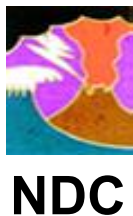


NORTHERN PROVINCE DISASTER RISK MANAGEMENT STRATEGY 2020 – 2030



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Funded by:	USAID
Facilitated by:	International Organization for Migration
Produced by:	Oro Provincial Administration



NDC



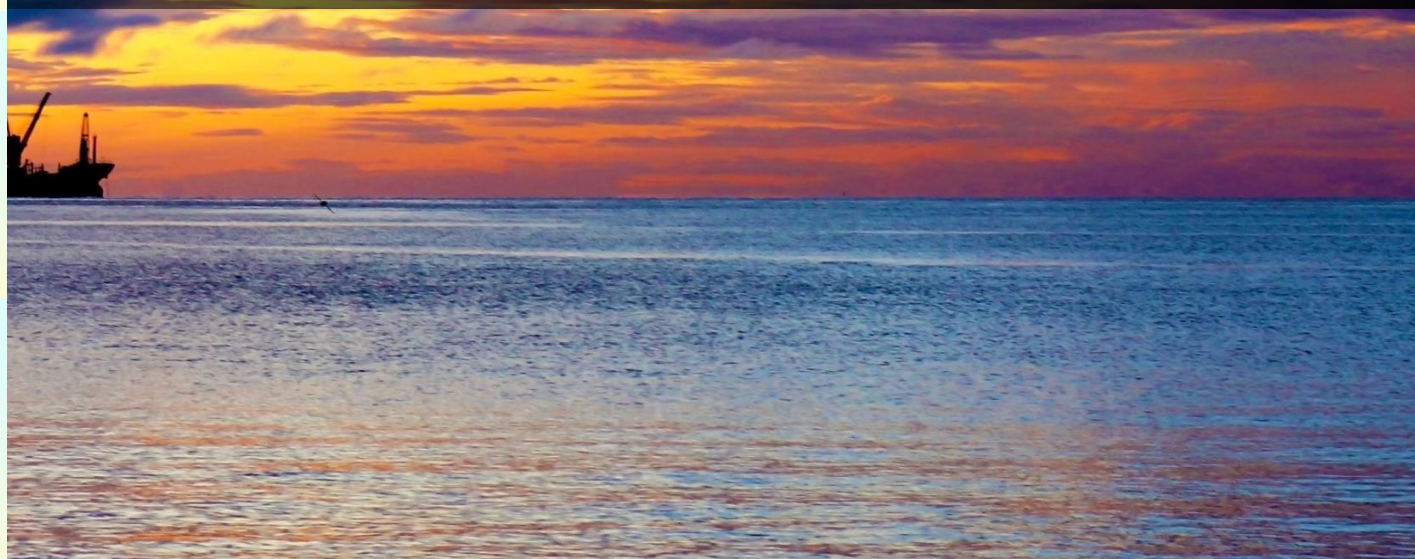
LIST OF ACRONYMS

DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
DDA	District Development Authority
GIS	Geographic Information System
GDP	Gross Domestic product
IOM	International Organization for Migration
PNG	Papua New Guinea
PDC	Provincial Disaster Centre
NDRR	National Disaster Risk Reduction Framework 2017-2030
NDC	National Disaster Centre
NP-DRMS	Northern Province Disaster Risk Management Strategy
USAID	United States Agency for International Development



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McRobins Photography

GLOSSARY

Acceptable risk:

The level of potential losses that a society or community considers acceptable given existing social, economic, political, cultural, technical, and environmental conditions.

Building Code:

Ordinances and regulations controlling the design, construction, materials, alteration and occupancy of infrastructure to ensure human safety and welfare. Building codes include both technical and functional standards.

Capacity:

The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals.

Capacity development:

The process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.

Climate change:

The Inter-governmental Panel on Climate Change (IPCC) defines climate change as:

Change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forces, or to persistent anthropogenic changes in the composition of the atmosphere or in land use".

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods".



Photo: The Northern Provincial Administration Divisional Heads with United Nations Migration Agency/IOM Project Manager (Outgoing) Wonesai Sithole at an introductory meeting of New IOM Project Manager (Sato Tomoko and Project Officer Christine Conway in June 2018. Photo by Christopher Soweni @ PDC Northern Province.

Contingency planning:

A management process that analyses 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.

Coping capacity:

The ability of people, organizations, and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters.

Critical facilities:

The primary physical structures, technical facilities and systems which are socially, economically, or operationally essential to the functioning of a society or community, both in routine circumstances and in the extreme circumstances of an emergency.

Disaster:

A serious disruption to the functioning of a community or society causing widespread human, material, economic or environmental losses that exceed the ability of the affected community or society to cope using its own resources. A disaster is a function of a risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity to reduce the potential negative consequences of risks.

Disaster risk:

The potential disaster losses — in lives, health status, livelihoods, assets, and services — which could occur to a community or a society over a specified future time period.

Disaster risk 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.

Disaster risk reduction:

The concept and practice of reducing disaster risks through systematic efforts, to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.



Photo: Major stakeholders in Disaster Risk Reduction activities are private business entities. Resources can be shared to serve during emergency situations. Picture of Tufi Dive resort boats. © Benson McRubins Burau/ Media & ICT Unit Oro Provincial Administration.



Photo: The Oro Provincial Administration Building remains occupational. It is a very critical building as it houses the office of the Province Disaster Centre. Critical government infrastructure is an important asset for maintenance and or relocation to safe zones. © Benson McRubins Burau/ Media and ICT Unit Oro Provincial Administration.

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 enough time to reduce the possibility of harm or loss.

Emergency management:

The organization and management of resources and responsibilities for addressing all aspects of emergencies, preparedness, response and initial recovery steps.

Emergency services:

The set of specialized agencies that have specific responsibilities and objectives in serving and protecting people and property in emergency situations.

Environmental degradation:

The reduction of the capacity of the environment to meet social and ecological objectives and needs.

Environmental impact assessment:

The process by which the environmental consequences of a proposed project or programme are evaluated, undertaken as an integral part of planning and decision-making processes with a view to limiting or reducing the adverse impacts of the project or programme.

Forecast:

A definite statement or statistical estimate of the likely occurrence of a future event or conditions for a specific area.

Hazard:

A dangerous phenomenon, substance, human activity, or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Hazard Analysis:

Identification, studies and monitoring of any hazards to determine potential, origin, characteristics and behaviour.

Mitigation:

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



Photo: A community was supported by IOM to develop its community-based disaster risk management plan pledges to have a strong united community. © Benson McRubins Burau/ Media and ICT Unit, Oro Provincial Administration.



Photo: Mr. Wonesai Sithole of IOM PNG advocating for community-driven disaster resilience at Kendata village in Sohe District, Northern Province. © Florie Asimba/ IOM PNG.

Natural hazard:

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

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.

Prevention:

The outright avoidance of the adverse impacts of hazards and related disasters.

Public awareness:

The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

Recovery:

The restoration, and improvement — where appropriate — of the facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.

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.



Photo: Children and women are vulnerable groups of population. Planning for effective timely response save lives and promote early recovery. © Provincial Disaster Centre 2007 Cyclone Guba.

Resilience:

The capacity of a system, community or society potentially exposed to hazards to adapt by resisting or changing in order to reach and maintain an acceptable level of functioning or structure.

Retrofitting:

Reinforcement or upgrading of existing structures to make them more resistant and resilient to the damaging effects of hazards.

Risk:

The combination of the probability of an event and its negative consequences.

Risk assessment/analysis:

A method of determining the nature or extent of risks by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.

Sustainable development:

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.



Photo: The Provincial Disaster Centre is an important office for long-term community resilience capacities. The Northern Province Provincial Disaster Centre team preparing for a boat departure to vulnerable communities along the coastlines. Photo by Sebastian Hurokoli @ IOM PNG

Vulnerability:

The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

STATEMENT OF THE NORTHERN PROVINCE GOVERNOR



The Northern Province Disaster Risk Management Strategy (DRM) embodies the commitment of the Northern Provincial Government and its administration to reduce risks to people's lives and property in the face of disasters.

Having put together a provincial vision — "Safe, Secured & Sustainable Northern Province" — the provincial government commits itself to supporting the implementation of the DRM strategy. Through the execution process, Northern Province will be prepared for any impending disasters and ensure that people are safe, thus, promoting early recovery of the livelihoods of the population.

The main objectives underpinning the development of this document are:

- to provide, in a concise and convenient form, a list of major executive actions involved in disaster risk management and reduction processes.
- to ensure that all concerned Northern Province Government Departments (NPGDs), Northern Province Administration Sectors (NPAS) and other agencies of the government and the District Administrations know the precise measures required of them at each stage of DRM, and also to ensure that all actions are carefully organized; and
- to specify various actions that need to be undertaken by different OPGDs, OPAS and other organizations within their areas of responsibilities so that they may prepare and review the Contingency Action Plans (CAPs) accordingly.

This Northern Province DRR Strategy 2019-2030 is aligned to the Papua New Guinea National Disaster Risk Reduction Framework (NDRRF) 2017-2030, which is based on the Sendai Framework for Disaster Risk Reduction 2015-2030. This will be used by all disaster management stakeholders who are involved in regulating, managing, planning, financing, implementing, facilitating, or monitoring disaster risk reduction programmes and activities. Successful implementation of this document will contribute to improving the lives of most Northern Province citizens.

A handwritten signature in blue ink, consisting of a series of vertical lines and a large, stylized 'A' or 'J' shape.

.....
Hon. Gary Juffa MP
GOVERNOR
Northern Province

STATEMENT OF THE NORTHERN PROVINCIAL ADMINISTRATOR

Knowing where and how a hazard is likely to unfold enables local governments to use resources effectively. On the same note, risk managers will have to define just how big the safety net should be, even if money is spent on relevant disaster management projects. Unfortunately, the budget is never large enough and local governments continue to have meagre funds to manage risks and prevent every possible disaster and looming adverse effects from occurring.

