat Outdoor Motor Stainless Carrier Stand procured	Disaster Preparedness	Procurement of Rubber Boat Outdoor Motor Stainless Carrier Stand	PDRR MO				1	1	1			AIR	PGS O,P DRR MO	Inspection	During the Delivery	PDRR MC, COA, PACC O		
	No. of trained personnel	Disaster Preparedness	Capability building development on LDRRM-H System Program	PHO									Terminal Report	PDR RMO					
	No. of recipient availed	Disaster Preparedness	Development of IEC materials on Emerging and Re-emerging Infectious Disease and conduct advocacie	PHO															

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
			s for public safety and community awareness																
	100% of identified public and private sectors participated in the Nationwide Simultaneous Earthquake Drill	Disaster Preparedness	Capacity building and training for Public and Private sectors in participating in the Nationwide Simultaneous Earthquake Drill	PDRR MO			100%	100%	100%	100%	100%		After Activity Report	PDRR MO	Evaluation	Quarterly	PDRR MC, OCD		
	1 Updated Contingency Plan for Earthquake	Disaster Preparedness	Updating of Contingency Plan for Earthquake	PDRR MO				1					Terminal Report	PDRR MO	Review of Document	Once	PDRR MC		
	1 Disaster Response Plan on Earthquake	Disaster Preparedness	Formulation of Disaster Response Plan on	PDRR MO			1						Terminal Report	PDRR MO	Review of Document	Once	PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	ake Hazard		Earthquake Hazard																
	100 trained personnel on GeoRisk	Disaster Preparedness	Training on the use of Rapid Earthquake Damage Assessment System Software	PDRR MO				1					Terminal Report	PDRRMO	Inspection	Once	PDRRMC		
	1 set of Collapsed Structure Life Detector Equipment procured	Disaster Preparedness	Procurement of Collapsed Structure Life Detector Equipment	PDRR MO				1					AIR	PDRRMO, PGSO	Inspection	During delivery			
	100 trained personnel increased capacity on Single Rope Rescue	Disaster Preparedness	Training on Single Rope Rescue for LGUs & Stakeholders	PDRR MO			1		1		1		Terminal Report	PDRRMO	Evaluation	PDRRMC			

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partners Agencies		For Outputs	2024	2025	2026	2027								
	100 trained personnel increased capacity on Mountain Search & Rescue	Disaster Preparedness	Training on Mountain Search & Rescue for LGUs & Stakeholders	PDRR MO			25	25	25	25			Terminal Report	PDR RMO	Evaluation	After the Training	PDRR MC		
	100 trained personnel from LGUs and Stakeholders increased capacity on Early Warning System	Disaster Preparedness	Training on Early Warning System for LGUs & Stakeholders	PDRR MO									Terminal Report	PDR RMO	Evaluation	After the Training	PDRR MC		
	100 trained personnel from LGUs and Stakeholders increase	Disaster Preparedness	Training on Climatological Data Management for LGUs &	PDRR MO			11	11	11	11	11		Terminal Report	PDR RMO			PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	d capacity on Climatological Data Management for LGUs		Stakeholders																
	100% of warning advisories and real time reporting were disseminated to affected LGUs	Disaster Preparedness	Dissemination of warning advisories and real time reporting	PDRR MO			100%	100%	100%	100%	100%		Actual Advisories	PDRR MO	Quarterly	PDRR MC			
	No. of communities, public and private entities trained on fire safety	Disaster Preparedness	Conduct fire safety seminar/training	PDRR MO/BFP									Terminal Report	BFP, PDRR MO	Evaluation	After the Training	PDRR MC		
	No. Recipients	Disaster Prepa	Community Learning on El Niño	PDRR MO															

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	informed	redness	induced forest fire																
	100 trained personnel increased capacity on Vehicular crash Extrication	Disaster Preparedness	Training on Vehicular crash Extrication for LGUs & Stakeholders	PDRR MO			25	25	25	25			Terminal Report	PDR RMO		After the Training			
	1 Quick Response Team established and members identified	Disaster Preparedness	Creation of Quick Response Team / Identification of team members / - Provision of PPEs & logistical supplies.	PDRR MO				1					Executive Order	PDR RMO	Once	PDRR MC			
	BLGUS trained on the mechanisms provided in the livestock emergency	Disaster Preparedness	Technical skills training on livestock emergency guidelines through workshops,	PVO									Terminal Report	PDR RMO		PDRR MC			

