



Seychelles National Integrated Emergency Management Plan

Department of Risk and Disaster Management





Seychelles National Integrated Emergency Management Plan (NIEMP)

Department of Risk and Disaster Management (DRDM)



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Foreword



The Government of Seychelles is firmly committed to the protection of its citizens and the natural environment of our country, as enshrined in the Constitution of the Republic of Seychelles.

To give effect to the Constitutional provision, the Seychelles National Disaster Risk Management Policy 2014 and the Disaster Risk Management Act, 2014, call for the setting up of standards for disaster risk management across the Seychelles' jurisdiction. The Act gives the Department of Risk and Disaster Management (DRDM) the mandate to develop mechanisms in order to effectively prevent, prepare and promote mitigation measures to counter the effects of multi-hazard events.

Seychelles follows the Global Framework for Disaster Risk Management (Sendai Framework 2015–2030). Over the past decades the Seychelles islands have become increasingly vulnerable not only to hydro-meteorological events, but also to other human-induced hazards, thus threatening lives, properties and the environment, which eventually escalate to become negative impacts on the national economy.

In May 2018, the Cabinet of Ministers approved the project for the development and implementation of the first Seychelles National Integrated Emergency Management Plan (NIEMP). The plan will be utilized by the government to deliver emergency management services in the Seychelles under the leadership of Department of Risk and Disaster Management.

The Department received active support under a World Bank technical assistance programme and after a year of hard work and exchange between the two parties, a comprehensive plan has been produced. It was validated through a series of workshops in August and September 2019 by key stakeholders involved in disseminating relief support and emergency management functions towards disaster risk management.

The plan sets out the way forward for all stakeholders to develop their sectorial plans according to their functions as lead or support agencies in the five functional areas of the NIEMP. The functions of stakeholders will have to be reviewed in order to meet the expectation of the government to lower disaster risks by implementing an effective collaborative approach to reduce the effects of multi-hazard events.

The government is committed to providing support for the full implementation of the NIEMP and is determined to protect lives, properties and safeguard valuable assets of the Seychelles.

A handwritten signature in black ink, appearing to read 'Macsuzy Mondon', written in a cursive style.

Mrs. Macsuzy Mondon
Designated Minister
Minister for Risk and Disaster Management

Introduction



The nature of disaster risks faced by the Republic of the Seychelles, both from natural events and human induced threats are very diverse and will continue to evolve. Therefore, the need to establish institutional coordinated arrangements with all the available resources and capacities planned for an immediate response to hazardous events has become more crucial. This plan will make it possible for the entire governmental mechanism to act in a proactive, systematic, and coordinated manner to prepare for, respond to, and recover from disasters.

As we work together in a more comprehensive manner to coordinate our efforts in managing our response to hazardous events, we can together achieve success. The achievement of our goals to develop this plan and its effectiveness will be possible through cooperation of all ministries, departments, and agencies. The inclusion of the private sector, civil society, and nongovernmental organisations is crucial. I trust that they will provide additional administrative and technical as well as educational support to maximise resources, develop appropriate policies, and improve response and recovery.

The National Integrated Emergency Management Plan (NIEMP) outlines the general framework and the Seychelles approach to emergency preparedness and response and delivery of the Integrated Emergency Management System required by the Seychelles law. It is designed to guide emergency preparedness and response stakeholders from different organisations, helping them understand their own role and how it relates to the role of other individuals and organisations, and to serve the Seychelles citizens at their best during emergencies, regardless of their complexity, scope, location, or causes.

The plan describes how the central government response will be organised, building on the role of the Department of Risk and Disaster Management (DRDM). It also describes the sectoral and local district arrangements, which are the foundation of preparedness work, and for the initial response to any emergency in the Seychelles. The NIEMP is not a stand-alone document; it supports national legislation and policies, providing the foundation for their practical delivery, and setting out arrangements for ensuring an effective response to, and recovery from, any emergency occurring in the Seychelles, irrespective of cause or location.

Natural hazards know no boundaries. The priority goals of the NIEMP are to protect and save lives, assure coverage of people's basic needs, reduce health impacts, safeguard property and the environment, promote swift restoration to normal life, and safeguard the economy and development gains.

I trust that the NIEMP will be effectively implemented by all.

Seychelles for All—All for Seychelles

Paul RJ Labaleine
Principal Secretary
Department of Risk and Disaster Management

List of acronyms

AG	Attorney General
ASP	Agency for Social Protection
CEPS	Citizens Engagement Platform Seychelles
CP	Command Post
CST	Command Support Team
DF	Department of Finance
DICT	Department of Information and Communication Technology
DRDM	Department of Risk and Disaster Management
DA	District Administrator
DT	Department of Transport
FAD	Family Affairs Department
GC	Gold Command
HCA	Health Care Agency
IEMS	Integrated Emergency Management System
LGD	Local Government Department
LWMA	Landscape and Waste Management Agency
MDA	Ministries, Departments, Agencies
MHILT	Ministry of Habitat, Infrastructure and Land Transport
MOECC–DOE	Ministry of Environment, Energy and Climate Change—Environment Department
MOECC–CCED	Ministry of Environment, Energy and Climate Change—Climate Change and Energy Department
MEHRD	Ministry of Education and Human Resource Development
MTLTCA–DOT	Ministry of Tourism, Land Transport and Civil Aviation - Department of Tourism
NBA	National Biosecurity Agency
NDC	National Disaster Committee
NIEMP	National Integrated Emergency Management Plan
PS	Principal Secretary
RRP	Regional Resilience Platform
SOP	Standard Operating Procedure
TC	Tropical Cyclone
UC	Unified Command

All dollar amounts are U.S. dollars unless otherwise indicated.

1. Preface

In pursuance of the Government of Seychelles constitutional mandate to actively promote the welfare of the Seychellois people, the Disaster Risk Management (DRM) Policy of the Republic of Seychelles, along with the Disaster Management Act 2014, gives effect to the global paradigm shift away from the approach of responding to disasters after they have occurred to a comprehensive disaster risk management.

The shift to comprehensive disaster risk management, which has taken place internationally, focuses on reducing vulnerabilities and exposure to different types of hazards, thus preventing the creation of new disaster risks and building resilience within the broad context of sustainable development. It also requires strengthening disaster preparedness, taking action in anticipation of events, and ensuring that capacities are in place for effective response and recovery at all levels.

This Seychelles National Integrated Emergency Management Plan (NIEMP) is not a stand-alone document. It supports National DRM Legislation and Policy of the Republic of Seychelles in providing the master plan for their practical delivery, setting out arrangements for disaster risk preparedness and response activities, irrespective of cause or location. It recognises the lead role of the Seychelles government in coordinating emergency preparedness and response and is designed to build upon, streamline, and strengthen existing institutional, governance, and coordination structures in the Seychelles.

The purpose of the NIEMP is to establish a shared framework for the effective coordination of preparedness and response operations, including both planning and training activities and the principles to be applied in responding to localized emergencies, and for responding to any disasters impacting the Seychelles, regardless of scale or causation.

The Plan describes how the government response will be organised, building on the role of the Department of Risk and Disaster (DRDM). It also describes the local- and sectoral-level arrangements, which are the foundation of disaster preparedness and response activities.

It is expected that ministries, departments, and agencies (MDAs) will use the principles and guidance set out in this plan to develop and implement their own single agency or hazard specific plans, design training for their staff.

The plan was developed through consultation with ministries, departments and agencies, UN agencies, World Bank, Red Cross Society of Seychelles, and other non-governmental organizations and humanitarian partners, incorporating a number of internationally recognised concepts, tools, and procedures in emergency response, such as incident command and management systems.

Its aim is to strengthen emergency preparedness for effective response at all levels and thus contribute to the implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework) Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation, and reconstruction.



2. Introduction

The NIEMP sets out a consistent framework to which all emergency preparedness and response efforts should adhere. The arrangements set out in this Plan will guide preparedness for disasters and an effective response to any disasters when they occur. The general concept is that government and organisational structures and mechanisms will continue to operate during an emergency, but will be enhanced through the robust coordination, communication, and decision-making structures set out in this Plan.

To ensure those arrangements and the responsibilities of individuals and organisations (including the private sector and civil society) are understood, the Plan sets out the roles and accountabilities for each agency and community involved in emergency response and recovery and describes the coordination and communications structure within which they will work.

This Plan covers a wide range of events, including those triggered by natural hazards such as cyclones, Tsunami, severe flooding, landslides, etc.; human-induced events such as transport accidents, terrorist incidents, and the impact of a disruption on essential services and critical infrastructure; and health and sanitary events like epidemics, pandemics, and animal-related diseases.

The **NIEMP** and the procedures outlined in this Plan represent a flexible and scalable approach to emergency management. All or part of this Plan may be implemented based on the needs of the situation. Events can, and do, take place that by their nature cannot be anticipated exactly. Response arrangements, therefore, need to be flexible in order to adapt to the circumstances at the time while applying good practice, including lessons from previous emergencies, and safeguarding the Seychelles constitution. In this sense, the NIEMP is also intended to be a living document that evolves and improves as the outcomes of ongoing planning efforts, exercises, and real-world events are incorporated.

2.1 National Priority Goals

The NIEMP aligns with the national goals for disaster risk management and brings along the necessary mechanisms required to help reduce the impact of disasters on the societal, economic, and environmental dimensions of the country. In this sense the priority goals that guide this Plan are:

- i. Protect and save lives
- ii. Assure coverage of people's basic needs
- iii. Reduce health impacts
- iv. Safeguard property and the environment
- v. Promote swift restoration of normal life
- vi. Safeguard the economy and development gains

2.2 Objectives for the Plan

The NIEMP is aimed at achieving the following objectives:

- i. A comprehensive and shared framework for a nationwide systematic approach for the effective coordination of disaster risk response and recovery, including the Incident Command System, Multiagency Coordination Systems, and Public Information;
- ii. A defining of roles and responsibilities for emergency management functions, establishing of the conditions under which each of the different levels of government and private or external partners are mobilized, and description of the organisational concepts and structures used to coordinate actions of national and district stakeholders;
- iii. A set of preparedness concepts and principles for all hazards, establishing common operating protocols, operational priorities, and general strategies for ensuring interoperability of communications and information management;
- iv. Standardised resource management procedures that enable coordination among different jurisdictions or organisations;
- v. Scalable, so it may be used for all incidents (from day-to-day to large scale); and
- vi. A dynamic system that promotes the coordination of different institutional and sectoral response plans and maintenance of effective plans.

2.3 Guiding Principles for Preparedness and Response

The following guiding principles have been developed to capture the core characteristics of effective preparedness and response. It is proposed that they should be applied to the preparations for, and management of, any emergency. These are:

- i. **Preparedness:** All individuals and organisations that might have to respond to emergencies should be properly prepared, including having clarity of roles and responsibilities, and specific and generic plans, and they should rehearse response arrangements periodically.

- ii. **Continuity:** The response to emergencies should be grounded within organisations' existing functions and their familiar ways of working, although inevitably, actions will need to be carried out at greater speed, on a larger scale, and in more testing circumstances during the response to any emergency incident.
- iii. **Subsidiarity:** Decisions should be taken at the lowest appropriate level, with coordination at the highest necessary level. Local and district responders should be the key building blocks of response for an emergency of any scale, supported by specialists with additional resources and expertise from the national level as required.
- iv. **Direction:** Clarity of purpose should be delivered through an awareness of the strategic aims and supporting objectives for the response. The operational structures set out within this plan at the national, command post, and field levels ensure these will be agreed and understood by all involved in managing the response to an incident in order to effectively prioritize and focus the response.
- v. **Integration:** Effective coordination should be exercised between and within organisations and between local, district, regional, and national tiers of a response. This requires timely access to appropriate guidance, information, and support.
- vi. **Communication:** Good two-way communications are critical to an effective response. Reliable information must be passed correctly and without delay between those who need to know, including the public.
- vii. **Cooperation:** Positive engagement based on mutual trust and understanding will facilitate information sharing and deliver effective solutions to arising issues.
- viii. **Anticipation:** In order to anticipate and manage the consequences of all kinds of emergencies, planners need to identify risks and develop an understanding of both the direct and indirect consequences in advance, where possible.

2.4 Conceptual Framework¹

Capacity

The combination of all the strengths, attributes, and resources available within an individual, community, organisation, or society which can be used to achieve established goals.

Emergency

Any occurrence, or imminent threat thereof, which results, or is likely to result, in substantial injury or harm to the population, or substantial damage to or loss of property. At one end of the spectrum, emergencies are usually small-scale, localized incidents which are resolved quickly using local resources. However, small-scale emergencies can escalate into disasters when there has been inadequate planning and a wasteful use of resources.

Note: *Emergency* is frequently used interchangeably with the term *disaster*.

Disaster

A serious disruption in the functioning of a community or a society involving widespread human, material, economic, or environmental threats, losses, and impacts, whether arising from an accident, social disruption, nature or human activity, and whether developing suddenly or as a result of a long-term process.

Incident

An incident, as used in this plan, refers to any occurrence or event, natural or human-caused, which requires an emergency response to protect life or property. An incident may be an emergency or a disaster.

Incident levels

Incidents can be classified by level of impact (which includes economic, human, and environmental, and may include death, injuries, disease, and other negative effects on human physical, mental, and social well-being) and the type and number of issues that need to be addressed. This classification involves minor emergencies, limited and potential emergencies, and major disasters.

Disaster/emergency management

The organisation, design, planning, implementation, and evaluation of strategies, policies, and measures that

promote and improve disaster preparedness, response, and recovery practices at different organisational and societal levels.

Disaster risk

The potential for adverse effects on lives; livelihoods; health status; economic, social, and cultural assets; services (including environmental); and infrastructure due to particular hazardous events occurring within some specified time period. Disaster risk derives from a combination of physical hazards and the vulnerabilities of exposed elements. Where disaster risk is materialised, severe interruption of the normal functioning of the affected society may be expected.

Disaster Risk Management (DRM)

Social processes for designing, implementing, and evaluating strategies, policies, and measures to improve the understanding of disaster risk, foster Disaster Risk Reduction (DRR) and transfer, and promote continuous improvement in disaster preparedness, response, and recovery practices, with the explicit purpose of increasing human security, well-being, quality of life, and sustainable development. DRM should be guided by the Sendai Framework for Disaster Risk Reduction 2015–2030 and considered and coordinated within relevant development plans, resource allocations, and programme activities.

Disaster Risk Reduction (DRR)

Denotes both a policy goal or objective, and the strategic and instrumental measures employed for anticipating future disaster risk; reducing existing exposure, hazard, or vulnerability; and improving resilience.

Early Warning System

The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities, and organisations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

Exposure

The presence of people; livelihoods; environmental services and resources, infrastructure; and economic, social, and cultural assets, in places that could be adversely affected.

Hazard

The potential occurrence of a natural or human-induced physical event that may cause loss of life, injury, or other

¹ Conceptual framework developed base on UNISDR. 2009; U.S. Department of Homeland Security (DHS). 2008a; IPCC, 2012

health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, and environmental resources.

Impacts

Effects on natural and/or human systems. In this plan, the term “impacts” is used to refer to the effects on natural and/or human systems of physical events, of disasters, and of climate change.

Mitigation (of disaster risk and disaster)

The lessening of the potential adverse impacts of physical hazards, (including those that are human induced), through actions that reduce hazard, exposure, and vulnerability.

Preparedness

The capacities developed by governments, response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, or current disasters. Preparedness includes activities such as contingency planning; the stockpiling of equipment and supplies; the development of arrangements for coordination, evacuation, and public information; and associated training and field exercises. Preparedness is considered as a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response.

Recovery

The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural, and environmental assets, systems, and activities of a disaster-affected community or society, aligning with the principles of sustainable development and “build back better,” to avoid or reduce future disaster risk.

Resilience

The ability of a system and its component parts to anticipate, absorb, accommodate to, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.

Response

Actions taken directly before, 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.

Vulnerability

The propensity or predisposition to be adversely affected. The vulnerability conditions are determined by physical, social, economic, and environmental factors or processes which increase the susceptibility of an individual, a community, assets, or systems to the impacts of hazards.

2.5 Differentiating between Plans and Procedures

Although the distinction between plans and procedures is fluid, the basic criterion used for this Plan is to set out essential “need to know” and generic information applicable to all stakeholders in respect to emergency preparedness and response, such as key frameworks and structures, and establishing these as a matter of public record.

More detailed information and “how-to” instructions that apply only to individual stakeholder and responder groups are set out in supporting Standard Operating Procedures (SOPs). Key SOPs relating to establishment of national response and recovery arrangements are set out in SOPs developed by DRDM in support of this NIEMP, but more detailed and sector specific SOPs may need to be developed by individual MDAs to guide their own response. These need to be designed so that they are consistent with the principles and structures set out in this NIEMP to ensure a consistency of approach across all MDAs.

For example, the NIEMP recognises the fire service is the primary agency responsible for putting out fires and describes the generic structures and arrangements for the coordination of the multiagency response, including tasks such as evacuating people, providing shelter, etc. However, it does not detail what firefighting actions should be undertaken at the scene or what fire equipment is most appropriate: the NIEMP would defer to the fire department’s SOPs for that.

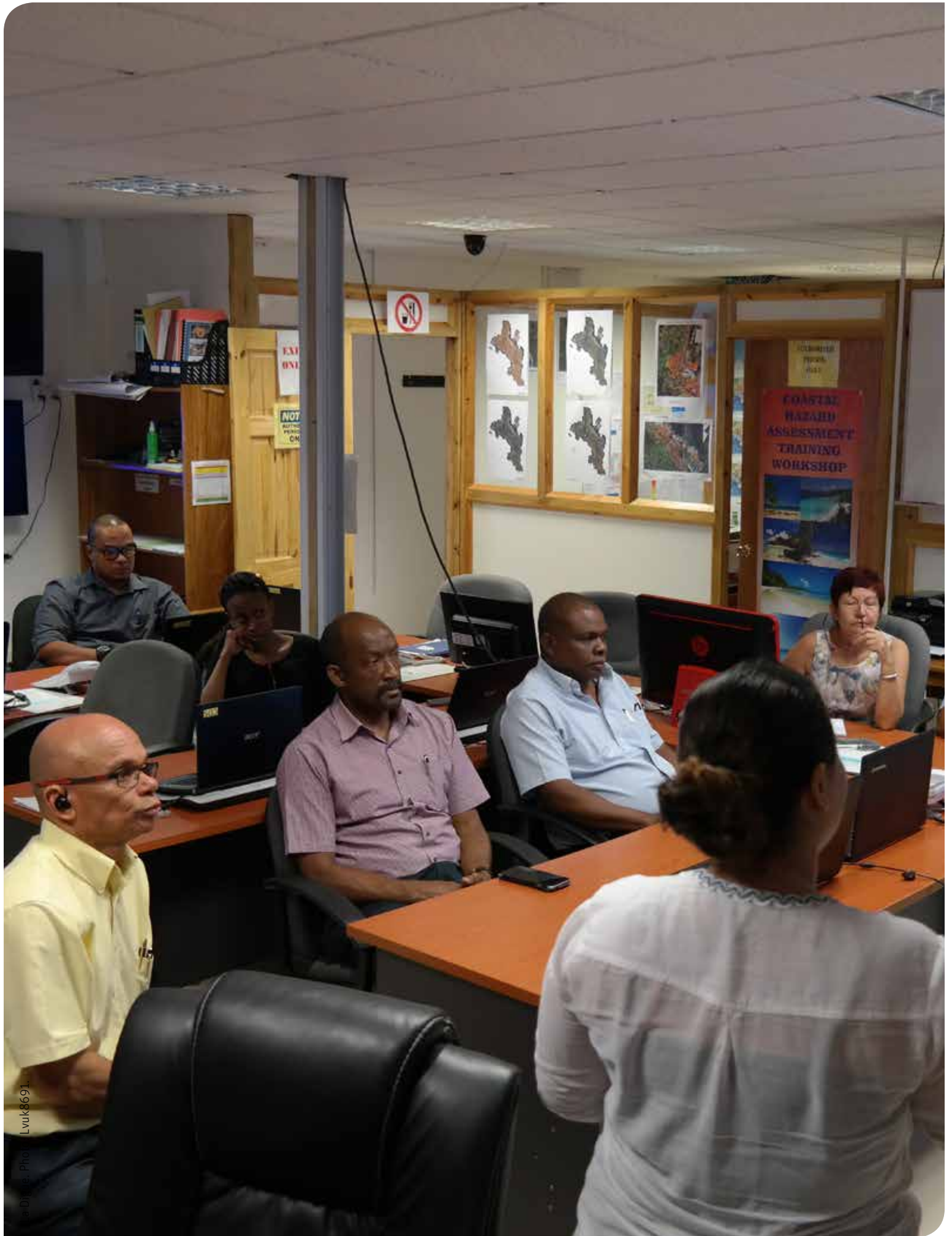
2.6 Plan Structure and Relationship with Other Plans

The generic frameworks set out in this Plan, including the multiagency structures at the national, regional, and district levels, form the baseline for all emergency preparedness and response activities, including production of local or sector specific plans, and for coordination of emergency response and recovery activities.