The economic impacts of disasters usually consist of direct damage (such as infrastructure, crops and housing), and indirect damage (such as, loss of revenue, unemployment and market destabilization). Disasters are therefore increasingly becoming a major development issue of urgent concern for the government, development partners and local communities.

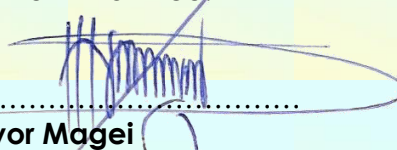


Over the past several years, the country has gained a lot of attention and momentum in disaster risk reduction. Numerous projects have been undertaken by various stakeholders, government agencies and local government offices. However, sustaining and scaling up these efforts to effect positive rippling changes in the lives of the people have been the constant challenges. If Northern Province remains prone to disasters, all possible related outcomes will remain a constant threat to the communities.

The formulation of this Provincial Disaster Risk Management Strategy and the Standard Operating Procedure is a milestone achievement. The strategy serves as a guide to how sustainable development can be facilitated through inclusive growth while building the adaptive capacities of communities, increasing the resilience of vulnerable sectors, and optimizing disaster mitigation opportunities with the end view of promoting people's welfare and security towards gender-responsive and rights-based sustainable development.

The Northern Province DRR Strategy 2019-2030 is aligned to the Papua New Guinea National Disaster Risk Reduction Framework 2017-2030, which is based on the Sendai Framework for Disaster Risk Reduction 2015-2030. All disaster management stakeholders involved in regulating, managing, planning, financing, implementing, facilitating, or monitoring risk reduction programmes and activities will be able to use this document.

Finally, successful implementation of this Strategy will help to improve the lives of most citizens of Northern Province.


.....
Trevor Magei
Acting Provincial Administrator
Northern Province

PNG NATIONAL DISASTER CENTRE ENDORSEMENT



**PAPUA NEW GUINEA
NATIONAL DISASTER CENTRE**
Informing Communities About Disasters



Date: 15 March 2020

The Provincial Administrator
Oro Provincial Administration
Private Mail Bag Service
POPONDETTA
Northern Province

Dear Sir

SUBJECT: ENDORSEMENT OF NORTHERN PROVINCE DISASTER RISK MANAGEMENT STRATEGY

I have reviewed the Northern Province Disaster Risk Management Strategy and pleased to inform you that I am satisfied with its content.

In retrospect, I hereby give approval for the implementation of the Northern Province Disaster Risk Management Strategy.

The Office of the National Disaster Centre will continue to work with Northern Province Disaster Centre to bring about relief and restoration of normality in the communities should natural disasters affect Northern Province at any time in the future.

Thank you.

Yours Faithfully

Colonel Carl. H. Wrakonei, DMS, MBE
Director
National Disaster Centre



PROVINCIAL EXECUTIVE COUNCIL ENDORSEMENT



ORO PROVINCIAL GOVERNMENT

Office of the Governor

Telephone: 629 7084
Facsimile: 697823

P.O Box 132
POPONDETTA
Northern Province

15 March 2020

The Provincial Administrator
Oro Provincial Administration
Private Mail Bag Service
POPONDETTA
Northern Province

Dear Sir

SUBJECT: ENDORSEMENT OF NORTHERN PROVINCE DISASTER RISK MANAGEMENT STRATEGY

The Provincial Executive Council acknowledges receipt of the Northern Province Disaster Risk Management Strategy and has viewed it with satisfaction.

This letter serves to inform you that the Provincial Executive Council has approved the submission and have endorsed the Northern Province Disaster Risk Management Strategy. We urge that the Provincial Disaster Centre, in collaboration with other stakeholders, implements the Strategy for the purpose of relief and restoration of normality by upholding **"A Safe, Secure & Sustainable Northern Province"** as depicted in the Strategy Vision.

On the same token, the Provincial Government will continue to fund the operations of the Provincial Disaster Centre through the Provincial Annual Budgetary Appropriations.

Thank you

Yours Faithfully


HON. GARY JUFFA MP
Governor for Northern Province

STATEMENT OF THE IOM CHIEF OF MISSION

The nature of disasters induced by natural hazards in Papua New Guinea (PNG), and vulnerabilities stemming from limited self-reliance and low resilience of communities to appeal for all parties involved in Disaster Risk Reduction and Management (DRRM) to collectively prioritize resilience building efforts to enhance capacity on at all levels.

The International Organization for Migration (IOM), United Nations' Migration Agency, has been working in PNG since 2001. IOM, in close cooperation with the National Disaster Centre and Provincial Disaster Centres, continue to support the PNG Government at the national, provincial, and local levels to respond to complex emergencies, reduce disaster-induced displacement, as well as mitigate the negative impacts of displacement through strengthened capacity in disaster mitigation, preparedness, response, and recovery.

IOM has supporting initiatives aimed at strengthening strategic decision-making and response capacity with a significant focus on the provincial and community level, which form the front lines of DRM in a context where disaster risks are primarily localized.

IOM's DRM programming complements efforts of the PNG Government to implement the Sendai Framework for Disaster Risk Reduction (2015-2030) and PNG's National DRR Framework (2017-2030) by advancing mobility-based strategies in DRR and resilience building. IOM is supporting provincial authorities to draft DRM strategies linked to the National DRR Framework. Northern Province received technical support from IOM, through financial assistance of the United States Agency for International Development (USAID), to develop its Provincial DRM Strategy and Standard Operating Procedures (SOPs).

IOM recognizes funding constraints and insufficient human resource will remain as challenges during the implementation of the Northern Provincial DRM Strategy. IOM remains committed and active in supporting the Northern Province to implement the main targets stated in the DRM Strategy.



Serhan Aktoprak
Chief of Mission
International Organization for Migration (IOM)
Papua New Guinea

INTRODUCTION

Northern Province (Oro) is one of the most disaster-prone provinces in Papua New Guinea. Because of the province's geological and climatic diversity, the province has experienced various hazards, including earthquakes, the 1951 Mt. Lamington Volcanic eruption, cyclones, river and coastal flooding, landslides, strong winds and drought.



Photo: Children of Ononda community waiting to welcome officials at the opening of the rainwater catchment tanks at Ononda village. Photo by Benson McRubin's Burau @ Media and ICT Unit, Oro Provincial Administration

In recent years, efforts towards disaster risk reduction programmes

have been hampered by resource constraints at the provincial level and local levels. The level of vulnerability is increased by limited information about hazards and lack of early warning and communication systems.

The Northern Provincial Government is aware of the level of vulnerability, given the various hazards in the province, and is committed to the processes of disaster risk reduction. The government is also aware that because of climate change, the frequency and intensity of disaster impacts will continue to increase over time.

The Northern Province Disaster Risk Reduction Strategy (NP-DRR Strategy) is aligned to the Papua New Guinea Disaster Risk Reduction Framework 2017 – 2030, which represents best national practice on disaster risk reduction in the province. The Papua New Guinea National Disaster Risk Reduction Plan was based on the Sendai Framework for Disaster Reduction 2015-2030. It is also in line with the Framework for Resilient Development in the Pacific 2017-2030 (FRDP) and the Asia Pacific Economic Cooperation (APEC) Disaster Reduction Plan.

VISION

The Northern Provincial Government believes that through partnership and well organized and coordinated implementation of the DRR Strategy, the impacts of natural disasters will be significantly reduced.

Thus, the vision of the Northern Provincial Government in terms of DRR states:

“SAFE, SECURED & SUSTAINABLE NORTHERN PROVINCE”

MISSION STATEMENT

The Northern Province Government aims to achieve the vision by supporting the Provincial Disaster Centre (PDC) to execute the NP-DRR Strategy. The PDC plays a vital role in DRM and managing disaster events in the province. It makes a direct contribution towards DRR while executing preparatory, response and recovery measures.

Thus, the mission of the PDC states:

“WE CARE FOR THE COMMUNITIES AND SOCIETIES OF NORTHERN PROVINCE”



EXPECTED OUTCOME

The Northern Province Disaster Risk Reduction Strategy outcome is aligned to the PNG-NDRR framework 2017–2030 outcome. The outcome is:

“Substantial reduction in disaster risk and increased resilience of communities in PNG”

GOAL

The goal of the Northern Province Disaster Risk Reduction Strategy is aligned to the PNG–NDRR Framework 2017-2030 goal. The goal is;

“Reduce existing and prevent new disaster risk through the implementation of integrated structural and non-structural risk reduction measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery capacity and, thus, strengthen resilience.”



Photo: Investing in preparation for disasters is the way forward as said by women in Northern Province. IOM PNG Chief of Mission, Lance Bonneau oversees the setting up of rainwater catchment facilities in Northern Province. Photo by Benson McRubins Burau @ Media & ICT Unit, Oro Provincial Administration, in 2017.

The Northern Province Disaster Risk Reduction Strategy targets are adopted and are aligned to the targets of the PNG-NDRR Framework 2017-2030. There are seven main targets, as stated here:

Target 1:

Contribute to a reduction of disaster mortality in PNG by 2030, aiming to lower the average mortality rate per 100,000 in the decade between 2020 and 2030.



Photo: Women and children waiting to be served at the children's clinic in Popondetta Town. Improving health facilities is preparing to counter high mortality rates. Photo by Benson McRubins Bureau @ ICT Oro Provincial Administration.

Target 2:

Contribute to a reduction in the number of people affected by disasters in PNG by 2030, aiming to lower the average figure per 100,000 in the decade between 2020 and 2030 compared to 2005–2015.

Every year, more than 80,000 people are affected by drought and flood. The situation is even worse as most or all the water sources people depend on may be contaminated or devastated badly, and not be useable by the population in the long run. Water is life.