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	guidelines		seminars, and simulations. (Provision of Projector)																
	1 Provincial ASF Council and Task Force established	Disaster Preparedness	Creation of ASF Council & Task Force	PVO				1					Executive Order				PDRR MC		
	Capacitated meat inspectors and handlers on detecting ASF infected pork	Disaster Preparedness	Conduct orientation for Meat inspectors & Meat Handlers.	PVO			1	1	1	1	1		Terminal Report		After the orientation		PDRR MC		
	11 LGUs have identified burial sites for dead animals	Disaster Preparedness	Identify location for the burial of dead animals	PVO									PDRR MC Resolution	PVO	Review of the Resolution	Once	PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	specify drugs and meds procured	Disaster Preparedness	Procurement of veterinary drugs and medicines	PDRRMO															
	80% of 150 HERT members trained on BLS	Disaster Preparedness	Basic Life Support Training (2days live-in)	PHO, C/MHO	DO H-HE MB	120 HERTs	120	120	120	120	120	number of participants completed the training	COC/COP	PHO	Consolidation and validation	monthly	PDRRMC		
	80% of 150 HERT members trained on SFA	Disaster Preparedness	Standard First Aid Training (2 Days live-in)	PHO, C/MHO	DO H-HE MB	120 HERTs	120	120	120	120	120	number of participants completed the training	Attendance, Activity Design, Terminal Report	PHO	Consolidation and validation		PDRRMC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	20% of 150 HERT members trained on HERO	Disaster Preparedness	Health Emergency Response Operation (5days live-in)	PHO, C/MHO	DOH-HEMB	30 HERTs	30	30	30	30	30	number of participants completed the training	Attendance, Activity Design, Terminal Report				PDRR MC		
	20% of 150 HERT members trained on Sub National PHEMAP	Disaster Preparedness	Sub National PHEMAP (5days live-in)	PHO, C/MHO	DOH-HEMB	30 HERTs	30	30	30	30	30	number of participants completed the training	Attendance, Activity Design, Terminal Report				PDRR MC		
	20% of 150 HERT members trained on MCIM	Disaster Preparedness	Mass Casualty Incident Management (5 days live-in)	PHO, C/MHO	DOH-HEMB, OGD	30 HERTs	30	30	30	30	30	number of participants completed the	Attendance, Activity Design, Terminal				PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
												training	Report						
	20% of 150 HERT members trained on HSFD	Disaster Preparedness	Hospital safe from Disaster( 5 days live-in)	PHO, C/MHO	DOH	30 HERTs	30	30	30	30	30						PDRR MC		
	20% of 150 HERT members trained on EOC	Disaster Preparedness	Emergency Operation Center Training(3 days live-in)	PHO, C/MHO	DOH-HEMB, OGD	30 HERTs	30	30	30	30	30						PDRR MC		
	all C/MHO, PHO and Hospitals with Total Participants of 50	Disaster Preparedness	Conduct Basic Incident Management System ICS for Health (3 days live-in)	PHO, C/MHO, PEED O Hospitals	DOH-HEMB, OGD	50 Pax	50	50	50	50	50						PDRR MC		
	100% of 105 EPI and Cold Chain Management	Disaster Preparedness	Conduct Basic EPI and Cold Chain Management Training (5	PHO, C/MHO	DOH	105 pax	105	105	105	105	105						PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	r to be trained		days live out )																
	100% of 105 EPI and Cold Chain Manager to be trained	Disaster Preparedness	Conduct Basic EPI and Cold Chain Management Training (5 days live in )	PHO, C/MHO	DOH	105 pax	105	105	105	105	105						PDRR MC		
	100% of 20 C/MHO Supervisors (5 days live in)	Disaster Preparedness	Conduct Supportive Supervision Training	PHO, C/MHO	DOH	20 pax	105	105	105	105	105						PDRR MC		
	30 participants	Disaster Preparedness	Training of Trainers on Maternal Nutrition and Infant and Young Child Feeding in Emergency (5 days live-in)	PHO, C/MHO	DOH, NIE	30 pax	30	30	30	30	30						PDRR MC		
	30 participants	Disaster Prepa	Training of Trainers on Nutrition	PHO, C/MHO	DOH, NIE	30 pax	30	30	30	30	30						PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline For Outputs	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		2024	2025	2026	2027	2028								
		redness	in Emergency Management (5 days live-in)																
	30 participants	Disaster Preparedness	Training of Trainers on Management of Acute Malnutrition in Emergency (community HRH)(5 days live-in)	PHO, C/MHO	DOH, NIE	30 pax	30	30	30	30	30						PDRR MC		
	30 participants	Disaster Preparedness	Training of Trainers on Management of Acute Malnutrition in Emergency (hospital personnel) (5 days live-in)	PHO, C/MHO	DOH, NIE	30 pax	30	30	30	30	30						PDRR MC		

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	100% of DDN CHO, MHO, coordinators	Disaster Preparedness	Water Safety Plan training on City/ Municipal Health Offices (live-in)	PHO, C/MHO	DOH	20 pax	20	30	30	30	30		Terminal Report	PHO				PDRR MC	
	90 % of 33 DDN Sanitation Inspectors	Disaster Preparedness	Food and waterborne outbreak investigation training (live-in)	PHO, C/MHO	DOH	33 pax	33	33	33	33	33		Terminal Report	PHO				PDRR MC	
	90 % of 33 DDN Sanitation Inspectors (live-in)	Disaster Preparedness	Food safety training course	PHO, C/MHO	DOH	11 pax	11	11	11	11	11		Terminal Report	PHO				PDRR MC	
	NO. 60 of RN, RM, RSW, MD (4 DAYS live-in)	Disaster Preparedness	MHPSS training	PHO, C/MHO	DOH	60 pax	60	60	60	60	60		Terminal Report	PHO				PDRR MC	
	NO. 60 of RN, RM, RSW, MD	Disaster Preparedness	MHGAP training (5 DAYS live-in)	PHO, C/MHO	DOH	60 pax	60	60	60	60	60		Terminal Report	PHO				PDRR MC	

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	NO. 60 of RN, RM, RSW, M D	Disaster Preparedness	Psychological first aid training (4 DAYS live-in)	PHO, C/MHO	DOH	60 pax	60	60	60	60	60		Terminal Report	PHO	Data Collection	Once a year	PDRR MC		Other Source
	260 Vbsi's	Disaster Preparedness	Dengue Vector Surveillance Training (3 days live in )	PHO, C/MHO	DOH	260 Vbsi's	260						Terminal Report	PHO	Data Collection	Once a year	PDRR MC		Other Source
	18 SI's	Disaster Preparedness	Refresher Course for SI's DVS ( 3 days live-in)	PHO, C/MHO	DOH	18 SI's		18					Terminal Report	PHO	Data Collection	Once a year	PDRR MC		Other Source
	30 spraymen	Disaster Preparedness	Training for Dengue Spraymen ( 2 days live-in)	PHO, C/MHO	DOH	30 spraymen		30					Terminal Report	PHO	Data Collection	Once a year	PDRR MC		Other Source
	0	Disaster Preparedness	Capability building development on Local EREID Program on Infection	PHO, C/MHO	DOH RE SU	30 DSO							Terminal Report	PHO	Data Collection	Once a year	PDRR MC		Other Source

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
			Prevention Control																
	6 items	Disaster Preparedness	Procurement of training materials and equipments for DRRM-H system									Procurement Documents	PHO	Review of documents		PDRR MC		Other Source	
	6 items	Disaster Preparedness	Adult Training Dummy Mannequin Simulators	PHO, C/MHO	DOH	6 items	6					Procurement Documents	PHO	Review of documents		PDRR MC		Other Source	
	6 items	Disaster Preparedness	Infant CPR Mannequin Simulators	PHO, C/MHO	DOH	6 items	6					Procurement Documents	PHO	Review of documents		PDRR MC		Other Source	
	6 items	Disaster Preparedness	AED(Automated External Defibrillation) Device (Trainer) with remote	PHO, C/MHO	DOH	6 items	6					Procurement Documents	PHO	Review of documents		PDRR MC		Other Source	