Whilst the overarching structures, responsibilities, and actions required for effective preparedness and response are set out in the NIEMP, it must be supplemented by more detailed hazard specific contingency plans that set out specific actions, SOPs, and checklists required for safe resolution of specific types of events, for example, sectoral and site-specific contingency plans produced specifically for airport or port operations. Localized plans for each district and specific action plans for each MDA will add further layers of detail listing much more detail in relation to local actions, priorities, and considerations.

Emergency response and recovery plans at all levels, and within all organisations, must be consistent with the NIEMP and follow the same principles of integrated emergency management, respecting the preparedness and response coordination structures set out. This will ensure effective coordination of effort from every MDA, and at every Level. The NIEMP should therefore be viewed as the master plan and cornerstone for all emergency preparedness and response activities, not a stand-alone document.





3. Country Context and Risk Profile

3.1 Country Context

The Seychelles archipelago comprises a total of 115 islands scattered over an exclusive economic zone (EEZ) of approximately 1.4 million square kilometres, situated to the west of the Indian Ocean between 4 and 9 degrees south of the equator (Figure 1). The total land area is 455.3 square kilometres, converting it in a very land scarce country and amongst the smallest amount of arable land per person of any country.

The archipelago is divided into two distinct groups of islands: the granitic group, 43 islands in all, with mountainous peaks and narrow coastal lands, and the low-lying islands, all coralline and numbering 72. All the granitic islands are found within a radius of 50 kilometres from Mahé. With a land area of approximately 148 square kilometres, Mahé, the seat of the government, constitutes about one-third of the total land area. The two other islands of major importance as regards to size and population are Praslin and La Digue, 33.6 km and 48.0 km from Mahé, respectively. Of the coral islands, Aldabra is the largest and farthest, located 1,150 km to the southwest. In addition to these 155 islands as per the Constitution of Seychelles there are seven reclaimed islands: Ile Perseverance, Ile Aurore, Romainville, Eden Island, Eve, Ile du Port, and Ile Soleil.

Figure 1. Seychelles location and island distribution



Mahé, Praslin, and La Digue concentrated 99 percent of the country total population of around 96,762 in 2018. Mahé estimated population 84,707, Praslin 8,586 and La Digue 2,900, and outer islands 592, according with 2018, National Statistics Bureau.

Seychelles is divided into 26 administrative districts (Table 1) comprising all of the inner islands. Eight of the districts make up the capital of Seychelles and are referred to as Greater Victoria. Another 14 districts are considered the rural part of the main island of Mahé with two districts on Praslin and one on La Digue, which also include respective satellite islands. The rest of the Outer Islands (Îles Eloignées) are the last district recently created by the tourism ministry.

The Seychelles is relatively isolated from the nearest neighbors. The Republic of Seychelles capital, Victoria, lies 1,500 kilometres (932 m) east of mainland East Africa. Other nearby island countries and territories include Comoros, Mayotte (region of France), Madagascar, Réunion (region of France), and Mauritius to the south; as well as the Maldives and Chagos Archipelago. The islands are also geographically separated from one another, and travel between islands is by air or sea. Commercial aircraft and ferry are the most common methods of inter-island travel, with flight times between 20 minutes to 2 hours depending on origin and destination points.

The Seychelles is considered a high-income economy. From 1976 until 2015, nominal GDP output has increased nearly sevenfold and the purchasing power parity nearly sixteenfold. The country gross national income per capita was US\$14,760 in 2015 (Atlas model), an order of magnitude

higher than the regional average for Sub-Saharan Africa (US\$1,637) and makes the Seychelles the only high-income economy in Sub-Saharan Africa, a classification it attained in 2015 by the World Bank.

3.2 Climate

Temperature and humidity remain generally high throughout the year, with a mean temperature of 26.9°C, and humidity of 80 percent. Temperatures on Mahé vary from 24 to 30°C (75 to 86°F). From May to October, the Southeast trades usually result in relatively cooler and drier conditions. Most of the islands lie outside the cyclone belt, so high winds are rare.

The period October to May is considered as the cyclone season for the Southwest Indian Ocean. The tropical cyclones are usually formed within the Intertropical Convergence Zone (ITCZ), where the sea surface temperature is at least 28°C. Located just south of the equator, Mahé and other main granitic islands are not within the direct track of the tropical cyclones. At latitude zero, the Coriolis force is also zero, and this makes it physically impossible for the tropical cyclone to develop or cross the equator. However, all the islands of the archipelago are affected by the feeder bands of tropical cyclones in the region, and this can result in gale-force winds, flash floods, and severe thunderstorm activity. During the Southern summer, the wind is predominantly northwesterly. Originating from the high-pressure ridge of the Arabian Peninsula, it brings in warmer air with a very high moisture content, which is characteristic of the Seychelles weather at that time of the year, whether or not there is a tropical cyclone in the Southwest Indian

Table 1. Seychelles Administrative Districts

Greater Victoria	Rural Mahé	Praslin
<ul style="list-style-type: none"> ■ Bel Air ■ La Rivière Anglaise (English River) ■ Les Mamelles ■ Mont Buxton ■ Mont Fleuri ■ Perseverance ■ Plaisance ■ Roche Caiman ■ Saint Louis 	<ul style="list-style-type: none"> ■ Anse aux Pins ■ Anse Boileau ■ Anse Etoile ■ Au Cap ■ Anse Royale ■ Baie Lazare ■ Beau Vallon ■ Bel Ombre ■ Cascade ■ Glacis ■ Grand'Anse Mahé ■ Pointe La Rue ■ Port Glaud ■ Takamaka 	<ul style="list-style-type: none"> ■ Baie Sainte Anne (Anse Volbert) ■ Grand'Anse Praslin (Grande Anse) <p>La Digue and remaining Inner Islands</p> <ul style="list-style-type: none"> ■ La Digue (Anse Réunion) <p>Outer Islands (Îles Eloignées)</p>

Table 2. Summary of potential hazards in the Seychelles

Natural hazards		Anthropic hazards	
Geological hazards	Hydro-meteorological hazards	Health-related hazards	Man-made/technological hazards
<ul style="list-style-type: none"> ■ Tsunami ■ Landslides/mass movements 	<ul style="list-style-type: none"> ■ Floods ■ Droughts ■ Cyclones ■ Coastal erosion ■ Spontaneous forest fires ■ Lightning strikes ■ Waterspout 	<ul style="list-style-type: none"> ■ Epidemic prone diseases, conditions, or events which require immediate reporting ■ Diseases targeted for eradication or elimination ■ Other major diseases, events, or conditions of public health importance ■ Animal disease outbreak ■ Pest infestation 	<ul style="list-style-type: none"> ■ Structural fires ■ Road accidents ■ Power failure ■ Environmental degradation and pollution ■ Marine accidents ■ Collapse of buildings ■ Oil spill ■ Civil disorder ■ Aircraft accidents ■ Hazardous material (including radioactive material) ■ Industrial disasters ■ Terrorism

Ocean. The length of the dry season also varies significantly throughout the Seychelles archipelago. Southeast trade winds from May to October result in drier but cooler conditions to most of the Seychelles archipelago. However, in the northeast atolls of Bird Island and Denis Island, the mean annual rainfall is twice as high (1973 mm and 1730 mm, respectively) as in the Southwest atolls of Aldabra (984.5 mm) and Assumption (867 mm). Both spatial and temporal precipitation variability is affected by tropical cyclones.

The pattern of the mean annual rainfall over Mahé island shows a higher mean rainfall along the mountainous area, and a lower mean rainfall along the northern and southern tips of the island (rainfall ranges from 2,900 mm (114 in.) annually at Victoria to 3,600 mm (142 in.) on the mountain slopes). The rainfall over Mahé exhibits large variations on an all time scale, ranging from a day to intra-seasonal, inter-annual, decadal, and even in century scales. The year-to-year variations, otherwise known as inter-annual variability, have the most profound effect on the socio-economic activities. The variability is linked to that of the global circulation like the El Niño Southern Oscillation (ENSO) and La Niña Southern Oscillation. Dry conditions are more common during the southern winter, and can result in severe water shortages affecting agriculture and all other sectors of the economy (Payet, 1998).

3.3 Main Hazards

Due to its geographical position and geology, the Seychelles is less exposed to major natural disasters than most of the

neighbor countries such as Mauritius, La Réunion, Comoros, and Madagascar, or the countries on the African continent. Earthquakes are common in the Southwest Indian Ocean, but seismic sources are far from the Seychelles. Tropical cyclones are also common on the Southwest Indian Ocean, but the inner Islands and Mahé are too close to the Equator for most of the cyclones to make direct hits, therefore the probability of potentially damaging wind speeds in Mahé, Praslin, and La Digue is lower than in northern areas closer to the tropical cyclone belt. Nonetheless, the islands can still experience the associated wind, rain, and storm surge effects from tropical cyclones, which historically have generated subsequent flooding, landslides, and so forth.

For the purpose of this Plan the hazards that affect the country have been classified generically according to their origin into “natural” and “anthropic” hazards (Table 2).

(i) Natural Hazards. These have their origin in the internal or external dynamics of the earth, and can be of a geological type such as tsunamis, landslides, etc.; or of hydrometeorological type, such as floods, overflows, storms, climatic phenomena, and spontaneous forest fires, among others.

(ii) Anthropic Hazards. These are caused directly by human beings or are related to technology and are characterised by the feasibility of occurrence of events intentionally or accidentally caused by man or by the failure in the operation of a system. In this Plan, the main anthropic hazards refer to fires, building collapses, spillage of dangerous chemicals, epidemics, environmental pollution, and deforestation, among others.

3.4 Vulnerability

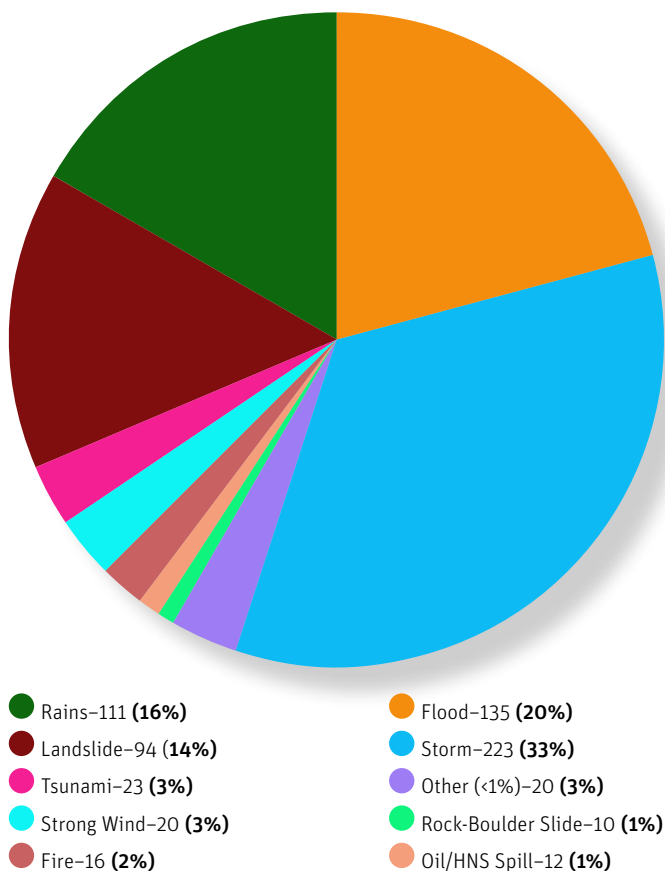
More than 90 percent of the population and all economic activities are located on the narrow coastal plateau of Mahé Island. The Seychelles is economically, culturally, and environmentally vulnerable to the potential effects of climate change and associated extreme events. Vulnerability characteristics, such as concentration of development on narrow coastal zones, and non-resilient populations and ecosystems, make the Seychelles extremely sensitive to a hydrometeorological event and climate change-associated effects. The economic importance of the tourism sector also makes the islands dependent on their coastal landscape and natural capital. The impact of natural hazards and climate change on coastal livelihoods from sea level rise, wave action, storm and tidal surges, extreme sea-surface temperatures, and coastal flooding are a direct threat to livelihoods, infrastructure, and the economy in the Seychelles.

3.5 History of Disasters in the Seychelles

There is an absence of accessible systematic record before the independence in the national archives of the Seychelles, so it is only possible to report the most recent events that have affected the islands (Figure 2) based on an international data base such as CRED or DESINVENTAR and some country specific studies.

Storms, floods/rains, and landslides/rock falls, followed by tsunami and fires are reported as the most frequent events accorded with a DESINVENTAR data base, which includes 664 events between 1980 and 2014. A description of the main events in terms of impact (both human and economic) has been consolidated in Table 3.

Figure 2. Summary of disaster events in the Seychelles 1980–2014



Source: UNDRR. Disaster Information System. Desinventar. Seychelles Profile. https://www.desinventar.net/Desinventar/country_profile.jsp?countrycode=syc&lang=EN

Another event that was very present for the country population, was the forest fire in 1990 on Praslin Island which destroyed a part of the forest of coco de mer trees, one of the most unique trees in the world.

3.6 Specific Scenarios

The Seychelles’ potential likelihood and impacts of hazards have been summarized in Table 4, all of which have a different potential of disrupting the community, causing casualties, and damaging or destroying public or private property.

Table 3. Major events in the Seychelles (chronological order)

Event date/name	Type	Impact descriptions
12 October 1862 "Great Avalasse"	Storm—generated an avalanche/mudflow	<p>A "cyclone" apparently hit the Seychelles, with Mahé mainly affected. A huge landslip (mudflow mixing rocks, mud, vegetation and trees) buried Mahé. Localization of the mudflow: eastern slopes of the mountain over Port Victoria, police and prison yards, Victoria street, Royal Street, Anglican Church, Cluny Orphanage, old cemetery, Government House.</p> <p>The affected area in town was covered with 3 to 4 feet (90–120 cm) of mud. The mud extended 400 feet (122 m) away from the port wharf. Boulders of 50 to 75 tons were displaced, and the largest could be less than 600 tons. Numerous landslips were observed all along the coasts.</p> <p>A list of damages was found in colonial reports. The recorded damages were:</p> <ul style="list-style-type: none"> • All bridges in Victoria (11) destroyed, all roads severely damaged, 613 huts and house destroyed, 5 stone houses damaged, 116 wooden houses damaged, 30,000 coconut trees blew down (= crops), 22 boats sunk, a minimum of 70 victims. No victims on other islands and few damages on Praslin.
January 1975	Storm	Mahé—2 persons injured
31st August–1st September 1985	Severe floods/landslides	Severe floods on the 3 main islands, landslide at St. Louis, > 1 million SCR damages. In Mahé, 3 persons dead
17–23 May 1990—Cyclone Ikonjo	Storm	Cyclone Ikonjo hits Desroches island—USD 1,500,000 damages, 2 injured in Mahé (<i>source: The Socio-economic Impact of Tropical Cyclone Ikonjo over the Seychelles, W. Agricole</i>)
January–April 1992	Landslides	3 dead in Praslin, 1 in Mahé
12–17 August 1997	ENSO—floods, landslides	The ENSO rainfall event—USD 1,700,000 damages, 5 persons dead in Mahé (<i>source: CRED database</i>)
06–07 September 2002, tropical depression '01S'	Storm	<p>The storm produced a microburst that lasted for two hours across several islands, producing wind gusts up to 130 km/h (81 mph) on Praslin. Heavy rainfall affected Praslin, La Digue, and particularly Mahé, which reported 327.1 mm (12.88 in.) in a 24-hour period. Damage on Mahé was limited to landslides and some flooding. On Praslin, high winds damaged the roofs of over 50 houses and destroyed six homes, while the airport was also damaged. The winds damaged 50 power lines, causing an island-wide power outage. High winds also downed about 30,000 trees, which blocked roads but were quickly removed. Due to widespread tree damage, Cousin Island—a nature preserve—was closed for about two weeks, accounting for about US\$50,000 (SR 250,000 rupees) in damage. Nationwide, the storm left 375 families homeless and damaged crop fields, becoming the most damaging in the country in 50 years</p>
December 2004: the great Indian Ocean tsunami	Tsunami	<p>There were 2 deaths in the entire Seychelles archipelago. It has been estimated that this event generated USD 30,000,000 damages (<i>source: CRED database</i>). The damage to coastal infrastructure on both eastern and western shores was most severe where natural coasts had been modified. Most damage was experienced at hotels and restaurants: these establishments being deliberately located in coastal embankments adjacent to beaches. Major structural damage occurred at one hotel (La Reserve) on Praslin. At this site, the damage was caused primarily by the draining of tsunami waters, which eroded and undermined foundations, causing distortion of the structures.</p> <p>Damage to public works was greatest in Victoria, capital of the Republic of Seychelles. Dock structures were damaged in Port Victoria. Washouts and eventual collapse occurred on two bridges of the highway between Victoria and the airport, and coastal roads were damaged in a number of other places. The fisheries sector was the hardest hit as many fishing vessels and equipment were damaged or lost.</p> <p>In some places, homes were flooded and some incurred minor structural damage. The overall damages seem to have been confined to the granitic islands.</p>
Vista Do Mare Landslide—December 2004 and early January 2005	Landslide	<p>The Vista Do Mar Estate, north of Mahé Island, is being affected by a deep-seated landslide. Sustained heavy rainfall of about 170 mm/day over a two-day period increased the pore pressure enough to cause accelerated movement and damage to property). The slope is presently in an actively unstable stage and moves whenever triggering factors are active.</p> <p>A total of 40 houses were affected, 10 severely damaged, 15 showing considerable damage, and another 15 with minor damages.</p>

continues

Table 3. Major events in the Seychelles (chronological order) (cont.)

Event date/name	Type	Impact descriptions
December 2006: Cyclone Bondo	Storm	Affected Providence and Farquhar islands. Due to its proximity to the equator, the Farquhar Atoll is rarely affected by tropical cyclones. On December 21, officials in the Seychelles evacuated 35 of its 43 residents. Bondo destroyed most of the buildings and about 60 percent of the coconut trees on Providence, decimating the island's copra industry. The cyclone also produced 1.8 m (5.9 ft) tides, higher than normal in the Inner Islands of Seychelles, along with 3 m (9.8 ft) waves. Rough seas caused flooding, beach erosion, and coastal damage on Mahé , Praslin , and La Digue . One person was injured on Mahé.
January 27–28, 2013, tropical Cyclone Felling	Storm	Caused severe flooding and landslides in the Seychelles, particularly in three districts on the southeast coast of Mahé (Au Cap, Pointe Larue, and Cascade), as well as on the nearby islands of Praslin and La Digue. The rainfall overwhelmed existing natural and constructed drainage systems and retaining walls, causing floods, landslides, and rockfalls, and resulting in serious damage to homes and public buildings, roads, bridges, drainage systems, water and sanitation systems, crops, and farms. The total damage and losses were estimated at SR 104 million (US\$8.4 million), equivalent to 0.77% of the country's gross domestic product (GDP).
In 2016, tropical Cyclone Fantala	Storm	Damaged infrastructure in the Farquhar Atoll, the archipelago's outer island. The storm made landfall with winds up to 350 km/h. The effects were estimated at SCR 101 million, equivalent to US\$7.5 million.