Photo: Types of water sources dug by people along the coast and many inland communities of Northern Province are unprotected water wells. These are always not safe for consumption during dry and wet seasons. Photo by Sebastian Hurokoli @ IOM PNG.

Target 3:

Reduce direct disaster economic loss in relation to provincial gross domestic product (GDP) by 2030.

There is considerable direct correlation between economic fluctuations in the national GDP and investments in physical infrastructure. Investing in disaster resilient physical infrastructure, supported by legislation and institutions driven by economic development, has the potential to generate growth in the economy in the short run, and maintains steady progress if the infrastructure and institutions are maintained. It is also true that once critical infrastructure and institutions are no longer useable, GDP collapses.



Photo: Work on bridge taken down by a flood in the 2007 Cyclone Guba. the economy dropped significantly, but it has recovered overtime as roads and other vital infrastructures were restored. Photo on file @ Provincial Disaster Centre.

Target 4:

Reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including developing their resilience by 2030.

Critical infrastructure is the body of systems, networks and assets that are so essential that their continued operation is required to ensure the security of a given community, province or nation, its economy, and the public's health and/or safety and security.

Critical infrastructure in Northern Province is a basic requirement of life. It is made up of services, institutions and infrastructures clustered in sectors. There are eight sectors — Local Level Government Services, Disaster and Emergency, Law and Justice, Lands and Physical Planning, Agriculture and Livestock, Education, Health, and Transport Infrastructure. There are also other sectors not listed here that are equally important when it comes to disaster risk reduction planning and implementation.



Photo: A primary school in Northern Province being rebuilt after being washed away by a flood during Cyclone Guba in 2007. Photo of file @ Provincial Disaster Centre

Target 5:

Increase the number of provincial, districts, local level government disaster risk reduction initiatives by 2030.

Northern Province selects more local disaster risk reduction initiatives in 2020 and beyond. So far, there is a draft drought contingency plan and a humanitarian response plan at provincial level which are pending endorsement and implementation.

Community based disaster risk management (CBDRM) planning is an effective bottom-up disaster risk reduction planning process. More than 15 wards in Northern Province are now implementing their CBDRM plans.



Photo: Mr. Peter Angito of Oro Provincial Administration from the Division of Human Resource Management showing a community-based disaster risk management plan for his Ward in the Oro Bay Local Level Government. Photo by Benson McRubin's Media & ICT Unit, Oro Provincial Administration

Target 6:

To enhance international cooperation through adequate and sustainable support to complement national actions for implementation of this Disaster Risk Reduction Strategy by 2030.

The Northern Provincial Administration has established several partnership agreements with international organizations. An example seen in the province is the presence of the International Organization for Migration (IOM) and the PNG Red Cross Society. They complement the Provincial Disaster Centre, the Department of Agriculture and Livestock, the Department of Health and other stakeholders in facilitating efforts encompassed in the Disaster Risk Management Cycle.



Photo: On the left is the IOM Chief of Mission, Lance Bonneau being welcomed in a local community of the Northern Province. Photo by Ms. Florie Asimba @ IOM PNG



Photo: On the left are Red Cross Australia and PNG Red Cross Society Staff supporting food security projects in Northern Province. Photo by Chris Sowni @ Provincial Disaster Centre Northern

Target 7:

Increase the availability of and access to multi-hazard early systems and disaster risk information and assessment for the people in PNG by 2030.

One of the challenges shared by Mr Lawrence Baisa was the lack of support from successive governments and administrations for existing vital institutions that provide real-time information or early warning information on imminent disasters, such as response planning. He has a strong desire to see the volcano observatory in Northern to be supported, equipped and resources with necessary resources to improve performance and output by staff. Modern technology and early warning promote enable reporting of vital information to decision makers and operation managers on a timely basis.



Photo: The Northern Province Volcano Observer Mr. Lawrence at the volcano observatory station in Popondetta Town. Photo by Benson McRubins Burau @ ICT Provincial Administration.

PRIORITIES FOR ACTION

The Northern Province Disaster Risk Reduction Priorities for Action are aligned with the PNG-NDRR 2017–2030 priorities for action. There are four priorities for action set at national level that the Northern Province DRR strategy is aiming to achieve between 2020 and 2030.

Action Priority 1:

Understanding disaster risk



Photo: IOM's Sebastian Hurokoli consulting community leaders to better understand disaster issues and the risks in their community. Photo by Benson McRubins Burau @ ICT Provincial Administration

Policies and practices for disaster risk management should be based on an understanding of disaster risk in all its dimensions: vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such understanding can be leveraged for pre-disaster risk assessment, for prevention and mitigation, and for the development and implementation of appropriate preparedness and effective response to disasters.

To achieve this, it is important to;

- a) Promote the collection, analysis, management and use of relevant data and practical information. Ensure their dissemination, taking into account the needs of different categories of users, as appropriate;
- b) Encourage the use of and strengthening of baseline data and information, and periodically assess disaster risks, vulnerability, capacity, exposure, hazard characteristics and their possible sequential effects at the relevant social and spatial scale on ecosystems in line with national circumstances;
- c) Develop, update periodically and disseminate, as appropriate, location-based disaster risk information, including risk maps, to decision makers, the general public

and communities at risk of disaster in an appropriate format by using, when applicable, geospatial information technology;



Photo: The only building left standing surrounded by logs and other debris in the mighty Eroro River flood during Cyclone Guba in 2007. Photo of file @ Provincial Disaster Centre

- d) Systematically evaluate, record, share and publicly account for disaster losses and understand the economic, social, health, education, environmental and cultural heritage impacts, as appropriate, in the context of event-specific hazard exposure and vulnerability information;
- e) Make non-sensitive hazard exposure, vulnerability, risk, disasters and loss disaggregated information freely available and accessible, as appropriate; Promote real-time access to reliable data, make use of space and in situ information, including geographic information systems (GIS), and use information and communications technology innovations to enhance measurement tools and the collection, analysis and dissemination of data;



Photo: Mr. Tako Gwae the Deputy Provincial Administrator – Field Services addressing participants at a training event on Displacement Tracking Matrix for government staff, organized to enable them to better understand how the disaster-affected population has been displaced and how to monitor the situation for timely response with adequate relief items. Photo by Peter Murorera @ IOM PNG

- f) Build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning;
- g) Promote and improve dialogue and cooperation among scientific and technological communities, other relevant stakeholders and policymakers, in order to facilitate a science-policy interface for effective decision-making in disaster risk management;
- h) Ensure the use of traditional, indigenous and local knowledge and practices, as appropriate, to complement scientific knowledge in disaster risk assessment; and the development and implementation of policies, strategies, plans and programmes of specific sectors, with a cross-sectoral approach, which should be tailored to localities and to the context;
- i) Strengthen technical and scientific capacity to capitalize on and consolidate existing knowledge, and to develop and apply methodologies and models to assess disaster risks, vulnerabilities and exposure to all hazards;
- j) Promote investment in innovation and technology development in the long term, and in multi-hazard and solution-driven research in disaster risk management to address gaps, obstacles, interdependencies and social,
- k) economic, educational and environmental challenges and disaster risks;
- l) Promote the incorporation of disaster risk knowledge — including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation — in formal and non-

formal education, as well as in civic education at all levels, as well as in professional education and training;

- m) Promote national strategies to strengthen public education and awareness in disaster risk reduction, including disaster risk information and knowledge, through campaigns, social media and community mobilization, taking into account specific audiences and their needs;
- n) Apply risk information — in all its dimensions of vulnerability, capacity and exposure of persons, communities, countries and assets, as well as hazard characteristics — to develop and implement disaster risk reduction policies;
- o) Enhance collaboration among people at the local level to disseminate disaster risk information, through the involvement of community-based organizations and non-governmental organizations.



Photo: Presentation on disaster assessment tools and practical exercises by Oro Provincial Administration staff. Photo by Peter Murodera @ IOM PNG

Action Priority 2:

Strengthening disaster risk governance to manage disaster risk



Photo: IOM supports the Oro Provincial Administration to build staff capacity on disaster risk reduction and management. Photo by Peter Murorera @ IOM PNG

Disaster risk governance at the national, regional and global levels is of great importance for effective and efficient management of disaster risk. Clear vision, plans, competence, guidance and coordination

within and across sectors, as well as the participation of relevant stakeholders, are needed. Strengthening disaster risk governance for prevention, mitigation, preparedness, response, recovery, and rehabilitation is therefore necessary, as it fosters collaboration and partnership across mechanisms and institutions for the implementation of instruments relevant to disaster risk reduction and sustainable development.