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	6 items	Disaster Preparedness	Pediatric ambu bag BVM with carry bag	PHO, C/MHO	DOH	6 items	6						AIR			Once	PDRR MC		Other Source
	0	Disaster Preparedness	Large 1000ml ambu bag BVM / Bag Valve mask emergency resuscitation with carry bag	PHO, C/MHO	DOH	6 items	6						AIR			Once	PDRR MC		Other Source
	1 glass board, 2 filling cabinet, 2 long table with chair, 10 monoblock chairs, glass	Disaster Preparedness	Updating and equipping functional Health Emergency Operation center and local epidemiologic surveillance unit	PHO, C/MHO	DOH								AIR			Once	PDRR MC		Other Source
	1 glass board, 2 filling cabinet, 2 long	Disaster Prepa	Furniture and fixtures for health emergenc	PHO, C/MHO	DOH	1 glass board, 2 filling											PDRR MC		Other Source

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	table with chair, 10 monoblock chairs, glass	redness	operation center			cabinet, 2 long table with chair, 10 monoblock chairs,													
	1 tablet, 2 cellular phone, 2 sets hand radio	Disaster Preparedness	ICT for Health Emergency Operation Center	PHO, C/MHO	DOH	1 tablet, 2 cellular phone, 2 sets hand radio, 2 PC with complete accessories, 2 printer with scanner	2 tablet, 2 cellular phone, 2 sets hand radio, 2 PC with complete accessories, 2 printer with scanner						Acceptance Inspection Report (AIR)				PDRR MC		Other source
	100% available health emergency	Disaster Preparedness	Stockpiling of Drug and Medicine health	PHO, C/MHO	DOH	100% available health							AIR				PDRR MC		Other source

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	commodities	redness	emergency commodities and supplies of th 4 clusters.			h emer genc y com modit ies and suppl ies.													
	10 project sites geotagged	Disaster Preparedness	Community Learning on El Niño induced forest fire	PENRO	DE NR, BFP	350 pax (35 pax per project sites)	350	350	350	350	350	pax	geotag photos, list of recipients	PENRO					

## Disaster Response

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
11 LGUs	100% issued timely, accurate, reliable advisories	Response	Issue timely, accurate and reliable information, protocols and public advisories during	PDRRMO								No. of advisories issued	Actual advisories released	PDRRMO	Document review	Quarterly	PDRRMO, PDRRMC, OCD	Personnel	LDRRMF

Area s Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
			response operations																
11 LGUs	100% incidents requiring IMT responded		Activation of IMT	PDRRMO								No. of Incidents responded by the IMT	ICS Forms	PDRMO	Document review	Quarterly	PD RR MO, PD RR MC, OC D	Pers onnel	LDRR MF
11 LGUs	100% of incidents requiring PDRA conducted	Response	Conduct PDRA to assess hazard's level of risk in the specific area with the prescribed period	PDRRMO, PEO, PAGRO, PSWDO, PVO	PRC, PNP, AFP, BFP							No. of incidents assessed with PDRA in the specific area	Situational/ Feedback report	PDRMO	Document review	Semestral	LDR RM C me mbers, Funding age ncie s/ don ors	Meal s & Snac ks, Pers onnel , fuels, vehic les	LDRR MF

Area s Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
11 LGUs	100% of incidents requiring RDANA conducted	Response	Conduct RDANA to assess extent impact and needs of the communities	PDRRMO, PEO, PAGRO, PSWDO, PVO	PRC, PNP, AFP, BFP							No. of incidents assessed with PDRA in the specific area	Situational/ Feedback report	PDRRMO	Document review	Semestral	LDRRMC members, Funding agencies/ donors	Meals & Snacks, Personnel, fuels, vehicles	LDRR MF
11 LGUs	100% of identified population in danger-zone pre-emptively evacuated before the onslaught of the hazard		Conduct pre-emptive evacuation	PDRRMO, LDRRMO	AFP, BFP, PNP, Coast Guard							No. of individuals pre-emptively evacuated	Situation Report	PDRRMO	Document review	Quarterly	PD RRM O, PD RRM C, OC D, DS WD	Pers onnel	LDRR MF

Area s Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Mean s of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
11 LGUs	100% of needed response operations conducted	Response	Provision of relief goods/ assistance grants to disaster affected families/ individuals	PSWDO	DSWD							No. of families provided with relief goods / assistance grants	RIS, RDS	PSWDO-DRM	Document review	Semestral	LDRRM C members, Funding agencies/ donors	Meals & Snacks, Personnel	LDRRMF
11 LGUs	100% persons in distress provided with Search, Rescue and Retrieval services	Response	Conduct Search, Rescue and Retrieval	PDRRMO	BFP, PNP, PA, Coast Guard							No. of individuals provided with SRR	Logbook, Situation Report	PDRRMO	Document Review	Quarterly	PD RRM C, PD RRM O, OC D, DS WD	Pers onnel , Computer	LDRRMF
11 LGUs	100% of the action taken in planning	Response	Implementation of Disaster Response Plans: · Provincial Disaster Response	PSWDO, PDRRMO	DSWD, OCD							No. of response cluster members participated	Situational Report, Minutes of meeting,	PDRRMO	Document review, Planning	Semestral	LDRRM C members, Funding	Meals & Snacks, Personnel	LDRRMF