Sources: Adapted from the Disaster risk profile of the Republic of Seychelles (UNDP, 2008a), EM DAT Database, DESINVENTAR Data Base, PDNA 2013, PDNA 2016.

Table 4. Likelihood of occurrence and potential impacts of hazards in the Seychelles

Hazard type	Likelihood of occurrence			Estimated impact on public health and safety			Estimated impact on property and economy		
	Unlikely	Likely	Highly likely	Limited	Moderate	Major	Limited	Moderate	Major
Earthquake	X				X				X
Tsunami		X				X			X
Landslides			X	X					X
Droughts		X			X		X		
Cyclones			X	X	X			X	
Coastal erosion			X	X					X
Spontaneous forest fires		X			X				X
Floods			X	X					X
Droughts		X				X	X		
Epidemics			X			X	X		
HIV/AIDS			X			X	X		
Animal disease outbreak		X				X	X		
Pest infestation		X				X	X		
Structural fires		X			X				X
Road accidents			X			X	X		
Power failure		X				X		X	
Environmental degradation and pollution			X			X			X
Marine accidents		X			X				X
Collapse of buildings		X			X				X
Oil spill		X				X			X

continues

Table 4. Likelihood of occurrence and potential impacts of hazards in the Seychelles (cont.)

Hazard type	Likelihood of occurrence			Estimated impact on public health and safety			Estimated impact on property and economy		
	Unlikely	Likely	Highly likely	Limited	Moderate	Major	Limited	Moderate	Major
Civil disorder	X				X				X
Aircraft accidents	X					X			X
Hazardous material		X			X		X		
Industrial disasters		X		X					X
Terrorism		X				X	X		

3.6.1 Tsunamis

There have been no recorded instances of large tsunamis resulting from earthquakes in the Southwest Indian Ocean (SWIO) region. This is because tsunamis are usually the result of high-magnitude subduction zone earthquakes, and the SWIO region does not experience many high-magnitude earthquakes or contain any major subduction zones. However, the entire region is at risk of tsunamis generated by subduction zones elsewhere in the Indian Ocean, which are capable of traveling across the ocean (teletsunamis give the opportunity to generate alerts with several hours difference between the occurrence of the earthquake event and the arrival of the waves). The main sources are the earthquakes produced in the plate boundaries from (a) Sunda arc–Sumatra subduction zone, (b) Makran subduction zone, (c) Carlsberg transform fault, and submarine mass movements (d) on the northern flank of the Reunion Piton de la Fournaise, and (e) Comoros. Source: (USGS).

The December 2004 Indian Ocean tsunami is the bigger historical tsunami in the history of the Seychelles and the Indian Ocean countries. Other officially identified tsunamis in the Seychelles are the one generated by the 27th August 1883 Krakatoa eruption in Java and the one generated in 2007 by the September 12 Sumatra earthquake. National archives for the 1883 event reported waves of 2.5 feet (76 cm) above usual high spring tides, receding in 15 minutes and then returning. Unusual waves continued for more than one day, only varying in time. No damages were caused by this event. For the 2007 event, wave disturbances were observed on the tide gauge located at the Seychelles International Airport. There were reports of unusual oscillations in the sea level, particularly along the drainage-river water systems.

Indian Ocean 2004 characteristics, runup

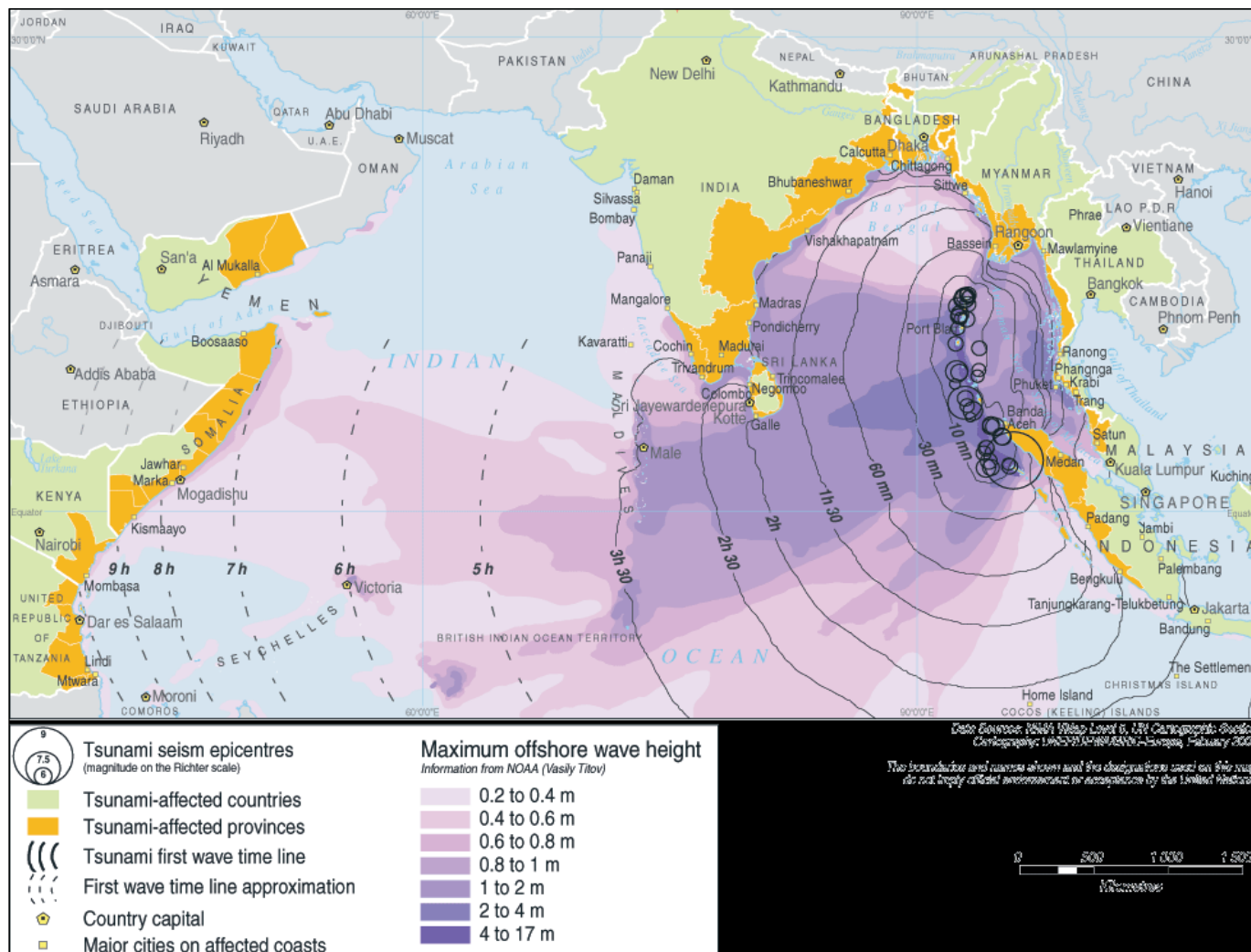
On Sunday, 26th December 2004, an earthquake measuring 9.2 on the Richter Scale, one of the largest ever in this region, caused a rupture along a fault about 1,000 km long, which generated a vertical displacement of about 10 m at around 00:59 GMT (04:59 LT). It is the displacement of the sea-floor of 0.25 million square kilometres of the Indian plate/Burma micro plate subduction zone (McCloskey et al., 2005 in UNDP, 2008a) that generated a huge tsunami across the Indian Ocean. Waves as high as 10 m hit the island of Phuket at 05:30. By 08:00 (LT), Sri Lanka and the south coast of India were badly hit by no less than 5 m waves. High waves, about 4 m, reached the Maldives by 10:30 LT completely submerging the capital of Mahe. Various tsunami travel time simulations show that the travel time from the epicentre in Sumatra to the main islands of the Seychelles at about six hours (Figure 3).

The UNESCO Indian Ocean Tsunami Expedition assessment (Jackson et al., 2005) details the run-up (figure 3) and damage assessment. It shows that the run-up and damage were locally as severe, along shores of Mahé and Praslin facing away from the source of the tsunami. The highest flood levels on Mahé ranged from ~ 1.6 m to more than 4.4 m above mean sea level. On Praslin they ranged from ~1.8 m to 3.6 m. Some impacts are described in Table 3, and for specific scenario planning more details can be found in the Seychelles Country Risk Profile (UNDP, 2008a) and the Post tsunami assessment (UNEP, 2005).

3.6.2 Tropical cyclones

The location of the Seychelles in the equatorial regions of the Indian Ocean area is a determinant factor that signifies that the Seychelles is mainly indirectly affected by

Figure 3. The December 2004 Indonesian tsunami travel time, maximum offshore wave height, and affected areas



tropical cyclones via the intensification of the intertropical convergence zone (ITCZ) and spiral rain bands associated with cyclones passing south of the islands. Records from 1972 to 2001 show that the islands are outside the major storm routes (JICA 2014) but the Seychelles has its fair share of cyclonic impacts through intense rain equivalent to rain rates in the inner core of tropical cyclone through the spiral rain band. Chang-Seng (2007) showed that tropical cyclone by-track characterises the preceding rainfall in the Seychelles at both event and seasonal time scales. Furthermore, it was shown that tropical cyclone (TC) generated swells and storm surges have a significant wider basin impact, posing a risk to maritime users within the region.²

Recent TC impacts on Praslin and Providence in 2002 and 2006, respectively, portrays the TC hazard is increasing; however, there were similar TC tracks in the past though the impacts were not well documented (Chang-Seng, 2007). Currently, there are simply no firm evidences to draw conclusions on TC spatial changes. Tropical cyclones can be thought of as being steered by the surrounding environmental flow. Short-term fluctuations in the track are common for intense cyclones. TC track changes toward the lower latitude have been established to be driven by the presence of a strong persistent anticyclone in the central SWIO causing mid-level easterlies in a core region between 10° S and 20° S, 35–65° E (UNDP, 2008).

² UNDP. United Nations Development Programme. 2008a. Disaster risk profile of the Republic of Seychelles

Historically, the tropical cyclones have been the most recurrent events and the ones that have generated the

bigger impacts. Cyclones in 1953 and 2006 caused great damage. Several tropical cyclones whose eyes had passed close to Victoria have had significant effects. As indicated in section 3.7, the devastation of tropical cyclonic Bondo (2004) produced coastal flooding and heavy rains in Mahé. Modelling for the region of tropical Cyclone Bondo showed a maximum storm surge of 0.84 metres (Alvarez Cruz et al. 2011), which adds to the regular variations in sea level from tides and can occur atop wave driven flooding. In the worst-case scenario, buildings or roads below 2.5 metres above the present mean sea level could be inundated. In 2016, tropical Cyclone Fantala damaged infrastructure in the Farquhar Atoll, the archipelago’s outer island, with winds of 330 to 345 kilometres per hour. It was reported that all the infrastructure on the islands suffered substantial damage except for cyclone-proof facilities (UNDP, 2008).

Although the probability of potentially damaging wind speeds in Mahé, Praslin, and La Digue is lower than in northern areas closer to the tropical cyclone belt (about a 20 percent chance of landfall in the next 10 years, according to estimates from Thinkhazard),³ the impact generated by the

cyclone-induced heavy rainfall and subsequent flooding and landslides, as well as through coastal flooding, have demonstrated the relevance of these type of events in the hazard scenarios of the Seychelles. In the absence of more concrete analyses, a worst-case scenario can be assumed when a tropical cyclone or depression passes close to the Seychelles and causes extremely high tides and flooding simultaneously.

3.6.3 Coastal and inland flooding

As described in the Seychelles Coastal Management Plan (World Bank and Ministry of Environment, Energy and Climate Change of Seychelles, 2019), coastal flooding often occurs during extreme water-level events that result from the simultaneous and combined contributions of different factors, such as high astronomical tides, storm surges, large waves, and mean sea level anomalies. Astronomical tides are defined as sea level variations produced by the gravitational interactions of the earth, moon, and sun. Storm surges result from the effect of atmospheric low pressure and wind stress over the sea surface, which are typically associated with tropical cyclones.

³ <http://thinkhazard.org/en/report/220-seychelles>



Table 5. Summary of coastal flooding heights by return period for the three main islands

Return period	Mahé	Praslin	La Digue
25	3.47–4.83	2.82–4.99	2.80–4.57
50	3.57–4.96	2.89–5.13	2.87–4.68
10	3.66–5.07	2.96–5.27	2.93–4.79
	<p>The majority of the coastal sectors in Mahé are susceptible to extreme coastal flooding.</p> <p>The most highly exposed coastal areas are English River, St Louis, Bel Air, Cascade, and Pointe La Rue. Regions between Providence and the airport are also affected. Boileau and the inland coast beaches Beau Vallon, Port Launay Beach, and Grand Anse Au Cap, Anse Royale, Takamaka, and Anse can also experience moderate flooding.</p> <p>The North East Point experiences more frequent floods.</p>	<p>Praslin is very sensitive to coastal flooding throughout all its extension.</p> <p>The south coast, mainly Grand Anse and Anse Kerlan, is more susceptible to greater flooding.</p> <p>On the north coast, Côte d'Or is one of the sections most exposed to flooding.</p> <p>Anse Possession, Anse Boudin, and Anse Lazio present lesser risks of flooding.</p> <p>In 2004, the tsunami caused intense coastal flooding along the north coast of Praslin, at Côte d'Or, Anse Volbert, Anse Petit Coeur, and Anse Possession.</p>	<p>The west coast is very low lying and prone to flooding. Coastal flooding is more frequent between Anse Grave and Anse Source d'Argent.</p>

Source: Adapted from JICA, 2014.

Note: Range of values gives mean to maximum values of flood height.

Wave-driven flooding results from the propagation effects of offshore waves and depends on the offshore conditions, but also on local coastal features, such as local bathymetry. Wave run-up is the maximum vertical height above the still water elevation (tides and surges) to which the water rises on the beach or structure, and it depends on the local water level, the incident wave conditions, and the nature of the beach or structures (such as reefs, beach, and coastal profile). The contribution of these factors, usually described as total water level, can be used to infer flooding inland. Other factors that affect flooding are not associated with a meteorological event such as a tsunami.

There is currently no comprehensive database of historic flooding incidents. The preliminary assessment of the study of the impact of sea level rise (Alvarez Cruz et al. 2011) provides an expert-based description of flooding events occurring in the years leading up to 2011 when the study was conducted. Sea level rise and future changes in storms are the two major elements of climate change that will increase the levels and frequency of coastal hazards and vulnerability on the coastal zone in the Seychelles. The sea level has been monitored since 1993 at Pointe La Rue, Mahé. The analysis of 18 years of data showed a sea level rise rate of 5.6–6.6 millimetres per year between 1993 and 2010. If this rate remains constant over the course

of the century, the sea level will rise 0.3 metres by 2050 and 0.6 metres by 2100 over the levels of 2010. However, the regional sea level in the southwest Indian Ocean is expected to rise between 0.4 and 0.6 metres from 2070 to 2100 as compared with the period from 1960 to 1990.

3.6.4 Landslides

Ground movements and landslides have always been a major concern in the Seychelles since the 1862 “Avalasse” event. Except for this major event, the morphology of the island clearly indicates that huge mass movements have occurred in recent Pleistocene or actual time. Oral reports of mass movements exist for the 20th century, but no details are available since no impact was recorded. The intense weathering, erosion of soils, and rapid growth of vegetation rapidly erase the clues and traces of past landslide.

The inner Islands of the Seychelles are frequently affected by small ground movements, landslides, and rockfalls. Mahé, with the steepest slopes and highest peak of all islands, is especially concerned by several types of phenomenon. Very few other events have been reported on the other islands, probably because none of them had seriously affected human activities. However, there are traces of ancient mass movements on other highlands with steep slopes, such as Silhouette.

4. Institutional Framework

4.1 Overview of Disaster Management Legislation in the Republic of Seychelles

The Disaster Risk Management (DRM) Policy of the Republic of Seychelles, and the Disaster Management Act of 2014, set the baseline structure for disaster risk reduction and response in the Seychelles. This includes detailed roles and responsibilities for various elements of the emergency preparedness and response (EP&R) structure.

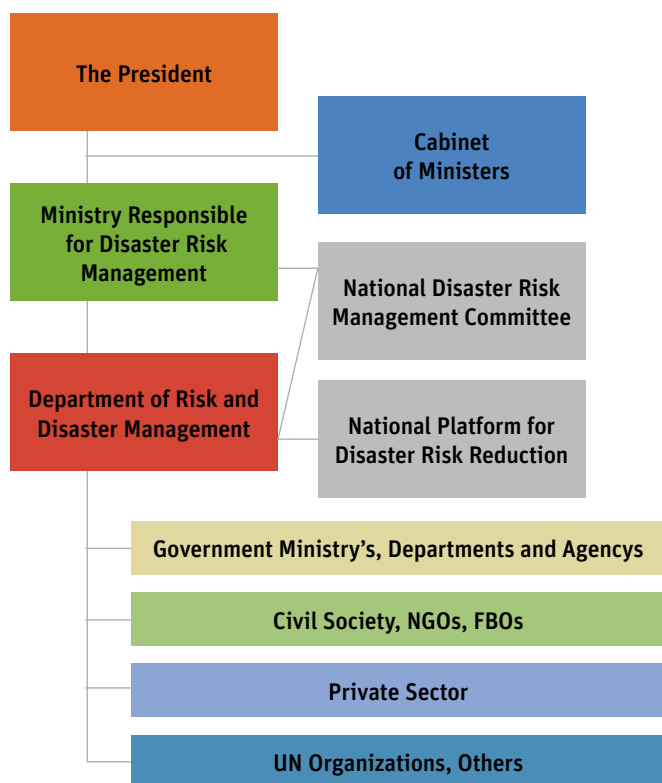
The government recognises its responsibility for protecting communities and the environment and has established the Department of Risk and Disaster Management (DRMD), led by a principal secretary, to act as the focal point and primary national body for disaster risk reduction and emergency management.

Key statutory responsibilities for DRDM are to:

1. Set out specific requirements and uniform procedures on matters which can be standardised nationally, including the declaration of an emergency, and allocation of functions and responsibilities between the agencies;
2. Command and control operations and interagency coordination arrangements and make the best use of available resources for response at local regional, national, and international levels;
3. Set out responsibility to ensure that interagency coordination arrangements are developed at all levels for effective coordination of individual response efforts to emergencies;
4. Provide common terminology to facilitate coordinated and safe working conditions;
5. Identify and prioritize risks to ensure that existing services are prepared and equipped to deal with realistic potential emergencies;
6. Ensure preparedness by the principal response agencies to ensure prompt and effective coordinated response;
7. Activate response mechanisms for effective, timely search and rescue operations to save lives and minimize damage to property in times of crises and to ensure the protection and care of the public at times of vulnerability;
8. Ensure that measures are in place to restore livelihoods and other life support;
9. Coordinate response in the event of a threat of the disaster;
10. Organize and execute various drills, and functional and full-scale exercises annually; and
11. Advise, assist, and coordinate the activities of the government institutions, nongovernmental organisations, private sector entities, and communities.

Further supporting structures and committees are set out in legislation, including a National Disaster Risk Management Committee and a National Platform for Disaster Risk Reduction.

Figure 4. Seychelles DRM structure



4.2 Integrated Emergency Management System

The Republic of Seychelles is committed to adoption of an Integrated Emergency Management System (IEMS), mandating its use in the 2014 Disaster Management Act and empowering DRDM to put in place appropriate disaster preparedness and response structures, including arrangements for effective disaster command, control, and coordination structures.