To achieve this, it is important to:

- a) Mainstream and integrate disaster risk reduction within and across all sectors. Review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies, which — by defining roles and responsibilities — guide the public and private sectors to: address disaster risk in publicly owned, managed or regulated services and infrastructures;
- b) promote and provide incentives, as relevant, for actions by persons, households, communities and businesses; enhance relevant mechanisms and initiatives for disaster risk transparency, which may include financial incentives, public awareness-raising and training initiatives, reporting requirements and legal and administrative measures; and put in place coordination and organizational structures;
- c) Adopt and implement national and local disaster risk reduction strategies and plans, across different timescales with targets, indicators and time frames, aimed at

preventing the creation of risk, reduction of existing risk and strengthening of economic, social, health and environmental resilience;

- d) Carry out an assessment of the technical, financial and administrative disaster risk management capacity to deal with the identified risks at local and national level;
- e) Encourage the establishment of necessary mechanisms and incentives to ensure high levels of compliance with existing safety — enhancing provisions of sectoral laws and regulations, including those addressing land use and urban planning, building codes, environmental and resource management and health and safety standards, and update them, where needed, to ensure an adequate focus on disaster risk management;
- f) Develop and strengthen, as appropriate, mechanisms to follow-up, periodically assess and publicly report on progress on national and local plans. Promote public scrutiny and encourage institutional debates, including by parliamentarians and other relevant officials, on the progress reports of local and national plans for disaster risk reduction;



Photo:

Implementing this DRR Strategy will also mean that the capacity of the provincial disaster centre is strengthened to respond to crisis situations. The photo on file @ Provincial Disaster Centre depicts the operations of the PDC during Cyclone Guba in 2007



Photo: Some people are vulnerable to drought. Water is always scarce, and often people walk miles for a drink or a bath. Pictured is a mother with daughters from Baga village in Tufi returning home from a water source. Photo by Sebastian Hurokoli @ IOM PNG

- g) Assign, as appropriate, clear roles and tasks to community representatives within disaster risk management institutions and processes and decision-making through relevant legal frameworks. Undertake comprehensive public and community consultations during the development of such laws and regulations to support their implementation;
- h) Establish and strengthen government coordination forums comprising relevant stakeholders at national and local levels, such as national and local platforms for disaster risk reduction, and a designated national focal point for implementing the post-2015 framework. It is necessary for such mechanisms to have a strong foundation in national institutional frameworks with clearly assigned responsibilities and authority to;
 - a. Identify sectoral and multi-sectoral disaster risk, and build awareness and knowledge of disaster risk through sharing and dissemination of non-sensitive disaster risk information and data,
 - b. Contribute to and coordinate reports on local and national disaster risk, coordinate public awareness campaigns on disaster risk, and facilitate and support local multi-sectoral cooperation; (for example among local governments),

- c. Contribute to determination of and reporting on national and local disaster risk management plans and all policies relevant for disaster risk management. These responsibilities should be established through laws, regulations, standards and procedures;
- i) Empower local authorities, as appropriate, through regulatory and financial means to work and coordinate with civil society, communities and indigenous peoples and migrants in disaster risk management at local level;
 - j) Encourage parliamentarians to support the implementation of disaster risk reduction through by developing new or amending existing legislation, and setting budgetary allocations;
 - k) Promote the development of quality standards, such as certifications and awards for disaster risk management, with the participation of the private sector, civil society, professional associations, scientific organizations and the United Nations;
 - l) Formulate public policies, where applicable, aimed at addressing issues of prevention or relocation, where possible, of human settlements in disaster risk zones, subject to national law and legal systems.



Photo: Building community resilience is people taking ownership and leading roles in disaster preparation and prevention measures. Photo by Sebastian Hurokoli @ IOM PNG of people in Huhuru village in a Higaturu bringing in rainwater catchment tank to store water in preparation for drought



Photo: Investing in disaster risk reduction activities is better than managing the effects or risks of disasters. Pictured are leaders from Kebara village in Kokoda, the staff of Uraki water drillers and IOM after successfully completing a water borehole. Photo on file @ IOM PNG.

Action Priority 3: **Investing in disaster risk reduction for resilience**

Public and private investment in disaster risk prevention and reduction through structural and non-structural measures is essential for enhancing the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment. These can be drivers of innovation, growth and job creation. Such measures are cost-effective and instrumental to save lives, prevent and reduce losses and ensure effective recovery and rehabilitation.

To achieve this, it is important to:

- a) Allocate the necessary resources, including finance and appropriate logistics, at all levels of administration for the development and implementation of disaster risk reduction strategies, policies, plans and regulations in all relevant sectors;
- b) Promote mechanisms for disaster risk transfer and insurance, risk sharing and retention and financial protection that are appropriate for both public and private investment in order to reduce the financial impact of disasters on governments and societies, in urban and rural areas;
- c) Strengthen, as appropriate, the disaster resilience of public and private investments, particularly through structural, non-structural and functional disaster risk prevention. Take reduction measures in critical facilities, particular

in schools and hospitals and physical infrastructure; building better from the start to withstand hazards through proper design and construction, including use of the principles of universal design and the standardization of building materials; retrofitting and rebuilding; nurturing a culture of maintenance; and taking into account economic, social, structural, technological and environmental impact assessments;

- d) Protect or support the protection of cultural and collecting institutions and other sites of historical and cultural heritage and religious interest;
- e) Promote the disaster risk resilience of workplaces through structural and non-structural measures;
- f) Promote the mainstreaming of disaster risk assessments into land-use policy development and implementation, including urban planning, land degradation assessments and informal and non-permanent housing, and the use of guidelines and follow-up tools informed by anticipated demographic and environmental changes;
- g) Promote the mainstreaming of disaster risk assessment, mapping and management into rural development planning and management of mountains, rivers, coastal flood plain areas, dry lands, wetlands and all other areas prone to drought and flooding, including through the identification of areas that are safe for human settlement; and at the same time preserving ecosystem functions that help reduce risks;



Photo: The Governor of Northern Province, Hon. Garry Juffa calls for protection of the environment, especially the land and what is on it and in it. Protecting the land and environment is a way of building disaster resilience. Pictured is Hon. Garry Juffa with the landowners of an illegal logging site. Photo by: Elisa Ebu



Photo: The PNG Red Cross Society (PNGRCS) has been focusing its activities more on training volunteers from high-risk or vulnerable communities on disaster risk management, change of mind set, leadership skills, entrepreneurship, water and sanitation, health, food security and preservation. Photo by Sebastian Hurokoli @ IOM PNG of participants at one of the training events conducted by PNGRCS.

- h) Encourage the revision of existing or the development of new building codes, standards, rehabilitation and reconstruction practices at the national or local levels, as appropriate, with the aim of making them more applicable in the local context, particularly in informal and marginal human settlements; survey and enforce such codes, using an appropriate approach, with a view to fostering disaster-resistant structures;
- i) Enhance the resilience of national health systems, including by: integrating disaster risk management into primary, secondary and tertiary health care, especially at the local level; developing the capacity of health workers to understand disaster risk and apply and implement disaster risk reduction approaches in health work; promoting and enhancing training capacities in the field of disaster medicine; and supporting and training community health groups in disaster risk reduction approaches in health programmes, in collaboration with other sectors, as well as in the implementation of the International Health Regulations (2005) of the World Health Organization;
- j) Strengthen the design and implementation of inclusive policies and social safety-net mechanisms, including through community involvement, integrated with livelihood enhancement programmes, and access to basic health care services (including maternal, newborn and child health, sexual and reproductive health) food security and nutrition, housing and education, towards the eradication of poverty, to find durable solutions in the post-disaster phase and to empower and assist people disproportionately affected by disasters;

- k) Because of their needs, include people with life-threatening and chronic diseases in the design of policies and plans to manage their risks before, during and after disasters, including having access to lifesaving services;
- l) Encourage the adoption of policies and programmes addressing disaster induced human mobility to strengthen the resilience of affected people and that of host communities in accordance with national laws and circumstances;
- m) Promote, as appropriate, the integration of disaster risk reduction considerations and measures into financial and fiscal instruments;
- n) Strengthen the sustainable use and management of ecosystems and implement integrated environmental and natural resource management approaches that incorporate disaster risk reduction;
- o) Increase business resilience and the protection of livelihoods and productive assets throughout supply chains. Ensure the continuity of services and integrate disaster risk management into business models and practices;
- p) Strengthen the protection of livelihoods and productive assets, including livestock, working animals, tools and seeds;
- q) Promote and integrate disaster risk management approaches throughout the tourism industry, given the often-heavy reliance on tourism as a key economic driver.



Photo: Unity in leadership harnesses the power of men, women and children and other stakeholders, including the police, to manipulate disaster risk reduction and management targets. Photo by Benson McRubins Burau @ Media & ICT Unit, Oro Provincial Administration.



Photo: Training for high-risk communities is an effective way of enhancing disaster preparedness for effective response, and to “build back better” in recovery, rehabilitation and reconstruction. Photo by Sebastian Hurokoli @ IOM PNG of Mr. Joseph Mokoda, Deputy Provincial Administrator Technical Services, addressing participants of Disaster Risk Management training event conducted by PNGRCS in Jonita village.

Action Priority 4:

Enhancing disaster preparedness for effective response, and to “build back better” in recovery, rehabilitation and reconstruction

The steady growth of disaster risk — including the increase in exposure of people and assets exposure — combined with the lessons learned from past disasters, indicates a need to further strengthen disaster preparedness for response, act in anticipation of events, integrate disaster risk reduction into response preparedness and ensure that capacities are in place for effective response and recovery at all levels. Empowering women and persons with disabilities to publicly lead and promote gender equitable and universally accessible response, recovery rehabilitation and reconstruction approaches are key factors.

Disasters have demonstrated that the recovery, rehabilitation, and reconstruction phase, which needs to be prepared far ahead of the disaster, is a critical opportunity to build back better, including through integrating disaster risk reduction into development measures, making nations and communities resilient to disasters.

To achieve this, it is important to:

- a) Prepare a periodic review and update disaster preparedness and contingency policies, plans and programmes with the involvement of the relevant institutions, taking into account climate change scenarios and their impact on disaster risk, and facilitating, as appropriate, the participation of all sectors and relevant stakeholders;
- b) Invest in, develop, maintain and strengthen people-centred multi-hazard, multi-sectoral forecasting and early warning systems; disaster risk and emergency communications mechanisms; social technologies; and hazard-monitoring telecommunications systems. Develop these systems through a participatory process. Tailor them to the needs of the users, including social and cultural requirements (in particular gender). Promote the application of simple and low-cost early warning equipment and facilities and broaden release channels for natural disaster early warning information;
- c) Promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, hospitals and other health facilities, to ensure that they remain safe, effective and operational during and after disasters in order to provide life-saving and essential services;
- d) Establish community centres for the promotion of public awareness and the stockpiling of materials required for rescue and relief activities;
- e) Adopt public policies and actions that support the role of public service workers to establish or strengthen coordination and funding mechanisms and procedures for relief assistance, and to plan and prepare for post-disaster recovery and reconstruction;
- f) Train the existing workforce and voluntary workers in disaster response and strengthen technical and logistical capacities to ensure better responses in emergencies;
- g) Ensure the continuity of operations and planning, social and economic recovery, and the provision of basic services in the post-disaster phase;



Photo: In disaster risk reduction, mobilizing stakeholders for planning plays a vital part in fostering DRM partnership. Photo by Benson McRubins @ Media & ICT Unit, Oro Provincial Administration.