Area s Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	addressed		Plan - CCCM Plan									during incident	Attendance					agencies/donors	
11 LGUs	100% of evacuation system/camp management activated at the city/municipal level	Response	Activation of evacuation system/camp management, set of procedures for affected families	P/LSWDO, P/LDRRM O	DSWD							No. of families situated in evacuation camp & activated procedures	Situational/Assessment Report, Photo documentation	P/LSWDO	Meeting	Semestral	LDRRM C members, Funding agencies/donors	Tent supplies, Meals & Snacks, Personnel	LDRRMF
Area s Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E	
	Short Term Target		PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
11 LGUs	100% Women Friendly Space and Children Friendly Space established within the city/municipal level	Response	Activation/establishment of women and children friendly spaces	PSWDO, PDRRMO, Dep-Ed, PEO, PHO, GAD, LSWDO	DSWD							No. of Women and children provided with basic needs and services inside the camp	Activity report, situational report, photo documentation, Intake sheet form	P/LSWDO	Workshop	Semestral	LDRRM C members, Funding agencies/donors	Tent supplies, Meals & Snacks, Personnel	LDRRMF

	unicipal level																		
11 LGUs	100% cash for work/food for work services implemented; No. of affected population Implementation of temporary livelihood and or income generat	Response	Implementation of temporary livelihood and or income generating projects (i.e. food for work, cash for work)	PSWDO, PESO/EWDD	DSWD, DOLE							No. of families provided with livelihood and income generating projects through food for work or cash for work	Payroll, seminar orientation, attendance, photo documentation	PSWDO	Meeting	Semestral	LDRMC members, Funding agencies/donors	Meals & Snacks, Personnel, vehicle, fuel	LDRRMF

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
	ing projects (i.e. food for work, cash for work)																		
11 LGUs	100% Mental Health and Psychosocial Support/Psychological First Aid services conducted	Response	Conduct of MHPSS/PFA to affected families/individuals and responders	PSWDO	DSWD							No. of families/individuals/responders conducted with MHPSS/PFA intervention	Assessment report, Case summary	PSWDO	Document review	Semestral	LDRM C members, Funding agencies/donors	Meals & Snacks, Personnel, vehicle, fuel	LDRR MF
11 LGUs	100% of affected LGU provided with CCCM augmentation	Response	Provision of augmentation support to the CCCM implementation of affected LGU	PSWDO	DSWD							No. of affected LGU provided with CCCM Augmentation	Assessment report	P/LSWDO	Document review	Semestral	LDRM C members, Funding agencies/	Meals & Snacks, Personnel, vehicle, fuel	LDRR MF

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E		
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027									2028	
																				donors	
11 LGUs		Response	Procurement and allocation of essential health and nutrition emergency commodities (drugs, medicines and others .)	PHO	DOH	30% Of the affected population							PO	PHO						LDRR MF	
11 LGUs			Mental Health Emergency Drugs and Medicine	PHO	DOH	30% OF 1150 Mentally Ill								PO	PHO						LDRR MF
11 LGUs			Procurement of prepositioned Breastfeeding Kits during disaster and/or emergencies	PHO	DOH	30% Of the affected population								PO	PHO						LDRR MF

Area s Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Mean s of Verification	Char ge of Moni toring / Data Gather ing	Meth od of Gather ing	Freq uen cy	M& E data user s	Reso urces need ed	Source of Funds to conduc t M&E	
		Them atic Area	PPA Code and Description	Implement ing Office	Partn er Agen cies		For Outputs	2024	2025	2026	2027									2028
11 LGU s			Procureme nt of Medicines and others supplies for WASH in Emergency and disaster.	PHO	DOH	30% Of the affected population							PO	PHO						LDRR MF
11 LGU s			Procureme nt of Medicines and others supplies for EREID Dengue in Emergency and disaster.	PHO	DOH	30% Of the affected population							PO	PHO						LDRR MF
11 LGU s			Collection, validation, and submission health emergency and disaster reports(post mission report,field reports,final report and other EREID reports)	PHO	DOH	100% Collected, validated and submitted health emergency and disaster reports.							PO	PHO						LDRR MF

Area s Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
11 LGUs			Mobilization of HERT, DSO, ERID focal person during disease outbreak and pandemic.	PHO	DOH /HEM B/ RES U	100% Mobilization of HERT, DSO, EREID focal person during disease outbreak and pandemic.							Attendance, reports, pictures	PHO	Field situational report, health situational report, post incident report			Meals & Snacks, Personnel, vehicle, fuel	LDRR MF
11 LGUs	100%		Mobilize Quick Response Mechanism for Animal Rescue and Management.	PVO															
11 LGUs			Conduct treatment of swine in outbreak zones (Identify and administer veterinary drugs and medicines	PVO															

Areas Affected	DRRM Targets	DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
		Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies		For Outputs	2024	2025	2026	2027								
			to infected animals)																
11 LGUs			Burial of infected swine	PVO															
11 LGUs			Decontamination and mandatory closure of infected farms	PVO															

## Disaster Rehabilitation and Recovery

DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
	Conduct Post-Disaster Damage and Needs Assessment	PEO, PAGRO, PVO, PSWDO, PHO, CEO, MEO, CAGRO, MAGRO, CVO, MVO, CSWDO, MSWDO, CHO, MHO, BPLO	DOLE, DTI, POWER SERVICE PROVIDER, AFP, CSO, BLGU, DEPED, DPWH, BFP	100% damaged Urban Infrastructure, Critical facilities, lifelines, Natural Resources assessed						No. of PDNA Conducted	PDNA Report	PDRRM O	Data Collection	Every after massive incident	PDR RMC		LDRR MF
	Development and implementation of comprehensive plan for the restoration of local	PESO, BPLO, PBO	DOLE, DTI	Implemented necessary rehabilitation and recovery activities for the restoration						No. of rehabilitation conducted	Project Completion Report	PDRRM C	Data Collection		PDR RMC		LDRR MF

DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
	economic activities			on of local economy													
	Identification and mobilization of funding resources	PBO, PACO, PTO, MBO, OMA, MTO	OCD, DILG	0						No. of funding resource identified	List of Funding Agencies	PDRRM C	Data Collection		PDR RMC		LDRR MF
	Identification of safe and secured relocation sites	PEO, PSWDO, PDRRM O, PPDO, MEO, MSWDO, MDRRM O	DHSUD, DILG, AFP	Identified sites for relocation of affected population						No. of safe relocation sites identified	Resolution	PDRRM C	Data Collection		PDR RMC		LDRR MF
	Relocation of affected persons/households	PSWDO, PEO, MDRRM O, PNP	AFP	Relocated affected families to safer sites						No. of affected persons relocated	Relocation report	PDRRM C	Data Collection		PDR RMC		LDRR MF
	Provide standards designs for houses or shelters	PEO, CEO, MEO	OCD, DILG, DPWH, BFP	100% of houses or shelter with standard design							Design	PDRRM C	Review of Design		PDR RMC		LDRR MF

DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
	Restored/repair Infrastructure, agricultural and social facilities & utilities following the standards of safety & resiliency	PEO, CEO, MEO	OCD, DILG, DPWH, BFP	100% damaged infrastructure, agricultural and social facilities & utilities restored/repaired						No. of Infrastructure, agricultural and social facilities & utilities restored/repaired	Project Completion Report	PEO	Field Inspection	After completion	PDR RMC , OCD		
	Strengthen collaboration and partnerships with concerned institutions in the provision of psychosocial and debriefing services to affected persons	PHO, PSWDO, MSWD	DSWD	- Debriefing and psychosocial activities conducted							After Activity report	PSWDO	Evaluation		PDR RMC		

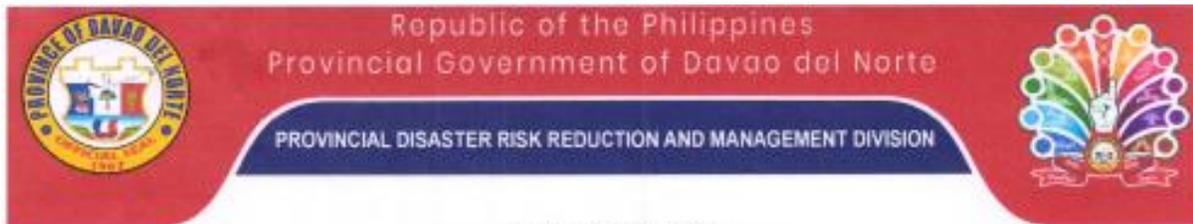
DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
	Procurement of medicine, drugs and supplies for sustainable health service to the identified affected individuals	PHO, MHO/CHO, PEEDO (hospitals)	DOH	-100% of health supplies and service procured													
	Designing and reconstruction of disaster-ready housing	PEO, CEO, MEO, DPWH, BFP	OCD, DILG	- 100% of resilient housing constructed (target_recipient)													
	Relocation of affected persons/households	PSWDO, PEO, MDRMO, PNP	AFP	- 100% of identified for relocation household relocated													
	Re-organization of peace	PNP, LEGAL OFFICE	AFP, BLGU, CSO	- 100% of rehabilitated													

DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
	keeping forces			damaged infrastructure													
	Undertake necessary repair, rehabilitation and development of damaged public infrastructures facilities and utilities	PEO, CEO, MEO	OCD, DILG, DPWH, BFP							No. of necessary repair, rehabilitation and development activities conducted of damaged public infrastructures facilities and utilities	Project Completion Report	PEO	Review of documents	After project completion	PDR RMC		
	Relief Operations Assistance	PEO, MEO, PSWDO PDRRM O, MDRRM O	BFP, PNP	- 100% of Relief Operations Conducted - 100% of household assisted													

DRRM Measures Planning				Baseline	Output / Timeframe					Indicator	Means of Verification	In-Charge of Monitoring / Data Gathering	Method of Gathering	Frequency	M&E data users	Resources needed	Source of Funds to conduct M&E
Thematic Area	PPA Code and Description	Implementing Office	Partner Agencies	For Outputs	2024	2025	2026	2027	2028								
	Establishment of containment zone free ASF areas	PVO	BAI	Negative Results / 100% sentinel pigs free from ASF disease.													
	Dispersal program and restocking activity	PVO	DA Livestock	List of Affected farmers and numbers of damage animals													
	Capacity Development	PVO		Improved husbandry practices													
	Implementation of health program	PVO		Disease incidence reduced													

# ANNEXES

## LDRRMP Formulation Process:



### TERMINAL REPORT

#### LOCAL DISASTER RISK REDUCTION AND MANAGEMENT PLANNING WORKSHOP

December 4-7, 2023

Royale House Travel Inn and Dormitel, Tagum City

#### RATIONALE:

The Local Government Code of 1991 mandates all local government units (LGUs) to be the frontline of emergency measures during and after disasters. Further, the enactment of Republic Act 10121 strengthened the capacities of LGUs through the promotion of bottoms-up and participatory approach in disaster risk reduction and management (DRRM).

Serving as the first responders and primary implementers of DRRM, the LGUs should be well equipped with capacities and resources in carrying out DRRM activities to ensure the safety of the lives of their constituents. As such, RA 10121 mandates the LGUs to constitute their Local Disaster Risk Reduction and Management Council (LDRRMCs) and establish their own Local DRRM Offices. Moreover, the law provides for the development of the Local DRRM Plan.

The Local DRRM Plan is the strategic road map to attain resilience against disasters and attuned with the National DRRM Framework (NDRRMF) and the priorities of the National DRRM Plan (NDRRMP). It provides detailed information on LGUs assessment of hazards, exposure, vulnerabilities, capacities, and goals, objectives, outcomes, action plan (including key outputs, activities, timeframe, and budget), and monitoring and evaluation for the four (4) thematic DRRM thematic areas: disaster prevention and mitigation, disaster preparedness, disaster response, and disaster rehabilitation and recovery.

#### OBJECTIVE:

At the end of the workshop, the participants were able to draft an updated Davao del Norte Local DRRM Plan 2024-2026.

#### OUTPUT OF THE ACTIVITY:

The workshop was held for four days. After the Planning Workshop, the participants were able to draft per DRRM Thematic Areas:

- Situational Analysis
- DRRM Thematic Area Goals
- Objectives and Outcomes
- DRRM Thematic Area PPAs
- LDRRMFIP
- Monitoring and Evaluation Plan.