IEMS introduces a common framework within which MDAs at all levels of government, nongovernmental organisations, and the private sector can:

- Work seamlessly to prepare for, respond to, and mitigate the effects of incidents, regardless of cause, size, location, or complexity; and
- Reduce the loss of life, damage to property, and harm to the environment.

To ensure effective preparedness for any disaster, IEMS requires robust structures, systems, and protocols for coordination of risk assessment, planning, and training in

advance of any emergency, and for management of multi-agency and multi-sectoral resources to deal with any arising emergency.

This is achieved through the creation of multiagency liaison and coordination platforms for all aspects of preparedness and a coordinated incident command system that ensures that multiagency partners can work together effectively in response to, and recovery from, any event that occurs. These platforms ensure that all available resources across government and the wider civil society, including NGO's, businesses, and citizens, can be harnessed effectively.

The key benefit of adopting a common approach to emergency preparedness and response across the Seychelles is that it delivers a flexible but standardised system for any emergency regardless of cause, size, location, or complexity, and system components can also be utilized to develop plans, processes, procedures, agreements, and roles for all types of incidents. Additionally, IEMS, including a robust Incident Command System (ICS), provides an organised set of standardised operational structures, which is critical in allowing disparate organisations and agencies to work together in a predictable, coordinated manner.

IEMS should ensure that key agencies can:

- Combine and act as a single authoritative focus where necessary;
- Consult, agree, and decide on key issues; and
- Issue instructions, policies, and guidance to which all agencies will conform.

4.3 Resilience Platforms

Many countries have found that emergency preparedness and response frameworks work best when they are based around the day-to-day structures and ways of working already established at the national, regional, and district levels for governance and the day to day service delivery of key ministries, departments, and agencies. This also helps when bringing stakeholders together from multiple agencies and sectors at appropriate levels as they will have a better understanding of their counterparts' roles and responsibilities. Bringing those multiagency partners together to plan emergency preparedness and response activities will both enhance the quality of resulting plans and ensure all partners can work together cohesively during any emergency response and recovery efforts.

No matter how well prepared, emergency response and recovery operations present a risk of confusion and misunderstanding between stakeholders. Having response and recovery structures that mirror, so far as is possible, the same simple and robust coordination structures used for planning and training activities, can minimize this risk. Partners that have previously worked together to produce joint plans and risk assessments, and who have regularly trained together, provide the ideal base structure for an effective disaster response.

The NIEMP therefore does not propose entirely unique structural arrangements for planning, training, and exercising, rather it seeks to strengthen and build on existing structures in the Seychelles, using them to form the backbone of a cohesive emergency preparedness and response structure in a way that is consistent with current law and the National Disaster Risk Management Policy.

To ensure effective coordination between national and locally based MDAs, seven multiagency and multi-sectoral Regional Resilience Platforms (RRPs) are proposed to support interagency coordination on emergency preparedness and response work. They will receive guidance and support from a National Resilience Platform, led by DRDM, and can use the structures from national to local to share best practice and lessons learned. National and Regional

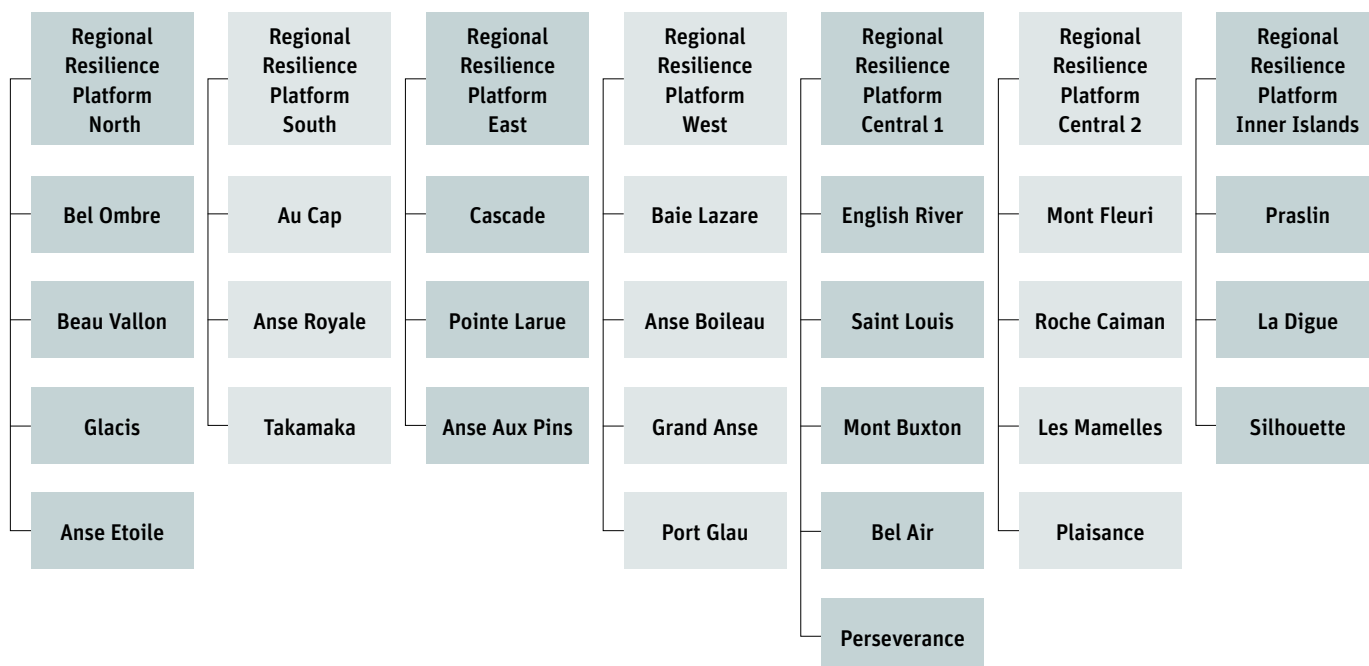
Platforms are established in accordance with Section 6 of 2014 Disaster Management Act.

As advisory structures established to facilitate multiagency cooperation and coordination, the frequency of National and Regional Platform meetings will be determined by the PS of DRDM. It is anticipated that both will meet quarterly, with regional platform meetings preceding the national meeting, so that any issues may be escalated from district or regional levels to the national level for consideration and determination as necessary.

The purpose of the regional layer is to ensure best use of specialist personnel and resources in the planning and training process, providing guidance and specialist support to the sectoral and district levels, and providing opportunities for enhanced partnership working and cooperation across sectors and jurisdictions to avoid duplication of effort.

Regional Resilience Platforms (Figure 5) help to support and coordinate sectoral and district level disaster preparedness activities and provide a link between the national and district levels. Standing membership of the National and Regional Resilience Platforms generally includes organisations identified by DRDM as Category 1 or 2 responders. These categories are applied consistently throughout the NIEMP, both for preparedness and response functions. The

Figure 5. Overview of National Resilience Platform structure



list of organisations involved in emergency preparedness and response, the key functions and tasks they are responsible for as lead or supporting agency, and their category, is set out in Appendix 1, Responsible Matrix by Functional Task.

4.3.1 Category 1 responders

Organisations in Category 1 are at the core of the response to most emergencies impacting the Seychelles. Category 1 responders are subject to a comprehensive set of preparedness and response duties. They will be required to:

- Cooperate with other local responders to enhance coordination and efficiency
- Assess the risk of emergencies occurring and use this to inform contingency planning
- Put in place emergency plans
- Put in place business continuity management arrangements
- Put in place arrangements to make information available to the public about civil protection matters and maintain arrangements to warn, inform, and advise the public in the event of an emergency
- Share information with other local responders to enhance coordination
- Provide advice and assistance to businesses and voluntary organisations about business continuity management (local government only)

Category 1 responder organisations have been identified through the evaluation of functional tasks and are illustrated in Appendix 1.

- i. Department of Risk and Disaster Management
- ii. Finance Department
- iii. Environment Department
- iv. Local Government Department
- v. Red Cross Society of Seychelles
- vi. Public Health Authority
- vii. Health Care Agency
- viii. Seychelles Fire and Rescue Service Agency
- ix. Seychelles Police Force
- x. Seychelles Peoples Defence Force
- xi. Public Utilities Corporation

4.3.2 Category 2 responders

Category 2 organisations are ‘cooperating bodies’. They are less likely to be involved in the heart of planning work but will be heavily involved in incidents that affect their own sector.

Category 2 responders have a vital role and should undertake their own internal planning and preparedness activities as is required of Category 1 responders. However, Category 2 responders have a lesser set of planning and public communication duties, their key tasks being:

- To cooperate with other Category 1 and 2 responders in all aspects of emergency preparedness and response
- To share relevant information with other Category 1 and 2 responders, both in planning and training activities managed through the Regional and National Platform structure, and through the Seychelles Incident Command Structure during an emergency response that involves the Category 2 organisation.

Category 2 responder organisations have been identified through the evaluation of functional tasks and are illustrated in Appendix 1.

- i. Ministry of Habitat, Infrastructure and Land Transport
- ii. Family Affairs Department
- iii. Ministry of Environment, Energy and Climate Change—Department of Environment
- iv. Ministry of Environment, Energy and Climate Change—Climate Change and Energy Department
- v. Landscape and Waste Management Agency
- vi. Department of Information and Communication Technology
- vii. Ministry of Education and Human Resource Development
- viii. National Biosecurity Agency
- ix. Nongovernmental organisations
- x. National Integrated Emergency Management Plan
- xi. Public Utilities Corporation
- xii. Seychelles Agricultural Agency
- xiii. Seychelles Civil Aviation Authority
- xiv. Seychelles Interfaith Council
- xv. Seychelles Land Transport Agency
- xvi. Seychelles Meteorological Authority

- xvii. Seychelles Maritime Safety Administration
- xviii. Seychelles National Parks Authority
- xix. Seychelles Port Authority
- xx. Seychelles Trading Company
- xxi. Family Affairs Department
- xxii. Agency for Social Protection
- xxiii. Seychelles Petroleum Company
- xxiv. Industrial Estate Agency
- xxv. Department of Tourism, Land Transport and Civil Aviation

- DA Team
- Category 1 and 2 representation where those MDAs are district based
- Emergency Brigade Team Leader
- Representatives from:
 - Schools
 - Zone leaders
 - Business organisations

The focus of district planning and the multi-stakeholder process, and for district plans, is to set out the district level arrangements for emergency response and recovery, linking these with the regional and national level and the various MDAs and sectors involved. The objectives are to ensure that coordination and information sharing at the local level is effective and links directly to MDAs, local businesses, and the community.

4.3.3 District planning arrangements

At the district level, it is not anticipated that the full multi-agency structures set out above will be replicated in full. However, multi-agency meetings and coordination at a district level should include key Category 1 and 2 representatives as required. Regular planning, training, and coordination meetings at a district level should include the following:





5. Concept of Operations

5.1 Levels of Emergency

The structure of emergency management should be organised based on scale and complexity. Local agencies are always the first responders and the ones who carry the burden of the emergency management. The NIEMP therefore describes the arrangements used to respond to any disaster event impacting the Seychelles, from routine minor emergencies generally resolved by first responders as part of their day to day activities, through to national disasters that will impact all of government and civil society. In order to structure the incident command and management arrangements necessary to effectively respond to this wide range of disasters, it is useful to establish a common understanding of emergency levels.

The NIEMP sets out four levels of emergency that describe both the general scale and consequences of an event, and four functional incident management levels that will be established to deal with any event arising (Figure 6). Although inextricably linked, both of those elements are different, and can be defined as follows:

Level of Emergency: A numeric 1–4 code reflecting the scale of emergency based on its scale and consequences (or potential consequences)

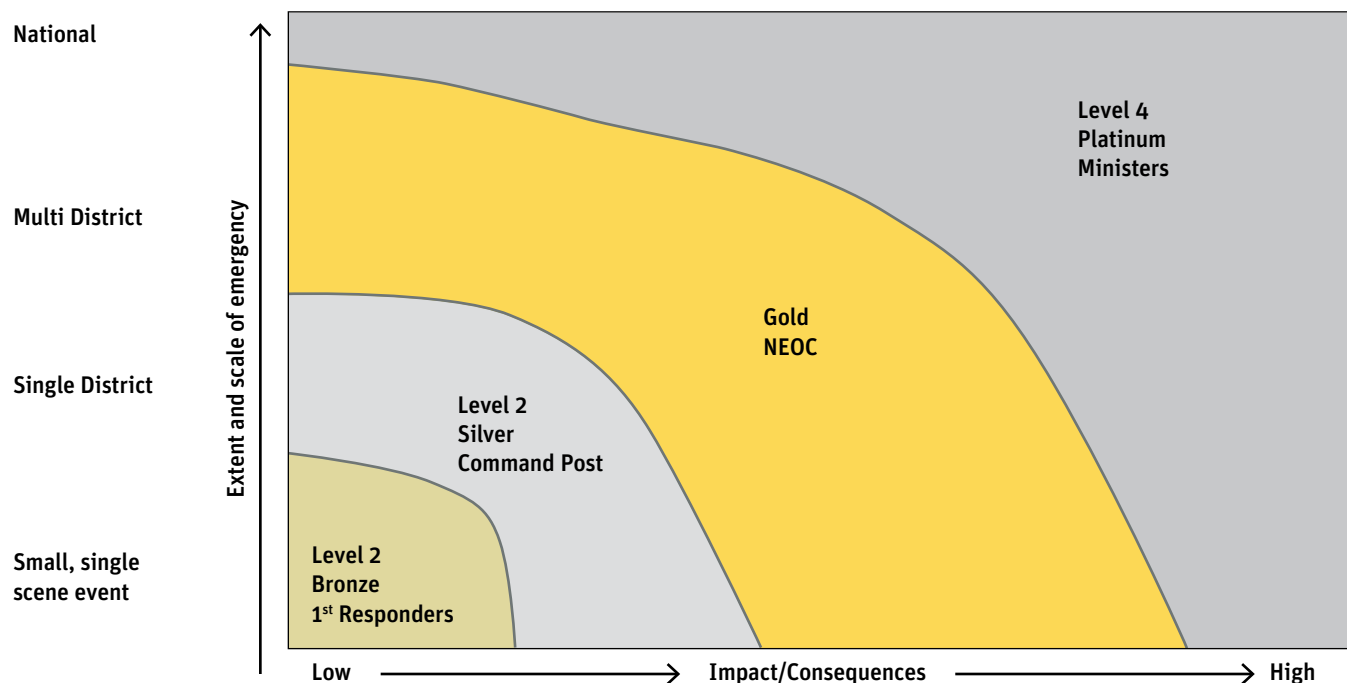
Level of Incident Command: A colour code reflecting four functional command levels used in the Seychelles emergency response.

In determining the appropriate level of a specific emergency, an evaluation must be made that considers both the scale and consequences of the incident. That evaluation will be made by the senior manager/officer in the field responding to an emergency that has already occurred, or by the PS of DRDM if reacting to the warning of an impending event.

The proposed system is designed to offer maximum flexibility by avoiding fixed definitions for incident level and command functions. This enables commanders to use professional judgement based on the precise circumstances of each emergency.

1. Most emergencies are localised events, with relatively low consequences, and are resolved by local responders at the scene of the emergency. These are defined as Level 1 emergencies.
2. More complex and larger scale events impacting large parts of a district, with more serious consequences, are defined as Level 2 emergencies.
3. Events that have a significant impact across two or more districts, or have significant national consequences, are defined as Level 3 events.
4. Events that impact the entire country, or have the most significant consequences, are defined as Level 4 events.

Figure 6. Emergency and incident command levels



5.2 Incident Command System

The Seychelles Incident Command System sets out the structures, definitions, and ways of working that will be used to guide the emergency response and recovery activities of all responders. This includes the structures that will be established at the national and local levels to enable responders from multiple MDAs to work together effectively to resolve an emergency. The system is flexible, enabling the response to be framed around the level of emergency. It also recognises that the response phase of any incident comprises two separate, but closely related and often overlapping, challenges: crisis management and consequence (or impact) management. These are both designed to control and minimize the immediate challenges arising from an incident.

1. Crisis management involves the phase of the response that attempts to prevent or avert an imminent emergency, along with the protective or other measures put in place to mitigate its effects, prevent further damage or disruption, and secure the scene. It also includes actions taken to address the immediate effects of an incident and may include, for example, fighting fires, search and rescue, providing public health advice, evacuating those at risk, and disseminating public information.

The duration of the crisis management phase can vary from a few hours or a few days in the case of an accident or explosion, or a few weeks or even months following an outbreak of a human or animal disease, until the situation is brought under control.

2. Consequence management usually takes place in parallel to crisis management and is concerned with steps taken to prevent the impact of an incident escalating. It includes managing wider consequences and services such as restoring transport networks or electricity supplies, managing community relationships, and providing shelter to displaced persons. Consequence management is also known as ‘Impact Management’.

The Seychelles Incident Management System also recognises that individual incident managers at the various functional levels of incident command will each have a different role and level of delegated authority given to them by their own organisation. The limits of those delegations mean that they undertake slightly different tasks. When responders at the same functional level come together to coordinate their activities at an Incident Command Post or the National Emergency Operations Centre, their role is different again.

To address these important differences, it is important to

recognise and understand the concepts of command, control, and coordination. The meanings of these three terms are different and they are as follows:

- **Command** is the exercise of vested authority that is associated with a role or rank within an organisation to give direction to personnel in order to achieve defined objectives. *(For example, the Team Leader of a District Emergency Brigade giving instructions to a Team Member)*
- **Control** is the application of authority, combined with the capability to commit and manage resources in order to achieve defined objectives. Some organisations define command and control together, but the key element of control is the combination of authority with the means to ensure command intent is communicated and results monitored.

For example, a junior officer present “on scene” from a responder organisation may command the personnel from their organisation. However, control of regional or national resources that may be used to reinforce on-scene operations, or the authority to authorize payments may sit with a more senior manager operating remotely from the incident, for example, at an Emergency Operational Control. *(For example, a DA may exercise “command” by giving instructions to the Emergency Brigade Team leader, and also exercise “control” by committing other local government resources at their immediate disposal.)*

- **Coordination** is the integration of multiagency efforts and available capabilities, which may be interdependent, in order to achieve defined objectives. The coordination function will be exercised through unified command functions such as the National Emergency Operations Centre (NEOC) and requires that command of individual organisations’ personnel and assets is appropriately exercised in pursuit of the defined objectives. *(For example, a Local government PS attending the NEOC on behalf of over local governments will retain responsibility for the direction of local government staff and resources, but will coordinate and agree their activities with all other “Gold level” functional commanders attending NEOC as part of an overall incident management plan.)*

Seychelles has implemented a Unified Command (UC) structure at a national level for many years. The NIEMP and Seychelles Incident Command System extend this UC system to include both the NEOC and Incident Command Posts.

UC provides a system whereby all relevant government and non-government organisations can come together to

coordinate their activities in order to resolve an emergency, while at the same time allowing each to carry out their own legal and functional responsibilities. The UC structure links the organisations responding to the incident at various functional levels of command and provides a structured forum for these entities to make consensual decisions.

For example, the UC established at NEOC allows the various government and non-government responders to blend together to create an integrated management team. Members of the NEOC work together to develop a common set of incident objectives and strategies, share information, maximize the use of available resources, and enhance the efficiency of the individual response organisations.

A Unified Command System delivers the following benefits:

- A single set of strategic objectives is developed for the entire incident, set by the senior decision makers from each agency or ministry involved
- A collective approach at NEOC and the Command Post is used to develop an incident action plan that is then enacted at the Silver and Bronze levels
- Information flow and coordination is improved among all government and non-government entities involved in the incident
- All government and non-government agencies with responsibility for incident response and recovery have an understanding of joint priorities and restrictions
- No ministry, agency, or sector legal authorities or responsibilities will be compromised or neglected
- Allows for collective approval of operations, logistics, planning, and finance activities
- Allows for shared facilities and makes best use of specialist command support teams, reducing training and response costs, maximizing efficiency, and minimizing communication breakdowns

5.2.1 Functional levels of incident command

When an emergency occurs, those responsible for managing the response and recovery effort will face an array of competing demands and pressures. These will vary according to the event or situation that caused the emergency, the speed of its onset, the geographical area affected, any concurrent or interdependent events, and many other factors.