Photo: The Oro Provincial Government has already started investing in the new Divune hydro power project. This is an example of investing in sustainable projects that have potential to generate income for the province while at the same time boosting economic recovery. Photo by; Benson McRubin's Bureau @ Media & ICT Unit, Oro Provincial Administration.

- h) Promote regular disaster preparedness, response and recovery exercises, including evacuation drills, training and the establishment of area-based support systems, with a view to ensuring rapid and effective response to disasters and related displacement, including access to safe shelter, essential food and non-food relief supplies, as appropriate to local needs;
- i) Promote the cooperation of diverse institutions, multiple authorities and related stakeholders at all levels, including affected communities and business, in view of the complex and costly nature of post-disaster reconstruction, under the coordination of national authorities;
- j) Promote the incorporation of disaster risk management into post-disaster recovery and rehabilitation processes; facilitate the link between relief, rehabilitation and development. Use opportunities during the recovery phase to develop capacities that reduce disaster risk in the short, medium and long terms, including through the development of measures such as land use planning, structural standards improvement and the sharing of expertise, knowledge, post-disaster reviews and

lessons learned. Integrate post-disaster reconstruction into the economic and social sustainable development of affected areas. This should also apply to temporary settlements for persons displaced by disaster;

- k) Develop guidance for preparedness for disaster reconstruction, such as on land use planning and structural standards improvement, including by learning from the recovery and reconstruction programmes over the decade since the adoption of the Hyogo Framework for Action, and exchanging experiences, knowledge and lessons learned;
- l) Consider the relocation wherever possible of public facilities and infrastructures in the post-disaster reconstruction process to areas outside the risk range, in consultation with the people concerned, as appropriate;
- m) Strengthen the capacity of local authorities to evacuate persons living in disaster-prone areas;
- n) Establish a case registration mechanism and a database of mortality caused by disasters in order to improve prevention of morbidity and mortality;
- o) Enhance recovery schemes to provide psychosocial support and mental health services for all people in need;
- p) Review and strengthen, as appropriate, national laws and procedures on international cooperation, based on the guidelines for domestic facilitation and regulation of international disaster relief and initial recovery assistance.



Photo: Disaster risks are managed well when all stakeholders work together. Photo on file @ Provincial Disaster Centre, Northern Province.

STRATEGIC ACTIONS

To achieve the PNG–NDRR Framework 2017–2030, Expected Outcomes, Goal; Priority for Action and Targets, the Northern Provincial Disaster Risk Reduction strategy will implement:

Volcano disaster risk reduction strategies

- Raising awareness about volcanic eruption and the impacts of eruptions throughout the province.
- Develop volcano eruption response and evacuation plans.
- Maintain existing and build new evacuation routes that will be used during volcanic eruptions to evacuate people from the affected villages to identified safe zones.
- Mobilization of resources by stakeholders and line agencies before, during and after the volcano eruption.
- Coordination of Province Disaster Centre with Provincial Works and Building Department, Provincial Health Authority, Provincial Lands Division, District Disaster Centre, Ward Disaster Committee and relevant stakeholders.
- Updating by PDC of population database on annual basis in consultation with National Statistical Office and Provincial CIR.
- Monitoring and assessment of all evacuation facilities by the Technical Services Division and reporting to relevant authorities.
- Relocation and re-settlement of internally displaced persons.
- Establishment of rehabilitation programmes.
- Monitoring, assessment and reporting of any volcanic activities in the province.



Photo: The Mt. Lamington Volcano eruption in 1951 had a devastating impact on people and infrastructures. More than 3,000 people died, including white missionaries and administration staff. Photo on file @ Oro Provincial Administration.

Inland and coast flooding disaster risk reduction strategies

- Development of disaster preparedness plan and awareness raising in communities about inland and coastal flooding.
- Development of inland and coastal flooding response plan.
- Coordination with relevant stakeholders and development of flood-resistant farming techniques and training events.
- Identification of potential community leaders to be trained on community-based disaster management.
- Provision and outsourcing by respective District Development Authority (DDA) in consultation with PDC of necessary financial support for training and other local activities designed for the people.
- Consultation between the PDC, Local-level Government and the ward councils to develop relocation policies.
- Mobilization by the Provincial Lands Division of identified land for relocation process.
- Development by the PDC, in consultation with responsible agencies, of agriculture and food security programmes.
- Identification by the PDC, in consultation with communities, of marked safe ground for evacuation.
- Development by the PDC, in consultation with Papua New Guinea Forest Authority and other agencies, of policy guidelines to promote re-forestation.
- Promotion by PDC, in consultation with DDA and other agencies, of safe shelter programmes.
- Design by PDC, in consultation with Technical Services Division and other agencies, of adequate storm water drainage systems for coastal communities.



Photo: Floods are common in Northern Province between September and March every year when the volume of precipitation is at its maximum. Photo on file @ Oro Provincial Disaster Centre. Disaster response team taking a risk across Kumusi river after 2007 cyclone Guba

Strong wind disaster risk reduction strategies

- Consultation between PDC, the National Weather Service and other agencies to develop a strong wind response and evacuation plan.
- Consultation between PDC, the National Weather Service and other agencies to establish effective pathways to disseminate early warnings.
- Development by PDC, Northern Province Health Authority and other agencies of a health response programme.
- Research and design of suitable building standards towards improving building structures to withstand strong winds.
- Consultations between PDC and relevant authorities to support communities on mitigating strong winds.



Photo: Strong winds are common in Kokoda, Afore, Tufi and coastal areas in Northern Province between September and March every year. Photo on file @ ICT Oro Provincial Administration.

Landslide/mudslide disaster risk reduction strategies

- Development by PDC in consultation with relevant agencies of landslide/mudslide response plan.

- Development by PDC and relevant agencies of awareness programmes on landslides/mudslides.
- Consultation by PDC with relevant agencies to carry out study on land formation and potential landslides, and provision by PDC of strategic information.
- Establishment by PDC, in consultation with Geo-Hazard Services and other agencies, of effective pathways to disseminate early warnings.



Photo: Landslides occur between September and March every year affecting more than 5,000 people. Photo on File @ Provincial Disaster Centre, Northern Province.

Drought disaster risk reduction strategies

- Development by PDC in consultation with relevant agencies of drought response plan.
- Identification and development of WASH programmes by PDC, working closely with Provincial Planning and Monitoring Division and relevant agencies.
- Establishment by PDC and Department of Agriculture and Livestock of agricultural training programs on drought-resistant farming practices.



Photos: Drought affects Northern Province between March and August every year. The land becomes too hard to be worked and planted. Photo on file @ Provincial Disaster Centre, Northern Province.

Fire Disaster Risk Reduction Strategies

- Development by the PDC, in consultation with all relevant agencies, of fire response and evacuation plan.
- Research and development by the PDC, in consultation with relevant agencies, of awareness raising programmes.
- Establishment by the PDC, in consultation with other agencies, of effective pathways to disseminate early warnings.



Photo: Fire emergencies happen in town when people are careless with electricity and fire. Photo by; Benson McRubins
Burau @ Media & ICT Unit, Oro Provincial Administration

Cyclone Disaster Risk Reduction Strategies

- Development by PDC, in consultation with all relevant agencies, of a cyclone response and evacuation plan.
- Design by PDC and relevant agencies of a systematic response and evacuation approach based on mitigating cyclone hazards.
- Establishment by PDC, in consultation with other agencies, of effective pathways to disseminate early warnings.
- Design by PDC, in consultation with technical agencies, of proper storm water drainage systems.
- Research and design of suitable building standards towards improving building structures to withstand cyclones.

Earthquake disaster risk reduction strategies

- Development by PDC, in consultation with all relevant agencies, of an earthquake response and evacuation plan.
- Development by PDC, in consultation with relevant agencies, of awareness programmes.
- Establishment by PDC, in consultation with other agencies, of effective pathways to disseminate early warnings.
- Research and design of suitable building standards towards improving building structures to withstand earthquakes.

Tsunami or king tides disaster risk reduction strategies

- Development by PDC, in consultation with all relevant agencies, to develop a tsunami/tides response and evacuation plan.
- Research and development by PDC, in consultation with relevant agencies, of awareness programs.
- Establishment by PDC, in consultation with other agencies, of effective pathways to disseminate early warnings.



Photo: Courtesy of Benson McRubins Burau showing sea waves and effects of a tsunami.

Disaster risk reduction (DRR) resources mobilization and capacity building to strategies

The strategies described here were developed to enable successful implementation of the DRR strategy. These strategies were designed to ensure that PDC Oro is encouraged to operate or conduct any disaster management activity implementation and monitoring in Northern Province. To realize these, it should be understood that:

- National and provincial budgetary funds must be allocated every year to mitigate hazards.
- Resources must be made readily available and must not be diverted to any other activities.
- All government bodies, corporate and business houses must contribute funds and resources to sustain disaster management activities.
- Disaster management activities should be included in all development plans.
- The PDC should take full responsibility for outsourcing funds and resources.
- The PDC should take full accountability for management of funds and resources in accordance with the mandatory requirement of the Provincial Finance Management Act.
- The PDC and other line agencies should identify training and manpower needs to build capacity.
- To develop and strengthen dialogue with line agencies and donor partners to engage and collaborate in assisting PDC in resource mobilization.
- Assist and equip relevant agencies with resources and technical assistance.
- The PDC should assess, monitor and report all disaster management activities in the province.
- The PDC should comply with both internal and external audit and compliance reporting requirements.