#### ACTUAL PARTICIPANTS:

Personnel from PPDO, PENRO, PHO, PICKMO, PADO, PSWDO, PAGRO, PVO, and PDRRMO. Also, from the Local Government Units, and Civil Society Organization participated. Facilitated by the Office of Civil Defense and the Provincial Disaster Risk Reduction and Management Office (PDRRMO).

*PPDO - PDRRMP - 2712 - 110*



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**WAYS FORWARD:**

December 7 - 12, 2023	Drafting and Completion of Data
December 13, 2023	Deadline Submission of Data/PPAs
December 14, 2023	Consolidation of Data
December 15, 2023	Refinement of Draft LDRRMP
December 21, 2023	Presentation of LDRRMP for the Approval of PDRRMC

**PHOTO DOCUMENTATION:**



Submitted by:

*Glenda O. Delideli*  
**GLEND A. DELIDELI**  
Local DRRM Officer IV 4  
Chief, DRRM Division

Noted by:

*Gale Guadalupe G. Mortillero*  
**GALE GUADALUPE G. MORTILLERO, MSLRG, MHRM**  
Assistant Provincial Administrator (Administration)



Participation of various stakeholders



Republic of the Philippines  
Province of Davao del Norte  
Mankilam, Tagum City



ATTENDANCE SHEET

Office : PADO-DISASTER RISK REDUCTION AND MANAGEMENT DIVISION  
Activity : LOCAL DISASTER RISK REDUCTION AND MANAGEMENT PLANNING WORKSHOP  
Venue : ROYALE HOUSE TRAVEL INN AND DORMITEL, MAGUGPO EAST, TAGUM CITY  
Date : DECEMBER 4, 2023

NAME	DESIGNATION/ POSITION	GENDER		OFFICE	SIGNATURE
		F	M		
1. ISIEM B. ARAGONES	AA III	✓		PDRRMO PDRRMO 5-PRDRM	[Signature]
2. EUGENE M. CARLOS	COO II	✓		OCU XI	[Signature]
3. CHERYL BERNABIA S. GORDON	COO III	✓		OCU XI	[Signature]
4. CARMY PONGY-TAN	COO IV	✓		OCU XI	[Signature]
5. MANGGAB RWO MASINIRIN	PSO I		✓	PDRRMO	[Signature]
6. GILBERT T. CORTA-AJAN	891B		✓	891B	[Signature]
7. ARKANO B. CLARIDO III	CCR - SS/PMS		✓	Philippine Red Cross	[Signature]
8. CHRISTEL B. OVALLO	DNARO-PAH		✓	DAVAO NORTE/PDRR	[Signature]
9. HAZEL E. GIANARDI	AD IV	✓		PADO-ADMIN	[Signature]
10. MARY CHRISTINA RICH D. GULOS	AD II	✓		COMMO-TRCO	[Signature]
11. MARY JOY O. FONTANILLA	PO I	✓		PPRO	[Signature]
12. JOSEL PERAY	PSADVI	✓		LGU SAN ISIDRO	[Signature]
13. KEZIAH PEJA TRINE	AA		✓		[Signature]
14. CARAZA S. PERA	SAA-1	✓		PDRRMO	[Signature]
15. JIMM B. MACHING	C1 Admin		✓	RRR DENVER	[Signature]
16. JIM L. SALARZA	IT STAFF		✓	BFP DAVAO	[Signature]
17. DOMINIC BASALO	PHO I		✓	PHO	[Signature]
18. VERA REYES	NURSE I		✓	PHO	[Signature]
19. CRISPINA WOLFE	OFFICER	✓		DG B DVI	[Signature]
20. JULIO M. TALAMON	CDRMMO III		✓	SABO TOMAS	[Signature]
21. JAKE TRAVIS L. JARREZ	ADMIN AD		✓		[Signature]
22. KIN REY O. BANGSUDAN	COO I		✓	PDRRMO KATHARINE	[Signature]
23. RENESE, ORES JUAN S	AA I		✓	UC - MORRADO	[Signature]
24. JONATHAN R. JIMENA	LORRMMU I	✓		CDRMMO	[Signature]
25. LT ALDRIN M. FELIPE PA	EX-O		✓	601B, 101D, PA	[Signature]

Attested by:

[Signature]

PADO-PDRRMO-2012-381

Certified Correct

[Signature]

GLENDIA O. DELIDELI  
LDRRMO-IV  
PADO-PDRRMO



ATTENDANCE SHEET

Office : PADO-DISASTER RISK REDUCTION AND MANAGEMENT DIVISION  
Activity : LOCAL DISASTER RISK REDUCTION AND MANAGEMENT PLANNING WORKSHOP  
Venue : ROYALE HOUSE TRAVEL INN AND DORMITEL, MAGUGPO EAST, TAGUM CITY  
Date : DECEMBER 4, 2023

NAME	DESIGNATION/ POSITION	GENDER		OFFICE	SIGNATURE
		F	M		
26. PFC MELVIN JAMES L. NAGUIT			/	GO 1B, 10 1D, 1A	
27. PVT MARK ANTHONY F. MONTERO			/	GO 1B, 10 1D, 1A	
28. ENSR. HARZEL ZAFRA	Acting PPDC	/		PPDO	
29. ENGR. HENRY T. CABALLERO	E-11		/	DPWH	
30. ENGR. RYAN JAMES C. RACHO	E-11		/	DPWH	
31. Hency Jean Navion	(SW-1)	/		PSWDB	
32. ENGR. JOHN ANGELO P. COJEN	E-1		/	DPWH	
33. ALDEN C. BARRAS	AA	/		MDRRMO LGU CANTON	
34. JOHN REY S. VILLANUEVA	AD 11		/	PRC/MO	
35. Krin Roland Sorreno	LODRMO M		/	MDRRMO Tagum	
36. JEJOSA R. PLANTO	STAFF	/		MDRRMO Tagum	
37. JILL A. ESPIRITU	ADU	/		PEO	
38. Angelie C. Rosales	Sr. OMS	/		PENRO	
39. Janna P. Francisco	Sr. OMS		/	PENRO	
40. Janna R. Fortunista	Personel Planning		/	LODRMO Asst. Dir. PPDO	
41. MANDREO B. PANTON	AA/PPDO	/		PPDO	
42. Rey Christopher V. Cosman	Admin. Asst. II	/		PPDO	
43. Rezielle R. Uy	E-1	/		PEO	
44. RUSSELL FLORENTIALYS	PCO III	/		PDU	
45. Raymond A. Cagay	SrO	/		PAGEO	
46. Jose Atlich B. Alino	POA		/	PAGRO	
47. Jaded Jay A. Salomon	Pres/DRRMO Tagum	/		Paratid	
48. Rudite Ariate	AA-III	/		PDPOMC	
49. LANNY CUMIT	ONS III	/		PSMO	
50. Karen U. Nodayong	AA-11	/		PORRMO	