The information available during the early stages of an incident will often be incomplete, inaccurate, or ambiguous, and perceptions of the situation may differ within and between organisations. The response and recovery effort may involve many organisations, potentially from across the public, private, and voluntary sectors, and each will have its own responsibilities, capabilities, and priorities that require coordination. The adoption of a common Incident Command System (ICS) will minimize the likelihood of misunderstanding and assist all agencies in delivery of an effective response.

Multiagency representatives from various ministries, agencies, or departments must come together to coordinate responses and to ensure effective communication and collaboration for all available resources to be harnessed effectively. Each of those responding MDAs will have their own internal management structures and “rank systems.” Historically, a weakness in disaster and emergency response structures involving multiple agencies has been the confusion caused by different hierarchies both between and within organisations. During a fast-moving emergency, a rigid “top down” response structure, with confusion about who is authorized to do what, increases potential for misunderstanding and slows down decision making.

To address this threat, the Seychelles has adopted an emergency response structure based on a “Functional Command” concept. This presents a flexible and robust structure capable of responding to fast moving and challenging disasters by acknowledging that incident management decisions are generally taken and implemented at one of four functional levels of decision making. These have been color coded both for easy reference and to avoid any confusion during emergencies between the function role within the Seychelles Incident Command System to which an individual is appointed and their rank or job title within the organisation they are representing.

- **Platinum:** Policy direction provided by National Government
- **Gold:** Direction of National Strategy through a Unified Command at the National Emergency Operations Centre.
- **Silver:** Direction of Tactics and Field Operations through a Unified Command at an Incident Command Post
- **Bronze:** First line management and supervision of personnel undertaking Field Operations

Figure 7. Functional incident command hierarchy



5.2.2 Platinum Level – National Policy Direction

Some of the most significant major emergencies will involve cross government or even international considerations or may have significant long term or financial implications for the entire nation. In these circumstances, Ministers at the Platinum Level will need to be consulted to make key national policy decisions on behalf of government.

Whenever the Gold Command and NEOC is established, the DRDM Principal Secretary will inform Ministers at the Platinum Level. It will be a matter for Ministers, in consultation with the President, to decide whether to formally convene a Platinum working group and call in senior policy or technical advisors as necessary. The key factor in a decision is the requirement to ensure appropriate focus is given to government policy or diplomatic relations and ensuring that all appropriate government resources can be deployed and coordinated effectively.

In the most serious incidents, where a State of Emergency is declared, Platinum will automatically be established to provide strategic leadership and take responsibility for key policy issues, such as requests for international assistance.

It is a matter for Government to establish appropriate ways of working, but it is assumed that these will follow existing governance and decision-making structures consistent with the Constitution and the circumstances arising.

5.2.3 Gold Level – National Coordination

Level 3 emergencies are declared where an event or situation has: an especially significant impact; substantial resource implications; involves a large number of organizations with the activation of multiple Silver Groups; or lasts for an extended duration, it will be necessary to convene Gold level Commanders at the National Emergency Operations Centre (NEOC).

The purpose of the Gold level of functional command is to consider the emergency in its wider national context; determine longer-term and wider impacts and risks with strategic implications; define and communicate the overarching strategy and objectives for the emergency response; establish the response and recovery framework, policy and parameters for lower level tiers; and monitor the context, risks, impacts and progress towards defined objectives.

It is important not to confuse the Gold Command function with the NEOC as the two things are not the same;

1. **Gold Command** – A level of function incident management in the Seychelles ICS. Executive Managers from Multiple agencies come together to undertake the Gold Command function and deliver their responsibilities by establishing a Unified Command at the National Emergency Operations Centre. (NEOC)
2. **NEOC** – is the facility established to support a Unified Command at the Gold level. In addition to physical infrastructure, such as communications and other facilities, NEOC includes a comprehensive Command Staff and General Staff structure to assist in the effective management of any emergency.

Lessons identified from many emergencies, including floods and landslides, show that establishing technical facilities and support staff at the NEOC at an early stage on a precautionary basis can be extremely helpful, even if the Gold level of functional command is not fully established immediately. Precautionary NEOC's need not require Gold Commanders to physically convene at the outset but can instead use other appropriate means to share and assess information on the extent of the emergency so that the full structure can be ready activated if a situation suddenly worsens.

The purpose of the Gold Level is to take overall responsibility for the Multi-Agency management of emergency response and recovery, and to establish the policy and strategic framework within which lower tier command and coordinating groups will work. Gold Level Commanders will:

- Build and maintain a common understanding of the situation, risk and challenges, using all available means, including reports from the Silver Level.
- Determine and promulgate a clear strategic aim and objectives and review them regularly;
- Establish a policy framework for the overall management of the event or situation;
- Prioritize the requirements of the Silver Level and allocate personnel and resources accordingly;
- Formulate and implement media-handling and public communication plans, potentially delegating this to one ministry or responding agency; and
- Direct planning and operations beyond the immediate response in order to facilitate the recovery process.

As a Multi-Agency Unified Command, Gold has collective responsibility for decision-making and implementation of national policy. To achieve this Gold relies on a process of discussion and consensus to reach decisions at a strategic level and to ensure that the agreed strategic aim and objectives are implemented at the Silver and Bronze Levels. The PS of DRDM however, has the authority to issue command or executive orders to any responding agency where it is found necessary to ensure compliance and continuity in the execution of the plan. These discussions, including both decisions taken and not taken or deferred, must be logged for future scrutiny.

5.2.4 Silver Level – Incident Scene Coordination

The purpose of the Silver tactical level of command is to establish a Multi-Agency Command Post and Unified Command system to ensure that the actions taken by the Bronze operational level are coordinated, coherent and integrated in order to achieve maximum effectiveness and efficiency. Silver Commanders are responsible coordinating with their multi-agency colleagues at the Silver level and determining the tactics that Bronze will follow. They are then responsible for managing their own agencies response to ensure those plans are enacted.

During a wide area event, such as a Cyclone, there may be multiple Bronze Commanders from each agency reporting up to each Silver. In these instances, Silver also has responsibility for prioritization and resource allocation at the local / on scene Level. Having come to a consensus on priority actions and objectives through the Unified Command process, all Silver Commanders will issue consistent orders, direction and guidance to their respective Bronze Commanders.

A decision to activate a Level 2 event and Silver Command Post will generally be taken by the senior officer / manager present from the Lead Government Department with primary responsibility for that incident type, in consultation with the senior officers / managers of any other agencies forming the response. The nature of the Command Post will generally be dictated by the nature and scale of the emergency and the resources available. For example, a Silver Command Post where the Silver Commanders can meet, discuss and agree tactics, may be established at the incident scene for incidents with a limited geographical spread, such as a building fire.

Equally, for incidents that involve a wider range of responders, involve complex operations over an extended time period, or involve multiple incident scenes, such as flooding impacting a number of roads and properties across a District, the Silver Command Post should be established at a pre-identified location as set out in a District or Sectoral Plan. These pre-identified Command Posts could include the District Administrators Office or a Police Station for general emergencies. Special risk sites, such as the Airport and Port, will have their own nominated position for a Command Post to which all responding Silver Level Officers / Managers will respond. Further information about the establishment of a Silver level Command Post and the structure for supporting a Unified Command are set out in the Silver level Command Post SOP issued by DRDM.

For events without a defined incident scene, for example, preparations ahead of a Cyclone, the Silver Command will automatically be established at the pre-defined location for the area concerned.

Whenever a Level 2 emergency is declared, and a Silver CP established the NEOC Duty Officer must be informed. The NEOC Duty Officer will consider whether to establish the NEOC, and if so, at what level in accordance with the NEOC SOP. Where more than one Silver CP is established in response to a major or wide area event, the NEOC and Gold Level will be established automatically.

Working together at the Silver CP, the Silver Commanders from each agency will:

- Collect information from Bronze Commanders in the field and elsewhere in order to build and maintain a common understanding of the situation, risk and challenges;
- Assess significant risks and use this to inform tasking of Operational Commanders; and
- Determine priorities and key objectives for action;
- Determine priorities for allocating available resources;
- Plan and co-ordinate how and when tasks will be undertaken, and by whom;
- Obtain additional resources if required;

Ensure the health and safety of the public and personnel and act to minimize any environmental impact.

Although each of the Senior Officers / Managers at the Silver level will have specific service or agency

responsibilities, they must work together to jointly deliver an effective Multi-Agency response to the incident, ensuring that Bronze Commanders have the means, direction and co-ordination required to deliver successful outcomes. Unless there is an obvious and urgent need for intervention, Silver Commanders should not become directly involved in directing the detailed operational tasks being discharged by the Bronze Operational Level.

5.2.5 Bronze level—field operations

Bronze is the functional command level at which single agency supervisors manage their own teams and resources at incident site(s) or other affected area.

Personnel first on the scene will take immediate steps to assess the nature and extent of the problem. The Bronze Commander for each agency is deemed to be the most senior person/officer present from that agency. The individual nominated as Bronze Commander for an agency may change over time as more resources are deployed, and more senior officers arrive. However, even though a more senior officer may take over from an officer arriving as part of the predetermined attendance, the functional role remains unchanged.

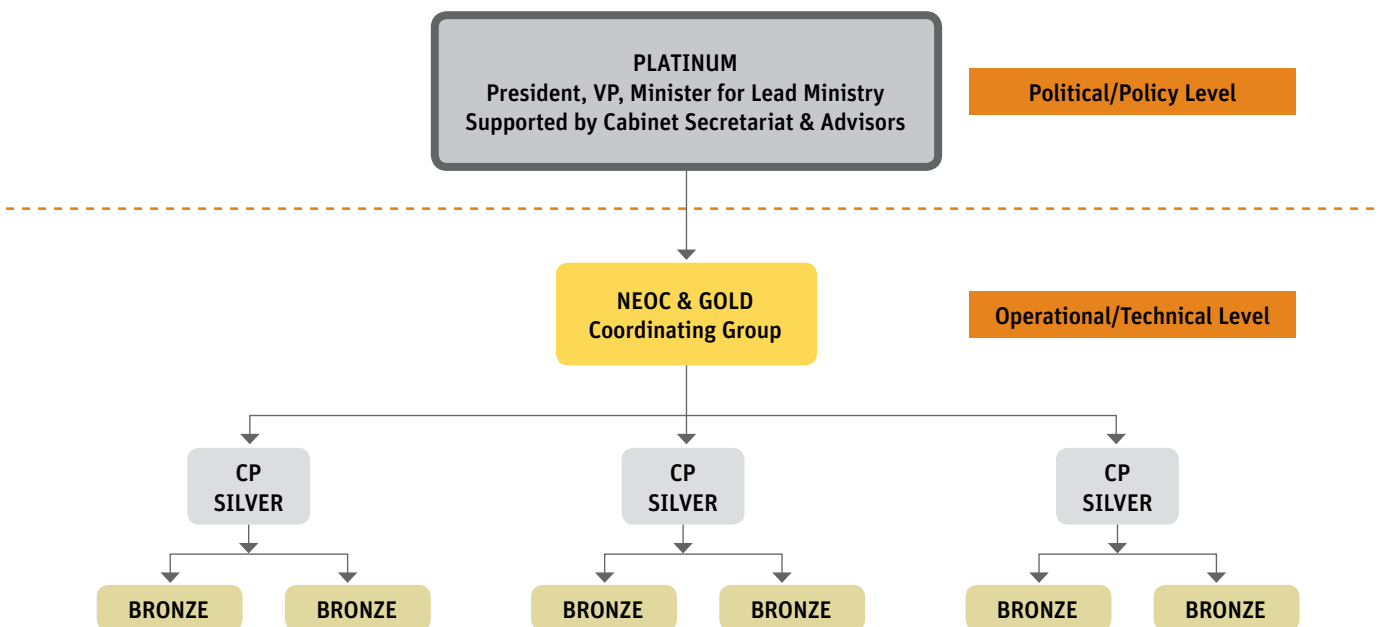
Bronze Commanders will put in place an Incident Command System (ICS) as set out in the ICS SOP produced by DRDM, and concentrate their effort and resources on the specific

tasks within their areas of responsibility, for example, the police will concentrate on establishing cordons, initiating evacuations and investigations, maintaining security, and managing traffic. Bronze Commanders will exercise command of their own resources and act on delegated authority from their parent organisation until or unless higher levels of management at the Silver or Gold level are established.

Individual district administrators and agencies retain command authority over their own resources and personnel deployed at the scene, but even for a relatively minor Level 1 incident resolved at the Bronze level, each agency must liaise and coordinate their on-scene activities with all other agencies involved in line with ICS requirements, ensuring a coherent and integrated effort. In most, but not all, instances, the police will establish outer cordons and coordinate the operational response at an identifiable scene, whilst the specialist response agency attending, such as fire and rescue services or medical services, will establish and control inner cordons and direct tactical operations.

These arrangements will usually be adequate to deal with most day-to-day emergency events or situations arising in the Seychelles, but if the level of emergency demands greater planning, coordination, or resources, an additional tier of management at the Silver functional command level may be necessary. A key function of a Bronze Level Operational Commander will be to evaluate the level of

Figure 8. National overview response and recovery structure



the emergency as set out in section 5.1 above and consider whether circumstances warrant a higher/tactical level of management at the Silver level.

Where a Silver tactical level of command is established to coordinate the multiagency response, Bronze Commanders become responsible for implementing the Silver Commander's tactical plan within their geographical or functional area of responsibility. To discharge this successfully, Bronze Commanders need to have a clear understanding of the Silver Commander's intent and plan, the tasks required of them, and any restrictions on their freedom of action, at which time they in turn determine required local actions so that they can brief their own staff.

5.2.6 Overview of incident level and command functions

5.2.6.1 Level 1: Routine Local Emergency—Bronze Level Activation

Most emergency events in the Seychelles are local emergencies resolved by the initial first responders deployed and for which formal multiagency coordination and additional assistance are not required. These emergencies are termed Level 1 events, resolved at the Bronze command functional level.

Level 1 events are usually handled by the initial responding agencies or district administrators as part of their routine duties operating within their given mandate. Typically, these events involve minimal injury or damages with no significant impact on the environment/biodiversity or the economy, and the impacts are localized with no requirement for national mobilization or coordination.

For localized incidents resolved at the "Bronze" functional level, responding agencies, districts, and sectoral entities follow their own internal plans, processes, and SOPs. Whilst formal multiagency coordination through a Unified Command is unnecessary, local collaboration in the field between Bronze Commanders of different agencies is achieved through the Incident Command System. For example, small incidents involving more than one agency, such as a minor road traffic collision, may require an element of operational collaboration in the field between respective Bronze level managers from the fire and rescue services, police, or ambulance service, but do not require a higher level of formal multiagency coordination structure to be established.

Examples of Level 1 events include routine minor vehicular accidents, small structural fires that are not connected with hazardous materials, rock or tree falls, local landslides, and so forth.

5.2.6.2 Level 2: Significant Local Emergency—Silver Level Activation

Significant local emergencies are incidents that are localized but are more significant than Level 1 in terms of scale, impact, or potential impact, or requiring coordination of a larger number of response personnel from multiple agencies. Typically, Level 2 emergencies will involve additional agencies and resources beyond those forming the Level 1 predetermined first response or require a higher level of coordination and management to resolve. These emergencies are termed Level 2 events, resolved at the Silver Command functional level.

Level 2 incidents require formalized multiagency coordination at the district/on-scene level and the involvement of supervisory officers/managers from responding agencies at a level above those in charge of the immediate first response. All Silver Commanders from MDAs forming part of the Level 2 response (including NGOs and private sector as appropriate) will deploy to an agreed incident command post, either established at or near the scene, or at a pre-identified command post for the area or risk site. This will generally be the district administrators' offices, although alternate command posts may be nominated in emergency plans for specific risk sites, such as the port or airport.

The role of the Silver level of functional command is to establish and then manage tactical plans to resolve an incident, including management and supervision of field operations and the local management and direction of all available resources.

The police Silver Commander or relevant district administrator will nominate the command post location and notify the NEOC Duty Officer whenever a Silver Command has been established.

The NEOC duty officer will consider whether an NEOC activation is required to support operations at the Silver level, and if so, at what level? For example, the NEOC command support function may be activated to provide technical support for Level 2 emergencies without the need to fully activate the Level 3 tier of incident management and the Gold Command.

Examples of Level 2 events include floods or landslides that affect strategic infrastructure, such as roads, power or water supplies, events that impact a large area, minor maritime accidents, structural fires in medium size buildings or public places like schools, for example. The key difference between Level 1 and Level 2 incidents is the geographical scale of the event and its terms of impact, complexity of response operations, and the requirement to manage and coordinate responders.

5.2.6.3 Level 3: National Emergency—Gold Level Activation

National emergencies at Level 3 include any incident that may or will require national level coordination and resources due to its scale, impact, or potential consequences, but is unlikely to require a declaration of a state of emergency or international assistance. These emergencies are termed Level 3 events, resolved at the Gold Command functional level.

Level 3 incidents may be declared in advance of an impacting event to enable appropriate coordination structures and resources to be put in place, for example, in response to an early warning of a significant event such as a tsunami or cyclone. In response to a Level 3 activation, national, district and/or sectoral plans will be activated, along with the establishment of NEOC and appropriate Silver Command posts to manage operational responses and activities in the field. Any widespread incident requiring more than two Level 2 Silver Commands being established will automatically be escalated to Level 3 and Gold Command will be established at NEOC.

When Level 3 is activated, the principal secretary of DRDM or their deputy, will determine the level of NEOC activation necessary and the members of the Gold Command group required to attend NEOC, dependent on the circumstances. The Gold Command will coordinate the national level of response and provide support to Silver in the effective resolution of the incident. The NEOC and Gold Command will be established in line with the NEOC SOP produced by DRDM, including the NEOC ICS structure of command and general staff.

The Gold Command key role is to ensure effective multi-agency and multi-sectoral coordination at the national level, manage and direct national resources, and provide strategic direction to Silver Commanders in the field.

Where NEOC is established to provide national coordination and direction, they should retain a strategic focus and avoid becoming drawn into tactical operations. It is the responsibility of Silver Commanders at relevant command posts to manage operations and tactics in the field as required to resolve the emergency.

Whenever NEOC is established, the principal secretary of DRDM will liaise with the Platinum level to keep them apprised of the situation and consider the need to escalate the incident to the Platinum level.

The starting point for response to, and resolution of, Level 3 emergencies will be the activation of any national hazard or sectoral plans. Where no specific plans exist for emergency, the national base plan in the NIEMP and associated structures for ICS will provide a starting point for the response.

Examples of Level 3 events include serious fires or building collapses, flooding, or landslide events that require deployment of national resources but do not warrant declaration of a state of emergency. Level 3 arrangements may also be activated in response to warnings of a significant event, such as a cyclone, tsunami or severe rainfall warning so that appropriate actions can be coordinated in advance.

5.2.6.4 Level 4: Significant National Emergency—Platinum Level Activation

Significant national emergencies at Level 4 include any incident for which a declaration of state of emergency is required or enacted, and which has significant policy, financial, environmental, or diplomatic implications for the country, or any other emergency that is significant due to its magnitude, geographic spread, or its impact on the country's ability to go about its normal business. Declaration of a formal state of emergency can be for a district, region, or at the national level. Any event that disrupts the function of three or more districts and has a national impact on the economic and social structure of the country will automatically be declared a significant national emergency. These emergencies are termed Level 4 events and are resolved at the Platinum functional level.

The president, vice president, minister of the lead government department involved, and/or other ministers as nominated by the President, will form a Platinum group to ensure that the Gold group is provided with appropriate policy direction and authorization. The Platinum group

will be supported by such senior advisors as they see fit, depending on the nature and scale of the event.