Photo: All stakeholders pool resources to respond to disasters. Photo by Benson McRubin's Bureau @ Media & ICT Unit, Oro Provincial Administration.

ROLE OF STAKEHOLDERS

The local community

Women, men, children, persons with special needs should be included as they are important stakeholders. They will participate in the implementation and training targeting local capacity building will be taken to empower people for their preparedness as well build capacity for alternate livelihood means of after disaster situations. Children are the future of Northern Province.



Photo: Girls from Harange village assisting staff across the Kumusi river. Photo by Sebastian Hurokoli @ IOM PNG.

International organizations, including NGOs and faith-based organizations

International organizations, including NGOs, inter-government organizations, United Nations agencies, and faith-based organisations will support and complement the efforts of the provincial disaster office in developing disaster plans and policies, in line with local government priorities to reduce risk in high-risk areas. At the same time, this links in with global knowledge and mainstreams it at the local Northern Province level and improves disaster preparatory, response and recovery programming. Local capacity gaps in areas such as improved geological information systems and other related technology to improve disaster risk reduction planning are important for international organizations to localize.



Photos: Courtesy of Benson McRubins Burau depicting different stakeholders working together on disaster risk management and reduction.

Academic, scientific and research institutions

The PDC should support both Sohe and Ijivitari districts to collect information on disaster risk factors and develop and continually update medium and long-term disaster risk reduction strategies and plans. In addition, it should assist local communities and government institutions with information on disaster preparedness, response and early recovery and decision-making platforms.

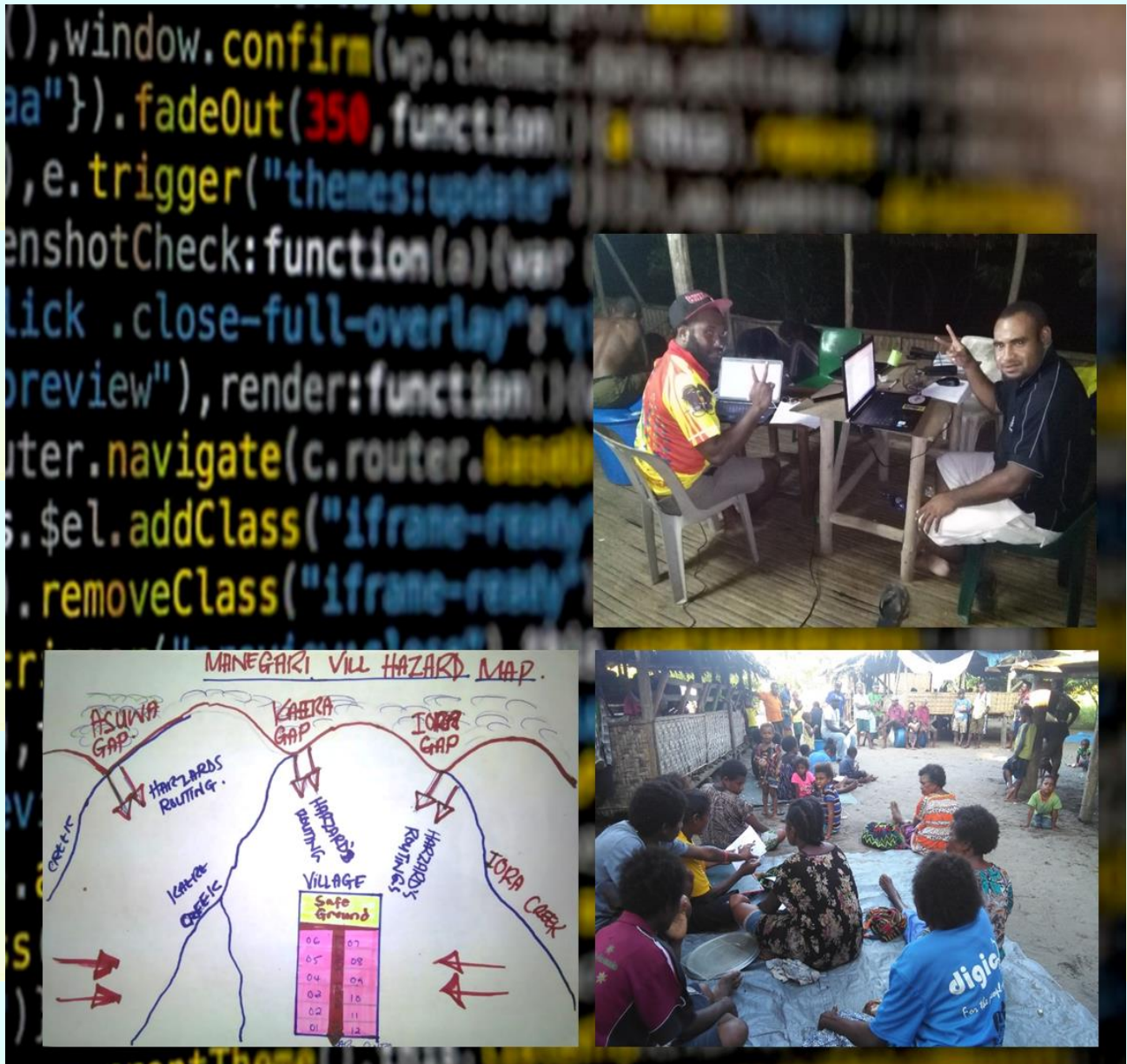


Photo: Consulting local people about the disaster risks they face and integrating the findings into disaster risk management plans is the way to curb exponential risks. Courtesy of Sebastian Hurokoli @ IOM PNG.

Private sector businesses, finance institutions and professional associations

Disaster risk reduction should be into business models and practices to promote investing in resilient small to medium-sized enterprises. With guidance from the PDC, they should participate in developing and supporting appropriate research and developing institutional disaster risk reduction standards, including raising awareness.



Photo: Courtesy of Benson McRubins Burau @ ICT Oro Provincial Administration.

Information and communications technology and media

To take an active leading role in mass media awareness with guidance from the PDC at the provincial, district, Local Level Government, wads and village levels to improve understanding of hazards and disaster risks. In addition, to develop and clear disseminate early warning information to throughout Northern Province.



Photo: Courtesy of Benson McRubins Burau @ ICT Oro Provincial Administration.

Implementation, monitoring and reporting guidelines

- The PDC will develop action plans to operationalize the Disaster Risk Reduction Plan;
- The PDC will develop a detailed disaster risk reduction strategy monitoring and evaluation plan;
- Conduct regular progress assessments on the disaster risk reduction strategies and update the Oro Provincial Administration, PDC and the provincial government with reports;
- The Northern Provincial Government will conduct bi-annual consultation meetings with respective government sectors and stakeholders;
- International organizations, United Nations agencies, the private sector and development partners will be encouraged to participate in the monitoring and reporting process.



Photos: Courtesy of Benson McRubins Bureau @ Media and ICT Unit, Oro Provincial Administration.

SUMMARY BUDGET

Expenditure hazard	Annual budget (kina)	Total budget (kina)
Volcanic Eruption	6,390,909	70,300,000
Inland and coastal flooding	17,463,636	192,100,000
Strong Winds	668,181	7,350,000
Landslides/mudslides	272,272	3,000,000
Drought	4,254,545	46,800,000
Fires	1,085,454	11,940,000
Cyclones	109,090	1,200,000
Earthquakes	163,636	1,800,000
Tsunamis/king-tides	445,454	4,900,000
Total Budget		339,390,000

The total budget required to successfully implementing the Northern Province DRR Strategy 2020-2030 is 187,540.00 million kina in 10 years.

Thus, the national, provincial and local level governments, private sector stakeholders, statutory organizations, NGOs and faith-based organizations will support the Northern Provincial Disaster Risk Management Strategy by mobilizing an annual total of 18,754,00.00 million kina.



Photo: Courtesy of Benson McRubins Burau @ Media & ICT Unit, Oro Provincial Administration.

RESULT BASED FRAMEWORK

Volcano Disaster Risk Reduction Strategies	Target Indicators	Baseline Indicators	Responsible institutions	Budget (PGK in Mil)
Raise awareness about volcanic eruption and impacts of the eruption throughout the province.	<ul style="list-style-type: none"> Number of volcano awareness raising events conducted in districts and communities; 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of reports and new evacuation strategies generated 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
Develop volcano eruption response and evacuation plans.	<ul style="list-style-type: none"> Number of new evacuation plans developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
Maintain existing and build new evacuation routes that will be used during a volcanic eruption event to evacuate people of affected villages to identified safe zones.	<ul style="list-style-type: none"> Number of new evacuation routes developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of existing routes maintained. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
Mobilization of resources by stakeholders and line agencies.	<ul style="list-style-type: none"> Stakeholders and line agencies have resources to respond to disasters 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The Province Disaster Centre will coordinate with the Provincial Works and Building Department, Provincial Health Authority, Provincial Lands Division, District Disaster Centre, and the Ward Disaster Committee and relevant stakeholders.	<ul style="list-style-type: none"> Number if evacuation centers are built and equipped Number existing government stations are upgraded to as community evacuation facilities 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11