Attended by:

Certified Correct:

GLENDA O. DELIDELI  
IDRRMO-IV  
PADO-PDRRMD

PADO-PDRRMD-2712-782



EXECUTIVE ORDER NO. 46  
Series of 2023

**“AN ORDER RECONSTITUTING THE COMPOSITION OF THE PROVINCIAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL, ITS TECHNICAL WORKING GROUP AND THE SPECIAL ACTION COMMITTEE”**

**WHEREAS**, Section 11 of the Republic Act 10121 mandates the existence of the Local Disaster Risk Reduction and Management Council (LDRRMC) at the provincial, city, and municipal levels;

**WHEREAS**, considering the charge of officers and representatives of newly accredited civil society and private organizations of the Province of Davao del Norte, it is deemed necessary to reconstitute the Provincial Disaster Risk Reduction and Management Council, Technical Working Group, and Special Action Committee;

**WHEREAS**, the amendment aims for more effective coordination between the agencies involved in the planning, implementation, monitoring, and evaluation of the mandates of the Provincial Disaster Risk Reduction and Management Council;

**NOW, THEREFORE, I, EDWIN I. JUBAHIB**, Governor of the Province of Davao del Norte, by virtue of the powers vested in me by law, do hereby order the reconstitution of the Provincial Disaster Risk Reduction and Management Council (PDRRMC), its Technical Working Group (TWG), and the Special Action Committee, viz:

**Section 1. Composition.** The Provincial Disaster Risk Reduction and Management Council (PDRRMC). PDRRMC shall be composed of the following:

- |  |   |  |
|--|---|--|
| Chairperson                                    | : | <b>HON. EDWIN I. JUBAHIB, MMPA</b><br>Governor   |
| Vice Chairperson                               | : | <b>HON. DE CARLO L. UY, MBA</b><br>Vice Governor   |
| Permanent Representative<br>of the Chairperson | : | <b>JOSIE JEAN R. RABANOZ, CE, MPA, EnP</b><br>Provincial Administrator   |
| Members  | : | 1 <sup>st</sup> District Congressional Office<br><br>2 <sup>nd</sup> District Congressional Office<br><br>Sangguniang Panlalawigan<br>Chairperson on Committee on Health and Social Services<br><br>Sangguniang Panlalawigan<br>Chairperson Committee on Peace & Order / Public Safety<br><br>President, Federation of Associations of Barangay Captains<br>(FABC)<br><br>Provincial Planning and Development Office |



**Section 3. Technical Working Group (TWG) Composition.** The TWG shall be composed of the following:

- Team Leader :** **JOSIE JEAN R. RABANOZ, CE, MPA, EnP**  
Provincial Administrator  
Executive Officer - PDRRMC
- Co-Team Leader :** **ENGR. MARIA HAZEL C. ZAFRA, EnP, MMPA**  
Acting P.G Department Head, PPDO
- Members :** **MS. ROSALINDA O. RAPISTA, RSW, MPA,**  
Department Head, PSWDO
- MR. JEFFREY C. CALAMONGAY**  
Assistant Department Head, PSWDO
- MS. LANNY L. GUNIT, RSW, SWO III, PSWDO**  
**MS. KRISTEL GRACE BALIAR, SWO I, PSWD**  
**DR. ALFREDO A. LACERONA, Department Head, PHO**  
**DR. DOMINIC R. BASALO, PHO I, PHO**  
**DR. JOSEPHINE THERESE P. PARREÑAS, MO IV, PHO**  
**MS. GLOMERLINA LAAG, Nurse II, PHO**  
**ENGR. TESSIE G. ABABON, Acting Asst. Department Head, PEO**  
**ENGR. REZIELLE R. UY, Engineer I, PEO**  
**MS. JILL A. ESPIRITU, OIC-SAO, PEO**  
**MR. CHRISTOPHER D. COSMOD, CPA, Admin. Asst. II, PBO**  
**MR. JUNREY S. VILLANUEVA, Admin. Officer II, PICKMO**  
**MS. GLENDA O. DELIDELI, LDRRMO IV, PDRRMD**  
**MR. ERIC R. ROSILLO, LDRRMO III, PDRRMD**  
**MS. CORAZON S. PERO, Senior Admin. Assistant I, PDRRMD**  
**MR. MELVIN ROY A. JAVIER, Admin. Officer IV, PDRRMD**  
**MS. MANGGOB REVO N. MASINARING, PSO I, PDRRMD**  
**MS. NOVIEJANE ROJAS, LDRRMO I, PDRRMD**  
**MR. VINCENT L. DUQUE, Admin. Aide IV, PDRRMD**
- MS. MILDRED B. FUNTILON, MSLRG, MPM, EnP**  
Acting P.G. Asst. Department Head, PPDO
- MS. MARY JOY O. FONTILLA, LPT, Planning Officer I, PPDO**  
**DR. DENNIS A. SUMAOY, Acting Department Head, PVO**  
**MS. RUSSEL FLOR MALALIS, Admin. Officer IV, PVO**
- MS. ALPHABET G. GULANES, RA, MM**  
Acting P.G. Asst. Department Head, PAGRO
- ENGR. RAYMUND A. COGAY**  
Supervising Admin. Officer, PAGRO
- MR. NELSON F. PLATA, EnP,**  
Acting Department Head, PENRO
- MR. REIL DELOSA, JR., SEMS, PENRO**  
**MS. RO-ANN GRANCHO, SEMS, PENRO**  
**MS. HAZEL G. GRANADA, Admin. Officer IV, PADO**  
**ENGR. LARRY A. ABLEN, Disability Affairs Officer IV, PADO**  
**MS. MARY KRISTINE C. SAGOT, RN, DepEd-Davao del Norte**
- Representative of Department of Public Works and Highways**  
**Operation Officer, 1001<sup>st</sup> Brigade, Philippine Army**