Level 4 (Platinum) events are differentiated from Level 3 (Gold) events by the scale of the event and its impact on the country. The impact or consequences of an event may be more serious than the initiating event that caused them. For example, a fire at a fuel storage depot may be manageable at Level 3 using national resources and existing delegated authority. However, the consequences of the event in terms of economic and environmental damages and continuity of key services, such as electrical generation, may require the activation of Level 4.

The need (or potential need) to enact emergency powers or requiring requests for the assistance of international resources will automatically invoke a Level 4 activation. Platinum may also be enacted if the nature of the emergency requires ministers to provide formal policy direction or authorizations beyond the day-to-day delegated authority of Gold level managers.

In response to a Level 4 activation, national, district and/or sectoral plans will be activated, along with full activation of NEOC and appropriate Silver Command posts established to coordinate operations in the field.

Members of Platinum will maintain an overview of the incident and response actions being coordinated by Gold, receiving regular briefings from the NEOC chair and information provided by the NEOC command support group. Platinum will consider any requests from Gold for emergency declarations or international assistance and provide policy direction and authorization as necessary.

Examples of Level 4 events include tsunamis, plane crashes, large scale maritime accidents, health emergencies including epidemics and pandemics, and in general events that involve a large number of people and international implications, or secondary effects like tourism business interruption or island food security.

Figure 9. National Incident Command System roles and responsibilities

Functional Command Level	Who/Where?	Key Responsibilities
Platinum	President–National	<ul style="list-style-type: none"> > Policy Direction > Ultimate Decision Makers > Ensure whole of Government/society approach
Gold	Commanders and PS of responding MDAs NEOC	<ul style="list-style-type: none"> > Coordinates Activates > Sets National Technical Direction > Allocates National Resources
Silver	DA's, Senior Officers of responding MDAs Command Post	<ul style="list-style-type: none"> > Coordinates Operational Activates > Interprets National Direction, Sets Response Tactics and Objectives > Allocates Local Resources
Bronze	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px; writing-mode: vertical-rl; transform: rotate(180deg);">Districts</div> <div style="border: 1px solid black; padding: 2px; writing-mode: vertical-rl; transform: rotate(180deg);">Responders</div> <div style="border: 1px solid black; padding: 2px; writing-mode: vertical-rl; transform: rotate(180deg);">NGOs</div> <div style="border: 1px solid black; padding: 2px; writing-mode: vertical-rl; transform: rotate(180deg);">Businesses</div> <div style="border: 1px solid black; padding: 2px; writing-mode: vertical-rl; transform: rotate(180deg);">Citizens</div> </div>	<ul style="list-style-type: none"> > Execute Silver Plan > Managing Single Agency/Local Response > Coordinate Actions at the District/ Incident Scene

5.3 Functional Areas

The functional areas are a mechanism for identifying key tasks associated with emergency preparedness and response and grouping the agencies responsible for delivering them during emergency response operations. In clarifying responsibilities for delivery of key functional areas, public, private, and non-government institutions can then support the response by deploying personnel and assets and sharing relevant information. Agencies may work individually or on a multiagency basis to deliver key functions and tasks, coordinated through incident command posts and the National Emergency Operations Centre (NEOC).

Each functional area defines the functional group purpose and scope, and concept of operation, and identifies the Lead Government Departments (LGDs) and support agencies assigned to the function and establishes their roles and responsibilities in the implementation of key response tasks. The NIEMP is set up along five functional areas, which are illustrated in Annex 1. These functional areas contain detailed descriptions of the methods that government ministries, departments, and agencies (MDAs) follow for critical operational functions during emergency operations.

DRDM has identified critical response and recovery functions in five key areas under the responsibility of the lead and supporting MDAs. A breakdown of those critical response and recovery functions, the lead and supporting agencies responsible for their delivery, and a brief description of key activities are set out below. More details are set out in Annex 1.

1. Rescue and security
2. Health
3. Humanitarian services
4. Essential infrastructure
5. Emergency management

For most emergency functions, successful operations require a coordinated effort from a number of departments, agencies, and volunteer organisations. To facilitate a coordinated effort, a number of central government ministries, departments and agencies (MDAs) are assigned primary responsibility for planning and coordinating specific emergency functions. Generally, primary responsibility for an emergency function will be assigned to a department or agency that has legal responsibility for that function or possesses the most appropriate knowledge and skills. Other MDAs may be assigned support responsibilities for specific emergency functions. Table 6 summarizes the general

emergency responsibilities of key government departments and agencies and other organisations.

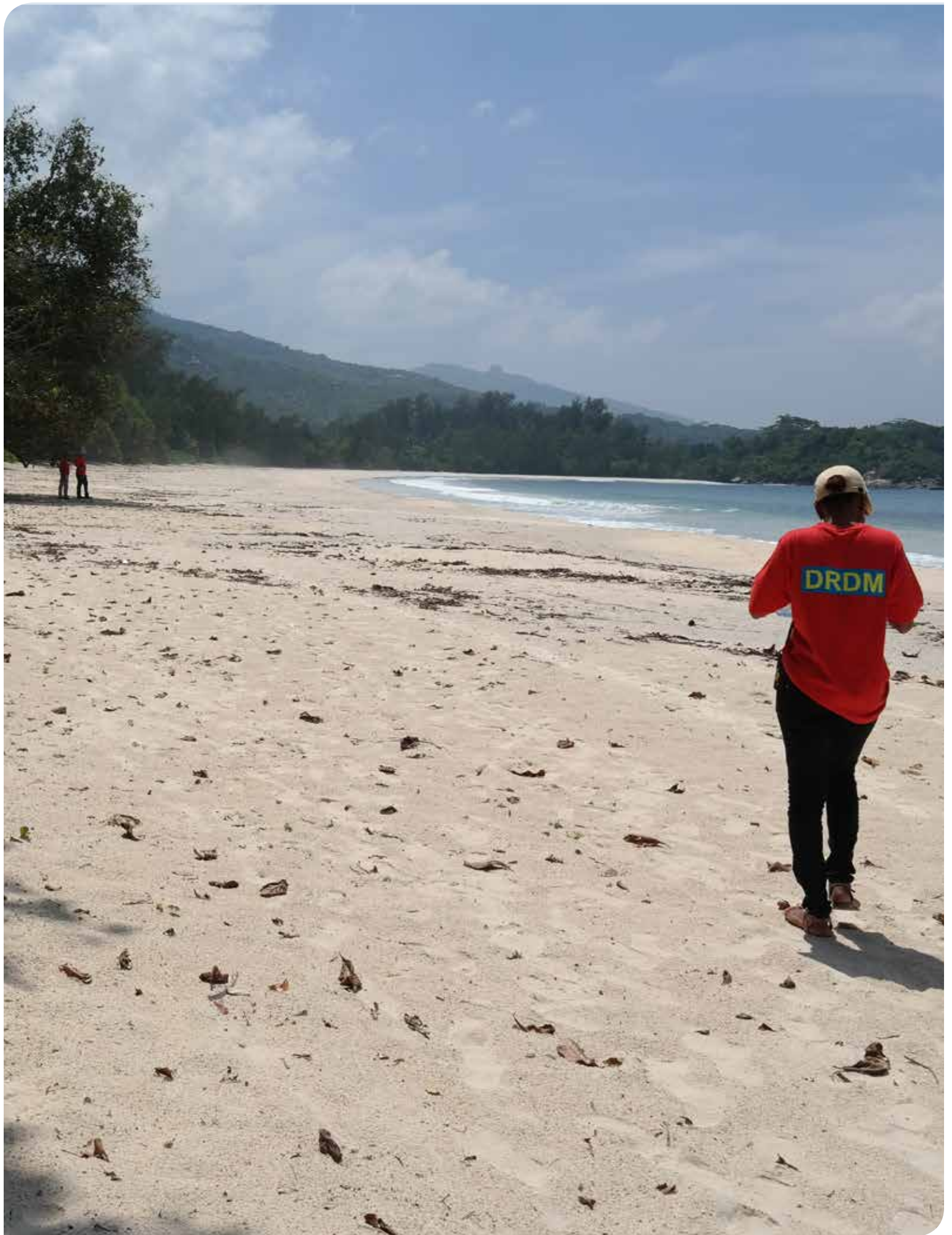
Specific MDAs will be assigned primary responsibilities to prepare, perform, and coordinate each of the functions and tasks listed in Annex 1. Others will be assigned support responsibilities. The specific tasks to be performed are detailed in the Task by Functional Areas section.

Whilst DRDM has responsibility for overall leadership and coordination of emergency management and recovery efforts through the coordination arrangements set out in the NEIMP, lead and supporting MDAs are responsible for developing specific capabilities and for providing the technical and policy leadership for safe and effective resolution of the incident. Therefore, it will be the responsibility of those MDAs having primary or support responsibility to maintain current standard operating guidelines and checklists which detail how their assigned task will be performed to implement this plan.

Where it is unclear which, if any, ministry or department should be designated as LGD, DRDM may nominate a lead, or retain the role. In some cases, the lead government department for the response phase of an emergency may be different from the recovery phase, reflecting the changing nature of the challenge, the different issues arising, and expertise required. In some wide area emergencies (e.g., flooding), it is possible that response and recovery activity will be occurring simultaneously in different parts of the country under the leadership of two different LGDs. The activation of national command and coordination structures and use of multiagency coordination groups will alleviate any potential challenges this raises.

The disaster response capabilities developed by the Seychelles lead and supporting MDAs need to be suitable and sufficient to manage the range of foreseeable disasters that may impact the country. To identify the capabilities and the required capacities needed to respond to foreseeable emergencies in the Seychelles, a range of reference disaster scenarios representing the key ‘worst credible threats’ to the Seychelles are required. These scenarios can be used for both capability and capacity assessment of first response agencies, and for design of more detailed SOPs and checklists required for each response and recovery task identified.

More information on the Functional Areas including purpose, concept of operations, and tasks for each functional area can be found in Annex 1



6. Implementation of the Plan

6.1 Review of Plans and Capabilities

The NIEMP introduces several emergency preparedness and response structures that are likely to impact all NGOs, businesses, and sectoral plans in the Seychelles, in addition to all MDAs. A key task for all of those MDAs and organisations will be to revise their own plans, policies, and working arrangements to ensure that they are consistent and compatible with the NIEMP.

It is necessary to complement the NIEMP with the contingency plans specific to each event, as well as to guide the institutions in the formulation and updating of their institutional plans as fundamental tools for the adequate implementation of the response. There are several existing sectoral plans or emergency-specific (contingency) plans that impact multiple agencies, and whilst each has a responsible lead government MDA, they will require review on a multiagency basis to ensure that all response partners are planning and working in a cohesive and consistent way. It is a matter for DRDM to determine the final list of these strategic plans for review, but it is suggested that as a minimum, the list should include a review of plans for:

1. The port
2. The airport
3. District plans
4. Maritime emergencies/oil spill
5. Health emergencies
6. Tsunamis

When reviewing current plans, reference can be made to key elements of the NIEMP, the levels of the incident and the activation, the functional areas and task descriptions set out at 5.3, and the matrix of responsible MDAs. These provide guidance on the range of tasks that will need to be carried out in response to the specific emergencies, the agencies responsible for them, and the contingency or institutional plans they are referring to. Reviews of current plans should include a review of capabilities and capacities across all phases of the incident. These phases commence with the activation, e.g., a first call from a member of the public to a responder agency via the 999 system, receipt of an early warning signal to a public agency through to the dispatch of responders, management and resolution of the incident, and post incident evaluations actions and recovery activities. It is required at each phase, in many instances carried out by multiple agencies, that the task is reviewed and formulated in a consensual way to ensure that the overall plan is robust.

In order to plan effectively, MDAs need to be clear about what type and scale of events they should prepare for. A common methodology for this work is to produce a suite of reference disaster scenarios that represent the key ‘worst credible threats’ to the Seychelles. These scenarios enable both lead and supporting MDA responders to plan in a consistent and cohesive way. The scenarios can also be used for the design of more detailed SOPs and operational checklists, and to identify specific equipment and training requirements for each response task.

Whilst each reference disaster scenario should be developed using data from past disasters and the best available modelling, and combining science and evidence, the development of these scenarios do not to be perfect if there is not much information available and could be based on a qualitative “risk assessment” process, and the outcomes should not be confused with a prediction about the scale of disasters most likely to occur. Their primary purpose is to create a robust but realistic set of planning assumptions against which a transparent and consistent assessment of responder agency’s roles and capabilities can be conducted and to support the formulation of contingency or institutional plans.

By ensuring that both lead and supporting MDA’s capabilities and capacities are measured against the same hypothetical scenarios, it is possible to identify any potential gaps or overlaps and to allocate responsibility for addressing these. In some instances, a capability may have been developed by a responder agency to deal with very minor or routine events, but this may be insufficient in terms of capacity to respond to a major, yet foreseeable, emergency, e.g., a flood rescue capability may exist, but the capacity needed to rescue 3–5 persons is very different than the one required to rescue 100 persons from flood waters across five districts, if a major extended event occurs.

Based on historical scenarios and the possible impacts generated by different hazards, in terms of contingency plans and scenarios to use institutional plan it is recommended to use:

1. The port—maritime emergencies/oil spill
2. Large aircraft accidents
3. Health emergencies related to large-scale epidemics
4. Tsunamis
5. Major fires
6. Cyclone leading to combined landslide and flooding

Each reference disaster scenario should be designed as an extreme test of multiple responder capabilities, after highly implausible scenarios have been excluded. The scenarios should be developed through an iterative process, subject to extensive consultation with experts and stakeholders from lead and supporting MDAs, as well as technical experts. Each scenario will inevitably test multiple task capabilities. For example, a well-designed cyclone scenario would facilitate assessment and testing of early warning and dissemination arrangements, and different

tasks related to functional areas 1 to 5 (search and rescue, epidemiological surveillance, provision and management of shelters, recovery of critical infrastructure, etc.)

In terms of deciding whether a functional capability exists or is sufficient to deal with the likely challenges faced by the Seychelles, a capability evaluation following the T.E.P.I.D O.I.L process will be useful. This separates out the various components required to be in place for a functional task to be conducted safely and examines each of them separately.

Capability assessment—T.E.P.I.D O.I.L

1. Training
2. Equipment
3. Personnel
4. Infrastructure
5. Doctrine and Concepts
6. Organisation
7. Information
8. Logistics

Whilst different elements of capability may develop at different speeds, only when all elements outlined in the T.E.P.I.D O.I.L model are in place and working effectively can a capability truly be said to exist. For example, even when there is a large number of personnel available and the latest technical rescue equipment, there is not a capability in place unless the personnel are trained, working to an agreed SOP, and supported by appropriate logistics and command systems.

Terms of Reference (TOR) /Standard Operating Procedures (SOP)

Terms of Reference (TOR) must be prepared for any MDAs and organisations having a role under the NIEMP. TORs are to explicitly set out the purpose, scope, and functions of the MDAs and organisations and its membership, accountability, and mode of engagement.

Standard operating procedures (SOPs) must be prepared for any MDAs and organisations having an operational role under the NIEMP. In addition to the requirements for TORs, SOPs are required to set out the mode of activation and operation of the MDAs and organisations.

TORs/SOPs that could apply to multiple agencies and relate directly to delivery of a function of the NIEMP are to be approved by DRDM, and once approved, become part of the



NIEMP. TORs/SOPs shall include a process for accountability and reporting provisions to minimize the potential for losses and misappropriation of resources and funds during disaster operations.

6.2 Training and Capacity Building

To implement the NIEMP, it is necessary to have an extended dissemination of the document and a training plan on key components of the NIEMP for all institutions identified as lead or support MDAs in the matrix of responsibilities. The dissemination and training activities should be conducted at multiple functional levels so that the responsible stakeholders can fulfill their obligations to operate the Seychelles Incident Command System, including the NEOC. The Lead and Support MDAs of the different tasks should develop specific training activities for their personnel and incorporate them into the orientation programme for all their staff members.

DRDM should conduct frequent exercises to test all or parts of the NIEMP. Exercises may include national and district representatives, as well as NGO and private sector organisations that have a role in coordinating emergency activities with the government. Members of the NEOC will participate in planning and coordination of the nationwide exercise. Afterward, action reports following exercises or

real world activations of the plan will be completed by DRDM to capture any findings, such as planning deficiencies, resource gaps, process refinements, or other areas recommended for improvement.

Specific skills training and capacity building requirements for implementation of the NIEMP will result from the outcome of the planning and capability review process set out in section 6.1. Those reviews will identify sectoral and agency gaps and challenges that should be prioritized and addressed.

Critical to this process is the training of key staff from DRDM and First Responder Organisations identified in Functional Area 1. The priority is to ensure that those staff required to establish a Unified Command at the Gold or Silver functional level fully understand the NIEMP and can undertake their roles effectively. Ministers at the Platinum level will also require sensitization to appreciate the critical role they may have to play. This training and sensitization may best be achieved by developing a number of staff to act as trainers from DRDM and other MDAs, and then cascading that training out to the remaining staff members, including the Bronze level. Training will also need to be provided to the private sector, NGOs, and other any other groups expected to play a formal role in emergency preparedness and response.

Table 6. Implementation Tasks

6.1 Planning and capability assessment	
Key tasks	Outcomes
1. All MDAs and organisations are required to revise their own plans, policies, and working arrangements to ensure that they are consistent and compatible with the NIEMP.	All Seychelles plans will follow a consistent emergency preparedness and response structure and Incident Command System, ensuring that disasters can be managed effectively and loss of life and damage to property and the environment minimized.
2. DRDM to determine the appropriate reference scenarios required for a robust evaluation of the functional areas and tasks identified in the NIEMP and allocate them to the responsible lead government department for review.	Reference scenarios will ensure a transparent and risk appropriate evaluation of the Seychelles EP&R plans, capabilities, and capacities. They will form the foundation for multiagency training and capacity building.
3. In support of multiagency plans, individual agencies must review their internal plans and SOPs to ensure they are consistent with the NIEMP.	All responders in the Seychelles will operate to a common ICS, improving collaboration at incidents and reducing risks to both the public and the responders themselves.
6.2 Training and capacity building	
1. The process set out at 6.1 will produce a gap analysis and list of capability and capacity building needs. Agencies need to record any gaps identified so that they can be prioritized, and appropriate plans put in place to address them. DRDM should maintain these lists and monitor implementation of improvement plans.	Building up the emergency preparedness and response capabilities of the Seychelles is a long-term process, and key priority tasks need to be identified. A coherent and risk-based approach to development of capabilities and capacities will ensure that maximum benefits can be delivered and opportunities to deliver efficiencies through better targeted investment maximized.
2. In addition to those issues identified through the process set out in 6.1, in order to roll out the NIEMP, there needs to be an initial training and development programme to ensure that all personnel undertaking a formal incident management role in the Seychelles Functional Incident Command System fully understand their personal role, and how it fits into the wider Incident Command System.	All multiagency and multi-sectoral responders will understand the Seychelles ICS and will be able to undertake their duties safely and effectively, reducing risks to both the public and the responders themselves.

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ANNEX I FUNCTIONAL AREAS

Functional Area I: Rescue and Security

PURPOSE (Goals)

Coordinate and provide the set of immediate actions carried out by the population and the relevant first response agencies, with the aim of saving lives, controlling secondary events, such as fires, explosions, leaks, and protecting assets and maintaining public safety.

SCOPE/CONCEPT OF OPERATIONS (Actions)

Mobilize teams for locating, rescuing, and providing first aid to the wounded, and provide support to control secondary events such as fires and hazardous materials, as well as guaranteeing safety and security to the population and the emergency personnel, including evacuating the population exposed to imminent risk.