PDC conduct an annual population database update in consultation with National Statistical Office and Provincial CIR.	<ul style="list-style-type: none"> The PDC developed an office population database is updated annually according to the standards of the national statistics office and provincial CIR. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Staff to man the database are well trained 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The technical Services division is to monitor and assess all evacuation facilities and report to relevant authorities.	<ul style="list-style-type: none"> Number evacuation facility assessment reports are submitted to the government by the technical services division. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number assessment reports produced, and recommendations are implemented timely. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.3
Relocation & Re-settlement of Internally Displaced Persons (IDPs)	<ul style="list-style-type: none"> Number of families relocated to safe areas. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	22
Establish Rehabilitation Programs.	<ul style="list-style-type: none"> Number recovery programs available and mainstreamed after disaster. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11
Monitor, assess and report any volcanic activities in the province.	<ul style="list-style-type: none"> The provincial volcanic observatory is equipped with tools to facilitate efficient monitoring and assessment activities 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11

Inland and Coastal Flooding Disaster Risk Reduction Strategies	Target Indicators	Baseline Indicators	Responsible institutions	Budget
Develop disaster preparedness plan and conduct awareness in communities about inland and coastal flooding.	<ul style="list-style-type: none"> Number of awareness campaigns on inland and coastal flooding in affected communities conducted and reported. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Numbers of families are prepared to respond to inland and coastal flooding. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
Develop inland and coastal flooding response plan.	<ul style="list-style-type: none"> Number of inland and coastal flooding response plans developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of inland and coastal flooding standard operating procedures (SOP's) developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
Relevant stakeholders will coordinate and develop flood resistant farming techniques and trainings.	<ul style="list-style-type: none"> Numbers of trainings on flood resistant farming are conducted for flood affected communities. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.5
	<ul style="list-style-type: none"> Number of subsistence farmers received flood resistant planting materials. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.5
Identify potential community leaders to be trained on community-based disaster management program.	<ul style="list-style-type: none"> Number of community leaders, disaster managers and officers are trained on community-based disaster management programs. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11
The respectively District Development Authorities in consultation with PDC will provide & outsource necessary financial support for trainings & other local activities designed for the people.	<ul style="list-style-type: none"> Number of disaster preparedness trainings designed for the local people are financially supported by the DDA. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11
The PDC will consult the LLGs' and the ward councils to develop relocation policies.	<ul style="list-style-type: none"> Number of LLG and ward relocation plans are developed 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders 	11

			<ul style="list-style-type: none"> Relevant Statutory Organizations 	
	<ul style="list-style-type: none"> Number of families in high-risk areas are relocated 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	22
The Provincial Lands Division to mobilize identified land for relocation process.	<ul style="list-style-type: none"> Hectares of land is mobilized and allocated for relocation purposes 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11
	<ul style="list-style-type: none"> Numbers of critical community infrastructures are relocated to new safe areas. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11
The PDC in consultation with responsible agencies to develop agriculture and food security programs.	<ul style="list-style-type: none"> Number of food security programs developed targeting in disaster affected communities 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of trainings on food security implemented 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11
	<ul style="list-style-type: none"> Number of communities improved food security. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The PDC in consultation with communities to identify a marked safe ground for evacuation.	<ul style="list-style-type: none"> Number of community evacuation routes and safe grounds identified and prepared. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11
	<ul style="list-style-type: none"> Number of community evacuation simulation drills are conducted in target areas 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.7
The PDC in consultation with PNGFA and other agencies to develop policy guidelines to promote re-forestation programs.	<ul style="list-style-type: none"> Number and lengths of buffer zones along high rivers are developed and protected 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.5

	<ul style="list-style-type: none"> Number and hectares of reforested areas are reported developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.5
PDC in consultation with DDA and other agencies promote safe shelter programs.	<ul style="list-style-type: none"> The Northern Provincial Safe shelter building code of practice developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Numbers of safe shelter trainings according to the standard are conducted throughout Northern Province. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	3
	<ul style="list-style-type: none"> Number of safe buildings reported built in rural areas. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	22
PDC in consultation with Technical Services Division and other agencies to design proper storm water drainage systems for coastal communities.	<ul style="list-style-type: none"> Storm water drainage systems developed and approved for implementation. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	22
	<ul style="list-style-type: none"> Number of water drainage established in waterlogged areas. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	22
	<ul style="list-style-type: none"> Water drainage systems maintenance plans developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	22

Strong Wind Disaster Risk Reduction Strategies	Target Indicators	Baseline Indicators	Responsible institutions	Budget
The PDC in consultation with the National Weather Services and other agencies to develop strong wind response and evacuation plan.	<ul style="list-style-type: none"> A strong response plan is developed 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Strong wind evacuation simulation drills conducted 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.7
The PDC in consultation with the National Weather Services and other agencies to establish effective pathways to disseminate early warnings.	<ul style="list-style-type: none"> Number of effective early warning systems established. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	3
	<ul style="list-style-type: none"> Number of officers trained to monitoring early warning instruments and systems. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1
	<ul style="list-style-type: none"> Number information dissemination processes developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1
The PDC and the NPHA and other agencies to develop a health response program.	<ul style="list-style-type: none"> Number of health disaster response plans developed. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
Research and design suitable building standards towards improving building structures to withstand strong winds	<ul style="list-style-type: none"> The provincial building code of practice developed and endorsed for implementation. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The PDC in consultation with relevant agencies to provide programs, support and interventions to communities on mitigating strong winds.	<ul style="list-style-type: none"> Number of strong wind preparedness plans for target communities are developed 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.45

Landslide/Mudslide Disaster Risk Reduction Strategies	Target Indicators	Baseline indicators	Responsible institutions	Budget
The PDC in consultation with relevant agencies to develop Land/Mudslide response plan.	<ul style="list-style-type: none"> Number of land slide response developed for target communities 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of families adopted response plans 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The PDC and relevant agencies develop awareness programs on Land/ Mudslides.	<ul style="list-style-type: none"> Number of landslide awareness campaigns conducted in target communities 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The PDC to consult relevant agencies to carry out study on land formation and potential landslides and provide strategic information.	<ul style="list-style-type: none"> Number of research on land formation conducted in target areas 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1
The PDC in consultation with the Geo-Hazard Services and other agencies to establish effective pathways to disseminate early warnings.	<ul style="list-style-type: none"> Landslide early warning systems developed 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of early warning information dissemination pathways developed 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4

Drought Disaster Risk Reduction Strategies	Target Indicators	Baseline indicators	Responsible institutions	Budget
The PDC in consultation with relevant agencies to develop a drought response plan.	<ul style="list-style-type: none"> Number of drought response plans developed and adopted 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The PDC will work closely with Provincial Planning and Monitoring Division and relevant agencies to identify and develop WASH Programs	<ul style="list-style-type: none"> WASH development plans developed and implemented. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of communities have access to sustainable water sources 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	22
	<ul style="list-style-type: none"> Number of communities improved hygiene practices 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	22
The PDC and DAL to establish agriculture training programs on drought resistant farming practices.	<ul style="list-style-type: none"> Number of communities received training on drought resistant farming 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1
	<ul style="list-style-type: none"> Number of families are supplied with drought resistant planting materials 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1

Fire Disaster Risk Reduction Strategies	Target Indicators	Baseline indicators	Responsible institutions	Budget
The PDC in consultation with all relevant agencies to develop fire response and evacuation plan.	<ul style="list-style-type: none"> Number of fire response plans developed; 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Fire Service division is equipped with relevant firefighting equipment's 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	11
	<ul style="list-style-type: none"> Percentage of Fire fighters are trained and improved their skills 		<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.5
The PDC in consultation with relevant agencies to research and develop awareness programs.	<ul style="list-style-type: none"> Number awareness campaigns on hazards are conducted in districts and target communities 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.04

Cyclone Disaster Risk Reduction Strategies	Target Indicators	Baseline Indicators	Responsible institutions	Budget
The PDC in consultation with all relevant agencies to develop a cyclone response and evacuation plan.	<ul style="list-style-type: none"> Number of response cyclone response plans developed and disseminated to relevant agencies. 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The PDC and relevant agencies to design a systematic response and evacuation approach based on mitigating cyclone hazards.	<ul style="list-style-type: none"> --- 	--	<ul style="list-style-type: none"> -- 	<ul style="list-style-type: none"> --
The PDC in consultation with other agencies to establish effective pathways to disseminate early warnings.	<ul style="list-style-type: none"> Number of early warning systems established and maintained 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
Research and design suitable building standards towards improving building structures to withstand cyclones	<ul style="list-style-type: none"> Number of weather monitoring systems are established for accurate weather reporting 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
Earthquake Disaster Risk Reduction Strategies	Target Indicators	Baseline Indicators	Responsible institutions	Budget
<ul style="list-style-type: none"> The PDC in consultation with all relevant agencies to develop an earthquake response and evacuation plan. 	<ul style="list-style-type: none"> Number of earthquake response plans are developed for target communities 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
<ul style="list-style-type: none"> The PDC in consultation with other agencies to establish effective pathways to disseminate early warnings. 	<ul style="list-style-type: none"> Number of earthquake early warning information dissemination pathways are developed and maintained 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
<ul style="list-style-type: none"> Research and design suitable building standards towards improving building structures to withstand earthquake. 	<ul style="list-style-type: none"> Number research studies carried out and earthquake building standards updated 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1

Tsunami or King Tides Disaster Risk Reduction Strategies	Target Indicators	Baseline indicators	Responsible institutions	Budget
The PDC in consultation with all relevant agencies to develop a Tsunami/Tides response and evacuation plan.	<ul style="list-style-type: none"> Number of tsunami response plans developed 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of standard operating procedures developed 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
	<ul style="list-style-type: none"> Number of simulation drills conducted 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1
The PDC in consultation with relevant agencies to research and develop awareness programs.	<ul style="list-style-type: none"> Number Tsunami research studies conducted 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1
	<ul style="list-style-type: none"> Number of local Tsunami IEC materials developed 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.7
	<ul style="list-style-type: none"> Number Tsunami awareness campaigns conducted 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	0.4
The PDC in consultation with other agencies to establish effective pathways to disseminate early warnings.	<ul style="list-style-type: none"> Number of Tsunami early warning information dissemination pathways are developed and maintained 	0	<ul style="list-style-type: none"> Relevant active government departments, divisions and sectors Relevant FBO's Relevant NGO's Relevant private sector stakeholders Relevant Statutory Organizations 	1



MAIN ACTORS

Active Government Departments, Divisions and Sectors

The DRR strategy and SOP will be implemented jointly by different government departments/sectors, private sector and other stakeholders.