EXECUTIVE ORDER NO. 34  
Series of 2023

**AN ORDER CREATING THE TECHNICAL WORKING GROUP FOR THE CLIMATE AND  
DISASTER RISK ASSESSMENT (CDRA) OF THE PROVINCE OF DAVAO DEL NORTE**

WHEREAS, the Province of Davao del Norte is updating the Provincial Development and Physical Framework Plan (PDPFP) for CY 2023-2029 which was prepared pursuant to Joint Memorandum Circular No. 1, Series of 2023, or the Interim Guidelines of PDPFP with the use of the Provincial/Local Planning and Expenditure Management (PLPEM) Guidebook prepared by NEDA.

WHEREAS, in support of the Climate Change Law, NEDA and the Department of Human Settlements and Urban Development (DHSD) embarked on the development of supplementary guidelines for the use of provincial planners in integrating disaster risks in their development plans so that proper spatial strategies can be adopted in avoiding and/or mitigating risks brought about by natural hazards;

WHEREAS, Republic Act No. 10121 known as the Philippine Disaster Risk Reduction Management Act of 2010 provides that the LGUs shall ensure the integration or mainstreaming of disaster risk reduction and climate change adaptation into local development plans and programs as a strategy in sustainable development;

WHEREAS, Republic Act No. 7160, otherwise known as the "Local Government Code of 1991" mandates the Local Government Units to share with the National Government the responsibility for the management and maintenance of ecological balance in their respective territorial jurisdiction;

WHEREAS, Republic Act No. 9729 known as the Climate Change Adaptation of 2009 serves as the basis for mainstreaming disaster risk reduction and climate change adaptation in local development planning at all levels of the government;

WHEREAS, the abovementioned memorandum also provided the composition of members of the TWG which recommends that the following offices be represented in the team; Planning and Development, Environmental Protection, Health, Engineering, Agriculture, Social Welfare and Development, Disaster Risk Reduction Management (DRRM) and other members may be selected from other offices.

WHEREAS, Pursuant to this provision of the law, the Provincial Government of Davao del Norte issued this Executive Order for the creation of the CDRA Technical Working Group (TWG) which will closely and collaboratively work for the successful formulation of the Climate and Disaster Risk Assessment of Davao del Norte;

NOW, THEREFORE, I, EDWIN I. JUBAHIB, Governor of the Province of Davao del Norte, by virtue of the powers vested in me by law, do hereby order the creation of the CDRA Technical Working Group which comprises the following:

**Section 1.** Composition of the CDRA Core Team. The Provincial CDRA Core Team shall be as follows:

- |             |   |  |
|-------------|---|--|
| Chairperson | : | <b>ENGR. JOSIE JEAN R. RABANOZ, CE, MPA, ENP</b><br>Provincial Administrator                           |
| Members     | : | <b>ENGR. MARIA HAZEL C. ZAFRA, ENP, MMPA</b><br>Acting Provincial Planning and Development Coordinator |

**Section 3.** Composition of the CDRA - Technical Working Group. The CDRA TWG shall be composed of the following:

Team Leader	:	<b>GLEND A. DELIDELI</b> LDRRM Officer IV, PADO-PDRRMD
Members	:	<b>PRINCESS LYN N. VISTAL, EnP</b> Planning Officer IV, PPDO
	:	<b>GEMMA C. MONTEGRANDE, EnP</b> Project Development Officer IV, PPDO
	:	<b>ODILON G. JUNTILLA, EnP</b> Planning Officer II
	:	<b>MARY JOY P. OLAVIDES, LPT</b> Planning Officer I

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:	<b>ROMCEL A. DORO-ON</b> Administrative Officer II
:	<b>ENGR. DONNIE A. VILLANUEVA</b> Administrative Assistant II
:	<b>HELIX ANNE A. CABATUAN</b> Administrative Aide IV
:	<b>ENGR. JUNE MAR M. FONTANILLA</b> Administrative Assistant VI
:	<b>MARK JOSEPH A. EDIG</b> Administrative Aide I
:	<b>MANGGOB REVO MASINARING</b> Public Service Officer I, PADO-PDRRMD
:	<b>RONIE BALONG</b> Administrative Aide VI, PADO-PDRRMD
:	<b>FOR. RIEL DELOSA</b> Supervising EMS, PENRO
:	<b>ENGR. ALLEN BATALUNA</b> Supervising EMS, PENRO
:	<b>FOR. ANGELIE C. ROSALES</b> Environmental Management Specialist II, PENRO
:	<b>CECILIA SANTANDER</b> Social Worker Officer II, PSWDO
:	<b>CHRISTOPHER DAN CARIAGA</b> Statistician II, PHO
:	<b>GLOMERLINA LAAG</b> Nurse II, PHO
:	<b>ENGR. THESSA DELA CRUZ</b> Engineer I, PEO
:	<b>ENGR. GILBERT A. MAMBULAO</b> Engineer II, PEO
:	<b>ENGR. RAYMUND COGAY</b> Supervising Administrative Officer IV, PAGRO
:	<b>ENGR. CHRISTOPHER S. DALISAY</b> Engineer II, PAGRO
:	<b>ANICETO IPANAG</b> Administrative Officer V, PICKMO
:	<b>JOHN RALPH AMAMIO</b> PDS I, PADO-SPPD

**Section 4.** Functions of the CDRA-Technical Working Group. The CDRA-TWG shall have the following functions:

PAGE 3 OF 4 AN ORDER CREATING THE TECHNICAL WORKING GROUP FOR THE CLIMATE AND DISASTER RISK ASSESSMENT (CDRA) OF THE PROVINCE OF DAVAO DEL NORTE