TASKS—This functional area is divided into six main tasks:

Table A1.1. Functional Area I: Rescue and Security

TASK 1.1. SEARCH AND RESCUE—SEA
PURPOSE: Locate, categorize and rescue affected persons.
SCOPE/CONCEPT OF OPERATIONS: Intervention starts after an emergency call is received reporting a maritime emergency within the maritime zone of the Seychelles
Lead Agency: The Coastguard Unit of the Seychelles Peoples Defence Force, Seychelles Maritime Safety Administration (SMSA)
Supporting Agencies: Department of Risk and Disaster Management, Seychelles Police Force, Seychelles Fire and Rescue Service Agency, Seychelles Civil Aviation Authority, Seychelles Maritime Safety Administration, Seychelles Port Authority, Islands Development Company Ltd.
TASK 1.2 SEARCH AND RESCUE—LAND
PURPOSE: Locate, categorize and rescue affected persons.
SCOPE/CONCEPT OF OPERATIONS: Intervention starts after an emergency call is received reporting affected persons resulting from structural collapse, flooding and/or road, boat, or airplane accidents. It includes location, identification, stabilization and rescue, onsite medical care.
Lead Government Agency: Seychelles Fire and Rescue Service Agency
Supporting Agencies: Red Cross Society Seychelles, Seychelles Peoples Defence Force, Seychelles Police Force, Seychelles Civil Aviation Authority, Department of Tourism
TASK 1.3 LAW AND ORDER
PURPOSE: Guarantee protection of life, public security, and compliance by emergency response operators.
SCOPE/CONCEPT OF OPERATIONS: The intervention begins once a report is received of an event requiring immediate emergency response where, due to its scale or at the request of first respondents, it is necessary to isolate and/or cordon off the affected areas, and control public security and traffic.
Lead Government Agency: Seychelles Police Force
Supporting Agencies: Seychelles Peoples Defence Force

Table A1.1. Functional Area I: Rescue and Security (cont.)

TASK 1.4. FIREFIGHTING
PURPOSE: Firefighting activities including protection, detection, and suppression of fire, irrespective of its nature, guaranteeing the protection of life and property.
SCOPE/CONCEPT OF OPERATIONS: Responses to fire incidents start with the reception of reports that a fire has broken out and the mobilization of a predetermined attendance firefighting response. Actions include fire detection, control and extinction, evacuation of affected people, and on-site provision of basic health care.
Lead Government Agency: Seychelles Fire and Rescue Service Agency
Supporting Agencies: Seychelles Civil Aviation Authority, Seychelles National Parks Authority, Seychelles Port Authority, Seychelles Peoples Defence Force, Seychelles Petroleum Company, Seychelles Police Force, Islands Development Company Ltd
TASK 1.5. EVACUATION OF AREAS AFFECTED/AT RISK
PURPOSE: Transfer population from areas at risk to safe areas and avoid panic. Effective and timely public information will significantly reduce the risk of panic.
SCOPE/CONCEPT OF OPERATIONS: The intervention starts once the evacuation order is issued by the relevant authority (police, local government, DRDM), i.e., the alert is declared. It includes informing the population with the activation of predefined alarms, the definition of evacuation routes if it has not been done previously, the evacuation of the community, and the monitoring and authorized return of the evacuated population. This task can be applicable to small as well as a large-scale evacuation and should consider marine and aeronautical routes.
Lead Government Agency: Local Government Department
Supporting Agencies: Red Cross Society Seychelles, Seychelles Fire and Rescue Service Agency, Seychelles Land Transport Agency, Seychelles Maritime Safety Administration, Seychelles Port Authority, Seychelles Peoples Defence Force, Department of Tourism, Local Government Department Health Care Agency, Department of Risk and Disaster Agency, Islands Development Company Ltd
TASK 1.6. HAZARDOUS MATERIAL–RELATED EMERGENCIES
PURPOSE: Respond to incidents involving hazardous materials.
SCOPE/CONCEPT OF OPERATIONS: The intervention starts once an incident involving hazardous materials is reported. It includes identifying and understanding the event and taking action to control the emergency.
Lead Government Agency: Seychelles Fire and Rescue Service Agency
Supporting Agencies: Ministry of Environment, Energy and Climate Change (MOECC), Public Health Authority, Red Cross Society Seychelles, Seychelles Peoples Defence Force, Seychelles Petroleum Company, Seychelles Police Force, Islands Development Company Ltd

Functional Area II: Health

Purpose

This functional area describes how medical assistance will be coordinated in response to public health and medical care needs following a major disaster or emergency, or during a developing potential medical situation.

SCOPE/CONCEPT OF OPERATIONS (Actions)

Once the emergency occurs, it begins with the mobilization of personnel, goods, equipment, and supplies to the impact area, and patient identification and transport (depending on level of complexity) according to the approved plans. It continues through the emergency. It includes hospital care, control of epidemiological surveillance, environmental health (management of vectors and domestic animals, basic sanitation), psychosocial support, and management of dead bodies.

TASKS—This functional area is divided into six tasks:

Table A1.2. Functional Area II: Health

TASK 2.1. PRE-HOSPITAL CARE
PURPOSE: Provide quick assistance to affected individuals in the incident area and transport them to a care center, if required, to safeguard their health.
SCOPE/CONCEPT OF OPERATIONS: It begins once the report is confirmed. The emergency is declared, a care center for victims is created, resources are allocated according to needs, and patients are categorized by severity (triage) to ensure that hospital care takes place in the most suitable location. Care provided at this stage is aimed at stabilizing the patient until their subsequent evacuation or transfer to the ultimate care center (hospital).
Lead Government Agency: Health Care Agency
Supporting Agencies: Public Health Authority, Red Cross Society Seychelles, Seychelles Peoples Defence Force, Seychelles Police Force
TASK 2.2. HOSPITAL CARE
PURPOSE: Provide timely and adequate medical attention to affected persons during an emergency by guaranteeing adequate hospital capabilities (facilities and human resources) according to their required level of care. Serve patients through their whole rehabilitation process.
SCOPE/CONCEPT OF OPERATIONS: It runs from the confirmation of the report, declaration of the emergency, and activation of the plan for patient care in health centers, until the end of the emergency. It includes the damage assessment of the hospital infrastructure and the reestablishment of health services.
Lead Government Agency: Health Care Agency
Supporting Agencies: Public Health Authority, Seychelles Peoples Defence Force
TASK 2.3. EPIDEMIOLOGICAL SURVEILLANCE
PURPOSE: Determine the epidemiological pattern and care by timely detecting outbreaks, in order to safeguard the health of survivors.
SCOPE/CONCEPT OF OPERATIONS: Evaluating potential epidemic risk, implementation of epidemiological surveillance system in disasters, and intervention during epidemic outbreaks. It includes the systematic identification, collection, collation, analysis, and interpretation of disease occurrence and public health event data to take timely and robust action. It also includes the timely dissemination of the resulting information to those who need to know for effective and appropriate action.
Lead Government Agency: Public Health Authority
Supporting Agencies: Health Care Agency, National Biosecurity Agency, Seychelles Police Force, Department of Tourism

Table A1.2. Functional Area II: Health (cont.)

TASK 2.4 ENVIRONMENTAL HEALTH
PURPOSE: Avoid or mitigate the environment deterioration and its negative effects on the health of the affected population resulting from a disaster event, including rescuing and treating affected animals.
SCOPE/CONCEPT OF OPERATIONS: It begins with the surveillance, control, and monitoring of water quality, food and beverages, solid waste, handling and disposal of human waste and wastewater, and vector control, including the treatment of affected animals.
Lead Government Agency: Public Health Authority
Supporting Agencies: Health Care Agency, MOECC, National Biosecurity Agency, Seychelles Police Force, Ministry of Habitat, Infrastructure and Land Transport
Task 2.5. MANAGEMENT OF DEAD BODIES
PURPOSE: Locate, recover, and receive human remains and place them in the designed areas for subsequent handling by forensics for disasters.
SCOPE/CONCEPT OF OPERATIONS: The handling of dead bodies begins with the search and recovery of the dead bodies by relevant institutions. It finishes with the delivery of bodies to the families and the categorization of unidentified bodies to be buried in individual graves.
Lead Government Agency: Public Health Authority, Seychelles Police Force
Supporting Agencies: Red Cross Society Seychelles, Seychelles Interfaith Council, Health Care Agency
TASK 2.6. PHYSCOSOCIAL SUPPORT
PURPOSE: Provide timely and adequate mental health care to people affected during an emergency to reduce mental effects.
SCOPE/CONCEPT OF OPERATIONS: It begins once the report is confirmed, the emergency is declared, and the plan for mental health care of the affected population is activated.
Lead Government Agency: Health Care Agency
Supporting Agencies: Seychelles Interfaith Council, Family Affairs Department

Functional Area III: Humanitarian Services

PURPOSE (Goals)

It aims to develop and coordinate the actions related to the care and treatment of persons affected by emergencies or disasters, especially regarding the provision of shelter, food, and basic needs, and the protection of vulnerable groups (minors, pregnant women, individuals with disabilities, sick persons, and the elderly).

SCOPE/CONCEPT OF OPERATIONS (Actions)

It starts once the number of affected persons has been identified and measured (categorized by family group, gender, age, special conditions, and basic needs required), taking into consideration the socio-cultural context in each area. This information is essential to understand basic needs and specialised care of individuals with special conditions and vulnerable groups.

TASKS—This functional area is divided into four tasks:

Table A1.3. Functional Area III: Humanitarian Services

TASK 3.1. REGISTRATION AND FAMILY REUNIFICATION
<p>PURPOSE: Determine the number of affected persons in need of shelter and food or non-food assistance and organize the delivery of humanitarian services to meet their basic needs and support the necessary actions for locating missing or lost persons after a large-scale event, with the goal of reunifying family members and relatives.</p>
<p>SCOPE/CONCEPT OF OPERATIONS: The intervention starts once there are affected persons who have lost their assets and require attention to satisfy their basic needs. This task includes identifying, categorizing, and quantifying the affected population (the disappeared, deceased, and/or at risk), and determining their basic needs after the event. Information should be collected on the composition of affected families/individuals (total number of members, number of adults, children, and teenagers, gender, and ages), name of the head of the family, individuals in need of special attention or belonging to vulnerable groups (children, teenagers, persons with disabilities, older adults, etc.), shelter or housing needs and personal (food, clothing, hygiene items, medicines) and domestic needs (mattresses, blankets, kitchen elements, etc.), taking into consideration the equipment and goods demanded by vulnerable groups. The task includes creating a database of missing persons (name, gender, age, last known location, clothing, special features, etc.) and disseminating the name of missing and found person(s) through the radio, television, or web, etc. Furthermore, it is important to identify the networks and social support mechanisms that could help assist the community.</p>
<p>Lead Government Agency: Local government department</p>
<p>Supporting Agencies: Red Cross Society Seychelles, Family Affairs Department, Agency for Social Protection, Department of Information and Communication Technology, Department of Tourism, Islands Development Company Ltd.</p>
TASK 3.2. SHELTER INSTALLATION AND MANAGEMENT
<p>PURPOSE: Provide temporary shelter for the affected population whose homes are destroyed or damaged, or who have been vacated during an emergency, guaranteeing a sufficient number of shelters with appropriate health and safety conditions.</p>
<p>SCOPE/CONCEPT OF OPERATIONS: The intervention starts once individuals and families lose their homes, are located in areas of risk, and/or do not have access to basic services during a disaster event. This task determines the number of families and persons to be housed, the safe areas for the location of shelters, the installation of shelters and the installation of public services (distribution of drinking water, provision of energy and communications services, and appropriate disposal of solid waste) and protective measures</p>
<p>Lead Government Agency: Local government department</p>
<p>Supporting Agencies: Department of Risk and Disaster Management; Health Care Agency; Landscape and Waste Management Agency; Ministry of Habitat; Infrastructure and Land Transport; Public Health Authority; Public Utilities Corporation; Red Cross Society Seychelles; Seychelles Interfaith Council; Seychelles Peoples Defence Force; Seychelles Police Force; Agency for Social Protection; Department of Tourism; NGOs; Family Affairs Department; Islands Development Company Ltd.</p>

Table A1.3. Functional Area III: Humanitarian Services (cont.)

TASK 3.3. FOOD—NON-FOOD ASSISTANCE
<p>PURPOSE: Temporarily provide food, covering, furniture, and/or items for personal hygiene to persons directly affected by an emergency, with the goal of satisfying their basic needs and ensuring a balanced diet, taking into account different food needs (pregnant women, children, the elderly, etc.) and the social and cultural characteristics of the affected population. Provide food and items in good condition in a timely manner until access is re-established.</p>
<p>SCOPE/CONCEPT OF OPERATIONS: The intervention starts by identifying affected total or partial loss of goods, or people unable to buy and prepare food. This task includes understanding community demands; planning, distribution, and control of aid; and, if applicable, community food preparation.</p>
<p>Lead Government Agency: Local government department</p>
<p>Supporting Agencies: Red Cross Society Seychelles, Seychelles Trading Company LTD, Family Affairs Department, Agency for Social Protection, NGOs, Department of Tourism, Islands Development Company Ltd.</p>
TASK 3.4. PROTECTION OF VULNERABLE GROUPS
<p>PURPOSE: Ensure the well-being of affected individuals belonging to vulnerable groups, as they require special assistance.</p>
<p>SCOPE/CONCEPT OF OPERATIONS: The intervention starts with the reception of the report on people affected during an emergency (reported in the registration) who have been identified as part of a vulnerable group. It includes developing an action plan and implementing measures to satisfy their needs and well-being.</p>
<p>Lead Government Agency: Local government department</p>
<p>Supporting Agencies: Department of Risk and Disaster Management, Red Cross Society Seychelles, Family Affairs Department, Agency for Social Protection, Health Care Agency, NGOs, Seychelles Fire and Rescue Service Agency, Seychelles Interfaith Council, Seychelles Police Force, Islands Development Company Ltd.</p>

Functional Area IV: Essential Infrastructure and Services

PURPOSE (Goals)

Monitor natural and/or human-induced events and assess damage to essential services, basic sanitation (water, sewage, and solid waste), energy, telecommunications, transportation, and the environment, in order to define the actions to be taken by the authorities for the protection of life and property, and for the rapid reestablishment of services and recovery of the environment.

SCOPE/CONCEPT OF OPERATIONS (Actions)

It begins with the identification and estimation of damages (determining area affected by the event) and the state of critical infrastructure (water, sanitation, energy, telecommunications, transport) and the environment; the consolidation and organisation of information on damages; and the planning and prioritization of emergency management for these services. The process ends with the rehabilitation/early recovery of the various systems and the environment.

TASKS—This functional area is divided into five tasks:

Table A1.4. Functional Area IV: Essential Infrastructure and Services

TASK 4.1. ASSESMENT OF DISASTER RISKS
<p>PURPOSE: Identify and perform a quantitative and qualitative record of the characteristics of potential natural events (tsunami, landslides, dam ruptures, floods, fires, etc.), human events (i.e., health related, transport accidents, industrial accidents, terrorism, etc.), or secondary risk events (i.e., oil spills) that may occur as a result of the main phenomenon, from the start of the emergency through subsequent stages, in order to determine its possible effects and appropriately establish priorities for response and rehabilitation work.</p>
<p>SCOPE/CONCEPT OF OPERATIONS: It starts after evaluating and categorizing the main event and notifying relevant authorities, which will generate alerts for tsunamis or other dangerous events. It includes analyzing relevant information and reports from the tsunami warning center at the international level, surveying and categorizing resulting events, analyzing historical data and relying on previous experiences in order to evaluate potential resulting events, and developing plans for emergency response and alerts. It also includes analyzing affected areas, identifying the areas affected by secondary events, and compiling all the information, at later stages, in order to keep record of the event and plan the rehabilitation/early recovery process.</p>
<p>Lead Government Agency: Department of Risk and Disaster Management</p>
<p>Supporting Agencies: MOECC, Seychelles Meteorological Authority, Seychelles National Parks Authority, Department of Tourism, Local Government Department, Landscape and Waste Management Agency,</p>
TASK 4.2. RESTORATION OF COMMUNICATION SERVICES
<p>PURPOSE: Understand, qualify, and quantify the extent of damage to communications (telephone, radio, and satellite), and the impact on service coverage and quality, from the start of the emergency and through subsequent stages, in order to plan appropriately, establish response priorities, and ensure the rapid rehabilitation of services.</p>
<p>SCOPE/CONCEPT OF OPERATIONS: During the initial stage of the emergency, identify the distribution of damages and estimate the impact on telecommunications infrastructure, through rapid assessments and/or overflights of affected areas (in case of large-scale events). It also includes surveying, quantifying, and qualifying the damages according to detailed methodologies, in order to establish the operational capacity and define the measures to guarantee protection of human lives, protection and management of infrastructure, and the rehabilitation of services.</p>
<p>Lead Government Agency: Department of Information and Communication Technology</p>
<p>Supporting Agencies: Ministry of Habitat, Infrastructure and Land Transport; AIRTEL; Cable and wireless; Intelvision</p>

Table A1.4. Functional Area IV: Essential Infrastructure and Services (cont.)

TASK 4.3. RESTORATION OF TRANSPORTATION SERVICES
PURPOSE: Understand, qualify, and quantify the extent of damage to transport infrastructure (air, maritime, and road) and the impact on service coverage and quality, from the start of the emergency and through subsequent stages, in order to plan appropriately, establish response priorities, and ensure the rapid rehabilitation of services.
SCOPE/CONCEPT OF OPERATIONS: During the initial stage of the emergency, identify the distribution of damages and estimate the impact on transport infrastructure through rapid assessments and/or overflights of affected areas (in case of large-scale events). It also includes surveying, quantifying, and qualifying the damages according to detailed methodologies, in order to establish the operational capacity and define the measures to guarantee protection of human lives, protection and management of infrastructure, and the rehabilitation of services.
Lead Government Agencies: Ministry of Habitat, Infrastructure and Land Transport; Seychelles Land Transport Agency, Seychelles Civil Aviation Authority
Supporting Agencies: Seychelles Maritime Safety Administration; Ministry of Habitat, Infrastructure and Land Transport
TASK 4.4. RESTORATION OF WATER AND SANITATION SERVICES
PURPOSE: Understand, qualify, and quantify the extent of damage to water and sanitation infrastructure (treatment plants, water, and sewage) and the impact on coverage and service quality, from the start of the emergency through subsequent stages, in order to plan and set priorities for response actions and ensure rapid rehabilitation of services. Verify and guarantee the quality and quantity of water supply for the general population until public services are reestablished.
SCOPE/CONCEPT OF OPERATIONS: During the initial stage of the emergency, identify the geographical distribution of damages and estimate the impact on potable water, and sewerage and sanitation infrastructure, through rapid assessments and/or overflights of the affected areas (in the case of large-scale events). It also includes surveying, quantifying, and qualifying damages through detailed methodologies in order to establish the operational capacity and define the measures to be taken to guarantee protection of human lives, protection and management of infrastructure, and rehabilitation of services.
Lead Government Agency: Public Utilities Corporation
Supporting Agencies: Public Health Authority, MOECC
TASK 4.5. RESTORATION OF ENERGY SUPPLY
PURPOSE: Understand, qualify and quantify the extent of damage to the energy infrastructure (electricity, gas, oil, and others) and the impact on the coverage and quality of energy supply, from the start of the emergency through subsequent stages, in order to plan and establish the priorities for response actions and achieve rapid rehabilitation of supply.
SCOPE/CONCEPT OF OPERATIONS: During the initial stage of the emergency, identify the geographical distribution of damages and estimate the impact on energy infrastructure (electricity, gas, pipelines), through rapid assessments and/or overflights of the affected areas (in the case of large-scale events). It also includes: surveying, quantifying, and qualifying the damages according to detailed methodologies in order to establish the operational capacity and define the measures to guarantee protection of human lives, protection and management of infrastructure, and the rehabilitation of supply.
Lead Government Agency: Public Utilities Corporation
Supporting Agencies: MOECC, Seychelles Petroleum Company

Functional Area V: Emergency Management

PURPOSE (Goals)

Lead disaster/emergency response through coordination with the relevant subnational entities; establish decisions to be translated into effective response actions, based on timely information; design and keep track of actions for early recovery.