Departments/sectors under provincial administration are:

- Afore Local Level Government/Sub-District Administration
- Correctional Services
- Department of Environment and Conservation
- Department of Labour and Industrial Relations
- Department of Oro Provincial Administration
- Department of Works and Supply
- Deputy Provincial Administrator — Corporate Affairs
- Deputy Provincial Administrator — Field Services
- District Courts
- Division of Agriculture and Livestock
- Division of Budgets and Internal Revenue
- Division of Commerce, Culture and Tourism
- Division of District and Local Level Government Affairs
- Division of Education
- Division of Fishery and Marine Resources
- Division of Home Affairs and Community Development
- Division of Human Resource Development
- Division of Lands and Physical Planning
- Division of Policy, Planning and Monitoring
- Division of Rural Health Services
- Higaturu Local Level Government/Sub-District Administration
- Ijivitari District Administration
- Ijivitari District Development Authority
- Ijivitari District Treasury
- Internal Audit Unit
- Kira Local Level Government/Sub-District Administration
- Kokoda Local Level Government/Sub-District Administration
- Law and Justice Sector
- National Airports Corporation
- National Broadcasting Corporation (Radio Northern)
- National Customs Authority
- National Fire Service
- National Fisheries Authority
- National Forest Authority
- National Identity Project (NID)
- National Maritime Safety Authority

- National Weather Service
- Northern Provincial Government
- Office of Climate Change & Development
- Oro Provincial Aids Council
- Oro Provincial Treasury
- Orobay Local Level Government/Sub-District Administration
- Papua New Guinea Defence Force
- Papua New Guinea University of Natural Resources & Environment
- Popondetta General Hospital
- Popondetta Urban Local Level Government/Sub-District Administration
- Provincial Administrator's Office
- Provincial Health Authority
- Provincial Maritime Safety Authority
- Provincial Transport Board
- Public Solicitor's Office
- Royal Papua New Guinea Police Constabulary
- Safia Local Level Government/Sub-District Administration
- Sohe District Administration
- Sohe District Development Authority
- Sohe District Treasury
- Tamata Local Level Government/Sub-District Administration
- Technical Services Unit
- Tufi Local Level Government/Sub-District Administration
- Village Courts Services
- Ward Councillors & Ward Development Committees

Statutory Organizations & Private Sector Stakeholders

Private sector organizations are recognized by this DRR Strategy as key stakeholders and partners to assist in ensuring services are provided, sourcing funds and carrying out humanitarian and community initiative activities and other programs where required by the Provincial Disaster Committee. They are but not limited to;

- Agmark PNG-Popondetta Branch
- BSP Popondetta Branch
- Cocoa Coconut Institute
- Coffee Industry Corporation
- DIGICEL Popondetta Branch
- Motor Vehicle Insurance Limited
- National Development Bank
- New Britain Oil Palm Limited
- Oil Palm Industry Corporation
- PNG Micro Finance
- PNG power Limited
- PNG Post Office

- Provincial Chamber of Commerce
- Telikom PNG
- Water PNG

Faith Based Organizations (FBOs)

The DRR Strategy recognises these main churches as major potential partners in implementing;

- Catholic Church
- Caritas PNG
- Salvation Army
- Seventh Day Adventist
- ADRA – Adventist Development & Relief Agency
- Assemblies of God
- Baptist Church
- Evangelical Alliance
- United Church
- Anglican Church
- AROD – Anglican Response to Oro Disaster
- Lutheran Church
- Four Square Church
- Church of Latter Day Saints

Non-Governmental Organizations

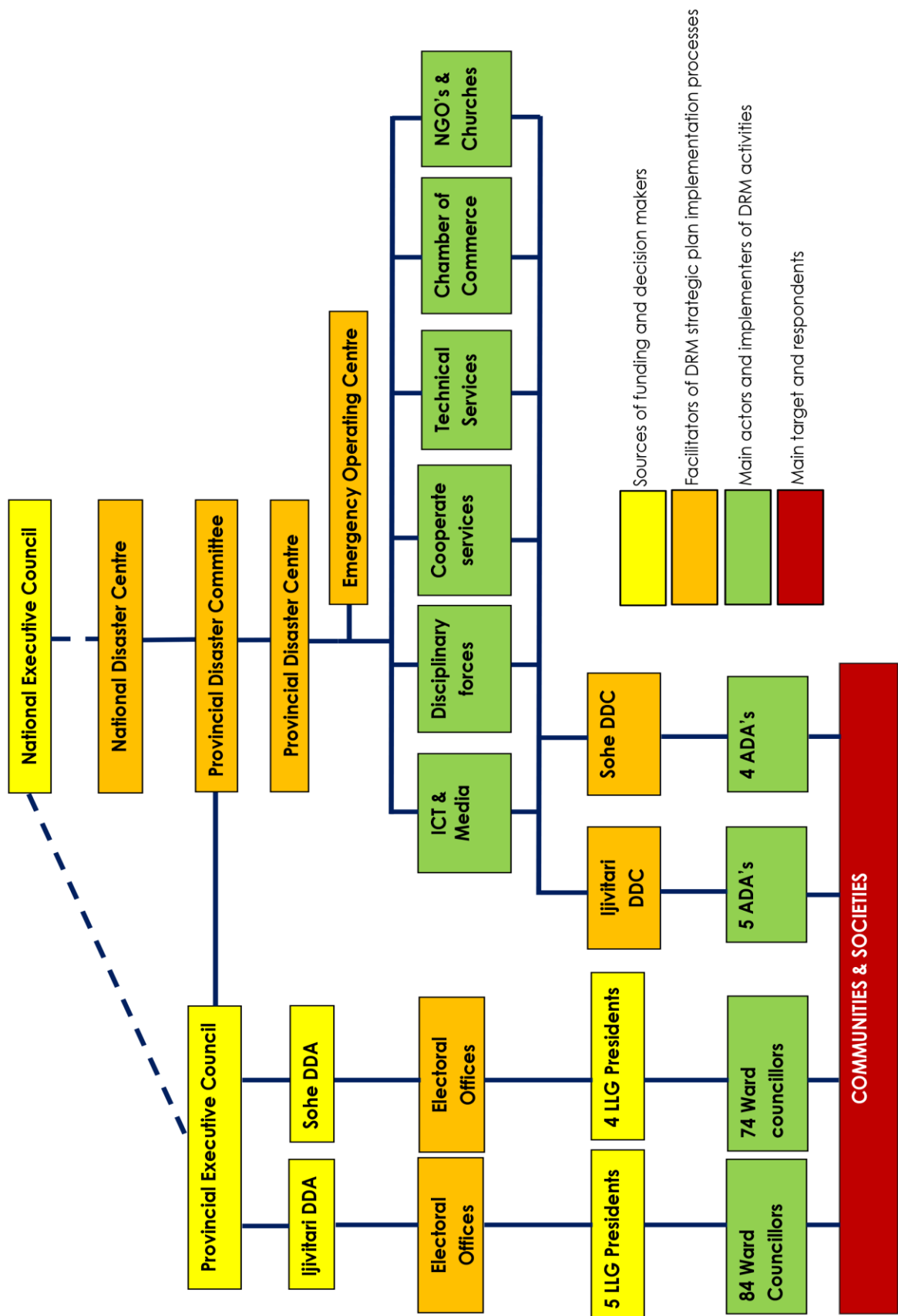
The DRR Strategy also recognises all NGOs in the province as implementing partners. These include:

- Anglicare PNG
- PNG Red Cross Society
- Provincial and District Council of Women
- World Vision
- Other established Inter-Governmental Organisations (INGOs), Non-Governmental Organisations (NGOs) & Community-Based Organisations (CBOs) in the Province
- This includes Volunteers



Photo: Training on safe shelter construction for high-risk communities in Kebara Village, Kokoda, Northern Province supported by IOM. Photo by Sebastian Hurokoli @ IOM PNG.

Northern Province DRM Strategy 2020 – 2030 Implementation Structure



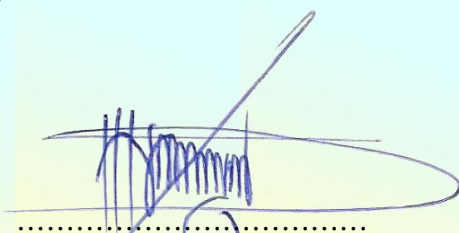
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- Adventist Development & Relief Agency
- Afore Sub District Administration
- Correctional Service
- Department of Agriculture and Livestock
- Higaturu Local Level Government
- Higaturu Oil Palms Limited
- Ijivitari District Administration
- International Organization for Migration
- Kira Sub District Administration
- National Airports Cooperation
- National Fisheries Authority
- Northern Chamber of Commerce
- Northern Division of Commerce
- Northern Province Division of Lands and Physical Planning
- Northern Province Division of Technical Services
- Northern Province Fire and Emergency Services
- Northern Province Health Authority
- Northern Province National Broadcasting Commission
- Northern Provincial Division of Community Development
- Northern Province Tourism Office
- Papua New Guinea Forest Authority
- PNG Red Cross Society
- PNG University National Resources and Environment
- Provincial Disaster Centre
- Rabaul Volcano Observatory
- Safia Sub District Administration
- Small Crafts and Maritime Safety
- Sohe District Administration
- Tufi Local Level Government
- USG Limited

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Thank you for the contributions and efforts from all.



Mr. Trevor Magei
Provincial Administrator