SCOPE/CONCEPT OF OPERATIONS (Actions)

It begins once the characteristics of large-scale events are identified, the alert is declared, if required, and the convening of the various Unified Commands (at national and local/district/regional levels) according to the NIEMP. The information is analysed and processed for the prioritization and coordination of response and rehabilitation work, emergency declaration according to impact, and territorial distribution. A comprehensive action plan is established for managing the various emergency response actions, followed by continuous monitoring of their implementation, taking decisions, making the necessary adjustments, and guaranteeing appropriate legal support and technical, human, and financial resources. Throughout the response process, the management must ensure continuous reporting on the impact and existing risks resulting from the event, safety recommendations, specific response and relief actions, and how to have access to relief/aid being provided.

TASKS—This functional area is divided into eight tasks:

Table A1.5. Functional Area V: Emergency Management

TASK 5.1. COMPREHENSIVE EMERGENCY PLANNING AND COORDINATION
PURPOSE: Evaluating the scale of the event and its consequences, and taking decisions for identifying strategic objectives, necessary mechanisms of action and coordination, and evaluating resource management and needs, in order to protect the population effectively and efficiently.
SCOPE/CONCEPT OF OPERATIONS: The intervention begins by verifying the characteristics of a large-scale hazard event, declaring alerts, if required, and convening members working at the Regional Command Post or National Operation Centers (from national and subnational levels), who, based on the SOPs (at national and subnational levels), are in charge of planning specific emergency relief work by defining objectives, strategies, resource allocation, while guaranteeing appropriate follow-up and required adjustments throughout the implementation process.
Lead Agencies: Department of Risk and Disaster Management
Supporting Agencies: Local government department, Vice-president office and Cat 1 and Cat 2 depending on the incident and location
TASK 5.2. PUBLIC INFORMATION
PURPOSE: Provide the population with timely information and recommendations on the impact caused by the emergency and the response actions taken for protecting lives, public and private assets, and the environment. Provide alerts and information about the actions and measures to be taken against potential risks resulting from the main event.
SCOPE/CONCEPT OF OPERATIONS: The intervention begins once the event report is received. This task includes acquire an understanding about the post-event scenario, preparing press releases and information chains, as well as communication strategies and citizen awareness strategies for risk prevention.
Lead Agencies: Department of Risk and Disaster Management
Supporting Agencies: Local government department, Vice-president office and Cat 1 and Cat 2 depending on the incident and location
TASK 5.3. LEGAL AND ADMINISTRATIVE AFFAIRS
PURPOSE: Ensure that the operations and actions carried out in response to an emergency are executed with the guidance and support of the current legal framework and ensure that the allocation of resources is executed with technical criteria of foresight and rationality, in accordance with disaster scenarios.
SCOPE/CONCEPT OF OPERATIONS: The intervention begins with the evaluation of the need to make exceptional decisions such as the declaration of the emergency (national, regional, or district level), curfews, etc. The analysis of the administrative needs to implement the comprehensive action plan, the execution of the resources in an efficient way so that the operations are supported by the appropriate economic and legal framework, based on the decisions of the Command Post—NEOC Gold—Platinum Command and the articulation of the different levels of government.
Lead Government Agency: Department of Risk and Disaster Management
Supporting Agencies: Department of Finance, Attorney General

Table A1.5. Functional Area V: Emergency Management (cont.)

TASK 5.4. COORDINATION OF DAMAGE AND NEEDS ASSESSMENT
<p>PURPOSE: Evaluate the post-disaster scenario and determine the needs of affected persons, in order to prioritize the lines of intervention to provide optimal response, compare needs with existing capacities, and determine whether an international appeal for aid is needed.</p>
<p>SCOPE / CONCEPT OF OPERATIONS: Collect and consolidate information on the identification and damage assessment of critical infrastructure (water, sanitation, energy, telecommunications, transport, health and education), critical centers for emergency response (hospitals, fire and police stations, etc.), housing, educational centers, food supply centers, etc. Identify the needs of affected persons through rapid assessments (initial stage of the emergency), and conduct quantification of damages, economic valuation and consolidation of information with detailed methodologies (later stages), in order to provide the necessary information for planning and managing the emergency, and the process of rehabilitation or early recovery.</p>
<p>Lead Government Agency: Department of Risk and Disaster Management</p>
<p>Supporting Agencies: MDAs</p>
TASK 5.6. COORDINATION OF INTERNATIONAL COOPERATION
<p>PURPOSE: Coordinate effective, efficient, and timely humanitarian aid and support for response through international cooperation, according to the specific conditions of each cooperation agency, and the needs and requests for aid.</p>
<p>SCOPE/CONCEPT OF OPERATIONS: It begins with the call for international aid, according to the needs established by the national authority. There are three differentiated cooperation options: (1) The Department of Foreign Affairs issues communications with the diplomatic missions and representations abroad, based on the requirements received from the extended multi-sector commission. Aid offers are registered in the Humanitarian Assistance Module of the National Emergency Operations Center. Once the support has arrived (be it from Seychellois abroad, other countries, or private entities), they are registered by Task 5.8 Resource Management and the lead of this activity at the National Emergency Operations Center). (2) The Department of Foreign Affairs, together with DRDM, summon the international community present in the country, through the UN Resident Coordinator for Seychelles, to inform about the situation and the need for aid. Cooperation agencies activate their technical and financial mechanisms. During the planning process, international agencies create links with authorities from different sectors to define the priority projects. The Humanitarian Assistance Module of the National EOC will be responsible for coordinating and recording aid and donations, be it financial, in human resources, or goods. (3) DRDM will issue the request for aid from international urban search and rescue (USAR) partners. DRDM requests INSARAG guide through the virtual OSOCC the presence of USAR teams. USAR teams confirm their activation; on the virtual OSOCC, this information includes itinerary and equipment characteristics. A reception center is installed by the first USAR team arriving in the country, with logistical support from the DRDM. Information on international cooperation is consolidated by the national EOC and serves both national authorities and international donors to guide decisions related to response, as well as for accountability.</p>
<p>Lead Agency: Ministry of Foreign Affairs</p>
<p>Supporting Agencies: Department of Risk and Disaster Management</p>
TASK 5.7. SUBNATIONAL COORDINATION AND COORDINATION WITH THE PRIVATE SECTOR
<p>PURPOSE: Ensure effective coordination and integration at subnational levels and with the private sector in order to meet the needs of the EOC/command post and provide a timely response to the emergency. Seek support from the entities responsible for critical infrastructure, key resources, other businesses and industries, and nongovernmental entities involved in response and recovery.</p>
<p>SCOPE/CONCEPT OF OPERATIONS: The appeal for national aid is initiated, according to the needs. Specific agreements or contracts are signed, if required, for the donation or acquisition of goods and/or services, with subsequent monitoring and compliance of the aid received.</p>
<p>Lead Agency: Department of Risk and Disaster Management</p>
<p>Supporting Agencies: Local government department, Seychelles Peoples Defence Force, Seychelles Police Force, Department of Finance, Department of Tourism</p>
TASK 5.8. RESOURCE MANAGEMENT
<p>PURPOSE: Determine the needs of the affected community and the agencies in charge of response and rehabilitation, according to the post-disaster damage assessment, comparing this information with the existing capacities, in order to determine the need to provide additional resources and establish different acquisition options (purchase, loans, agreements, contracts, and/or national or international appeals for aid).</p>
<p>SCOPE/CONCEPT OF OPERATIONS: The process begins by evaluating requirements and available resources, through consolidation of information from the damages and needs assessment and the reports from the managers of each task, in order to determine the existing capacities, prioritize resources, and inform the relevant authorities about the gaps in appropriate attention of the affected community and the need for additional resources.</p>
<p>Lead Government Agency: Department of Risk and Disaster Management</p>
<p>Supporting Agencies: Department of Finance, Local government, Department of Tourism, Seychelles Trading Company Ltd, Red Cross Seychelles, Department of Tourism</p>

NATIONAL INTEGRATED EMERGENCY MANAGEMENT PLAN

Responsible Matrix by Functional Areas and Task

ANNEX II RESCUE AND SECURITY

COORDINATING ENTITY – NATIONAL LEVEL				SEYCHELLES FIRE AND RESCUE SERVICE AGENCY					
				1.1 Search and rescue sea/air	1.2 Search and rescue land	1.3 Law and order	1.4 Fire fighting	1.5 Evacuation of affected/ at-risk areas	1.6 Emergencies of hazardous materials
1	CAT 1	DRDM	Department of Risk and Disaster Management	S				S	
2	CAT 1	LGD	Local Government Department					S	
3	CAT 1	HCA	Health Care Agency					S	
4	CAT 1	PHA	Public Health Authority						S
5	CAT 1	PUC	Public Utilities Corporation						
6	CAT 1	RCSS	Red Cross Society Seychelles		S			S	S
7	CAT 1	SFRSA	Seychelles Fire and Rescue Service Agency	S	L		L	S	L
8	CAT 1	SPDF	Seychelles Peoples Defence Force	L	S	S	S	S	S
9	CAT 1	SPF	Seychelles Police Force	S	S	L	S	L	S
10	CAT 1	FAD	Family Affairs Department						
11	CAT 1	MOECC-DOE	MOECC - Department of Environment						S
12	CAT 1		Vicepresident Office						
13	CAT 1	DF	Department of Finance						
1	CAT 2	DICT	Department of Information and Communication Technology						
2	CAT 2	LWMA	Landscape and Waste Management Agency						
3	CAT 2	MHILT	Ministry of Habitat, Infrastructure and Land Transport						
4	CAT 2	MOECC-CCED	MOECC - Climate Change and Energy Department						
5	CAT 2	MOEHRD	Ministry of Education and Human Resource Development						
6	CAT 2	NBA	National Biosecurity Agency						
7	CAT 2	NGOs	Non -Governmental Organizations						
8	CAT 2	SAA	Seychelles Agricultural Agency						
9	CAT 2	SCAA	Seychelles Civil Aviation Authority	S	S	S	S		S
10	CAT 2	SIFCO	Seychelles Interfaith Council						
11	CAT 2	SLTA	Seychelles Land Transport Agency					S	
12	CAT 2	SMA	Seychelles Meteorological Authority						
13	CAT 2	SMSA	Seychelles Maritime Safety Administration	L				S	
14	CAT 2	SNPA	Seychelles National Parks Authority				S		
15	CAT 2	SPA	Seychelles Port Authority	S	S	S	S	S	
16	CAT 2	STC	Seychelles Trading Company LTD						
17	CAT 2	ASP	Agency for Social Protection						
18	CAT 2	SEYPEC	Seychelles Petroleum Company				S		S
19	CAT 2	DOT	Department of Tourism		S			S	
20	CAT 2	AG	Attorney General						
21	CAT 2	MFA	Ministry of Foreign Affaires						
22	CAT 2	IDC	Islands Development Company Ltd	S			S	S	S
23	CAT 2		Cable and wireless Seychelles Ltd						
24	CAT 2	AIRTEL	AIRTEL Seychelles						
25	CAT 2	INTELVISION	Intelvision						

L: Leading response entity S: Supporting entity

NATIONAL INTEGRATED EMERGENCY MANAGEMENT PLAN
Responsible Matrix by Functional Areas and Task

ANNEX III HEALTH

COORDINATING ENTITY – NATIONAL LEVEL				2.1 Pre-hospital care	2.2 Hospital care	2.3 Epidemiological surveillance	2.4 Environmental health	2.5 Dead body handling	2.6 Psychosocial support
HEALTH CARE AGENCY/PUBLIC HEALTH AUTHORITY									
1	CAT 1	DRDM	Department of Risk and Disaster Management						
2	CAT 1	LGD	Local Government Department						
3	CAT 1	HCA	Health Care Agency	L	L	S	S	S	L
4	CAT 1	PHA	Public Health Authority	S	S	L	L	L	
5	CAT 1	PUC	Public Utilities Corporation						
6	CAT 1	RCSS	Red Cross Society Seychelles	S				S	
7	CAT 1	SFRSA	Seychelles Fire and Rescue Service Agency						
8	CAT 1	SPDF	Seychelles Peoples Defence Force	S	S				
9	CAT 1	SPF	Seychelles Police Force	S		S	S	L	
10	CAT 1	FAD	Family Affairs Department						S
11	CAT 1	MOECC-DOE	MOECC - Department of Environment				S		
12	CAT 1		Vicepresident Office						
13	CAT 1	DF	Department of Finance						
1	CAT 2	DICT	Department of Information and Communication Technology						
2	CAT 2	LWMA	Landscape and Waste Management Agency						
3	CAT 2	MHILT	Ministry of Habitat, Infrastructure and Land Transport				S		
4	CAT 2	MOECC-CCED	MOECC - Climate Change and Energy Department						
5	CAT 2	MOEHRD	Ministry of Education and Human Resource Development						
6	CAT 2	NBA	National Biosecurity Agency			S	S		
7	CAT 2	NGOs	Non -Governmental Organizations						
8	CAT 2	SAA	Seychelles Agricultural Agency						
9	CAT 2	SCAA	Seychelles Civil Aviation Authority	S				S	
10	CAT 2	SIFCO	Seychelles Interfaith Council					S	S
11	CAT 2	SLTA	Seychelles Land Transport Agency						
12	CAT 2	SMA	Seychelles Meteorological Authority						
13	CAT 2	SMSA	Seychelles Maritime Safety Administration						
14	CAT 2	SNPA	Seychelles National Parks Authority						
15	CAT 2	SPA	Seychelles Port Authority						
16	CAT 2	STC	Seychelles Trading Company LTD						
17	CAT 2	ASP	Agency for Social Protection						
18	CAT 2	SEYPEC	Seychelles Petroleum Company						
19	CAT 2	DOT	Department of Tourism			S			
20	CAT 2	AG	Attorney General						
21	CAT 2	MFA	Ministry of Foreign Affaires						
22	CAT 2	IDC	Islands Development Company Ltd						
23	CAT 2		Cable and wireless Seychelles Ltd						
24	CAT 2	AIRTEL	AIRTEL Seychelles						
25	CAT 2	INTELVISION	Intelvision						

L: Leading response entity S: Supporting entity

NATIONAL INTEGRATED EMERGENCY MANAGEMENT PLAN

Responsible Matrix by Functional Areas and Task

ANNEX IV HUMANITARIAN SERVICES

COORDINATING ENTITY – NATIONAL LEVEL				3.1 Registration and family reunification	3.2 Shelter installation and management	3.3 Food and non-food assistance	3.4 Protection of vulnerable groups
LOCAL GOVERNMENT DEPARTMENT							
1	CAT 1	DRDM	Department of Risk and Disaster Management		S		S
2	CAT 1	LGD	Local Government Department	L	L	L	L
3	CAT 1	HCA	Health Care Agency		S		S
4	CAT 1	PHA	Public Health Authority		S		
5	CAT 1	PUC	Public Utilities Corporation		S		
6	CAT 1	RCSS	Red Cross Society Seychelles	S	S	S	S
7	CAT 1	SFRSA	Seychelles Fire and Rescue Service Agency				S
8	CAT 1	SPDF	Seychelles Peoples Defence Force		S		S
9	CAT 1	SPF	Seychelles Police Force		S		
10	CAT 1	FAD	Family Affairs Department	S	S	S	S
11	CAT 1	MOECC-DOE	MOECC - Department of Environment				
12	CAT 1		Vicepresident Office				
13	CAT 1	DF	Department of Finance				
1	CAT 2	DICT	Department of Information and Communication Technology	S			
2	CAT 2	LWMA	Landscape and Waste Management Agency		S		
3	CAT 2	MHILT	Ministry of Habitat, Infrastructure and Land Transport		S		
4	CAT 2	MOECC-CCED	MOECC - Climate Change and Energy Department				
5	CAT 2	MOEHRD	Ministry of Education and Human Resource Development				
6	CAT 2	NBA	National Biosecurity Agency				
7	CAT 2	NGOs	Non -Governmental Organizations		S	S	S
8	CAT 2	SAA	Seychelles Agricultural Agency			S	
9	CAT 2	SCAA	Seychelles Civil Aviation Authority	S			
10	CAT 2	SIFCO	Seychelles Interfaith Council		S		S
11	CAT 2	SLTA	Seychelles Land Transport Agency				
12	CAT 2	SMA	Seychelles Meteorological Authority				
13	CAT 2	SMSA	Seychelles Maritime Safety Administration				
14	CAT 2	SNPA	Seychelles National Parks Authority				
15	CAT 2	SPA	Seychelles Port Authority				
16	CAT 2	STC	Seychelles Trading Company LTD			S	
17	CAT 2	ASP	Agency for Social Protection	S	S	S	S
18	CAT 2	SEYPEC	Seychelles Petroleum Company				
19	CAT 2	DOT	Department of Tourism	S	S	S	
20	CAT 2	AG	Attorney General				
21	CAT 2	MFA	Ministry of Foreign Affairs				
22	CAT 2	IDC	Islands Development Company Ltd	S	S	S	S
23	CAT 2		Cable and wireless Seychelles Ltd				
24	CAT 2	AIRTEL	AIRTEL Seychelles				
25	CAT 2	INTELVISION	Intelvision				

L: Leading response entity S: Supporting entity

NATIONAL INTEGRATED EMERGENCY MANAGEMENT PLAN
Responsible Matrix by Functional Areas and Task

ANNEX V ESSENTIAL INFRASTRUCTURE AND SERVICES

COORDINATING ENTITY – NATIONAL LEVEL				4.1. Assessment of disaster risks	4.2 Restoration of communications services	4.3. Restoration of transport services	4.4. Restoration of water and sanitation services	4.5. Restoration of energy services
				PUBLIC UTILITIES CORPORATION				
1	CAT 1	DRDM	Department of Risk and Disaster Management	L				
2	CAT 1	LGD	Local Government Department	S				
3	CAT 1	HCA	Health Care Agency					
4	CAT 1	PHA	Public Health Authority				S	
5	CAT 1	PUC	Public Utilities Corporation				L	L
6	CAT 1	RCSS	Red Cross Society Seychelles					
7	CAT 1	SFRSA	Seychelles Fire and Rescue Service Agency					
8	CAT 1	SPDF	Seychelles Peoples Defence Force					
9	CAT 1	SPF	Seychelles Police Force					
10	CAT 1	FAD	Family Affairs Department					
11	CAT 1	MOECC-DOE	MOECC - Department of Environment	S			S	
12	CAT 1		Vicepresident Office					
13	CAT 1	DF	Department of Finance					
1	CAT 2	DICT	Department of Information and Communication Technology		L			
2	CAT 2	LWMA	Landscape and Waste Management Agency	S				
3	CAT 2	MHILT	Ministry of Habitat, Infrastructure and Land Transport		S	S		
4	CAT 2	MOECC-CCED	MOECC - Climate Change and Energy Department	S			S	S
5	CAT 2	MOEHRD	Ministry of Education and Human Resource Development					
6	CAT 2	NBA	National Biosecurity Agency					
7	CAT 2	NGOs	Non -Governmental Organizations					
8	CAT 2	SAA	Seychelles Agricultural Agency					
9	CAT 2	SCAA	Seychelles Civil Aviation Authority	S		L		
10	CAT 2	SIFCO	Seychelles Interfaith Council					
11	CAT 2	SLTA	Seychelles Land Transport Agency			L		
12	CAT 2	SMA	Seychelles Meteorological Authority	S				
13	CAT 2	SMSA	Seychelles Maritime Safety Administration			S		
14	CAT 2	SNPA	Seychelles National Parks Authority	S				
15	CAT 2	SPA	Seychelles Port Authority			L		
16	CAT 2	STC	Seychelles Trading Company LTD					
17	CAT 2	ASP	Agency for Social Protection					
18	CAT 2	SEYPEC	Seychelles Petroleum Company					S
19	CAT 2	DOT	Department of Tourism	S				
20	CAT 2	AG	Attorney General					
21	CAT 2	MFA	Ministry of Foreign Affaires					
22	CAT 2	IDC	Islands Development Company Ltd					
23	CAT 2		Cable and wireless Seychelles Ltd		S			
24	CAT 2	AIRTEL	AIRTEL Seychelles		S			
25	CAT 2	INTELVISION	Intelvision		S			

L: Leading response entity S: Supporting entity

