Pacific Disaster Risk Management Partnership Network

October 2009





GUIDE TO DEVELOPING NATIONAL ACTION PLANS

A Tool for Mainstreaming Disaster Risk Management
Based on experiences from selected Pacific Island Countries

SOPAC

UNDP

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List of Acronyms

CHARM	Comprehensive Hazard and Risk Management
CRP	Community Risk Programme
CROP	Council of Regional Organisations of the Pacific
DRM	Disaster Risk Management (comprising DRR and DM)
DM	Disaster Management
DRR	Disaster Risk Reduction
HLAT	High Level Advocacy Team
ISDR	International Strategy for Disaster Reduction
MDG	Millennium Development Goal
MTEF	Medium Term Expenditure Framework
NAP	National Action Plan
NSDS	National Sustainable Development Strategy
NTF	National Task Force
PPN	Pacific Disaster Risk Management Partnership Network
PIC	Pacific Island Countries
PIFS	Pacific Islands Forum Secretariat
PIFAC	Pacific Islands Framework of Action on Climate Change
SOPAC	Pacific Islands Applied Geoscience Commission
SPREP	Secretariat for the Pacific Regional Environment Programme
WB	World Bank
UNDP	United Nations Development Programme
UNISDR	United Nations International Strategy for Disaster Reduction

This publication may also be refered as:
SOPAC Joint Contribution Report 196

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PART 1

Setting the Scene

1.1 Introduction

This guide has been produced to assist Pacific Island Countries (PICs) to prepare Disaster Risk Management (DRM) National Action Plans (NAP). The NAP development process is supported by the Pacific Disaster Risk Management Partnership Network (PPN) and is considered a key instrument in facilitating DRM mainstreaming. Disaster Risk Management (DRM) is a cross-cutting or cross-sectoral development issue, meaning that it is necessary for a broad range of stakeholders to cooperate and coordinate their activities in order to effectively reduce disaster risks to national sustainable development. The National Action Plan (NAP) facilitates this as it seeks to include all relevant DRM sectors, institutions and stakeholders in developing the NAP through a consultative and participatory process. While government typically drives the process of plan development, it is important to note that this is not a government plan. Rather it is a whole-of-country plan representing all sectors of society: government, civil society, private sector and communities.

As with other cross-cutting themes, mainstreaming of DRM is a complex and broad-ranging undertaking. While a NAP can go a long way in promoting mainstreaming, it is not the only instrument that can be used. Ideally NAPs should be complemented with sub-national or sectoral/agency action plans at provincial, local and community levels.

The guide is divided into six parts.

Part 1 sets the scene by providing an overview of the impact of disasters on development in Pacific Island Countries. It goes further to define and explain the relationship between Disaster Risk Management (DRM), Disaster Risk Reduction (DRR) and Disaster Management (DM). A conceptual diagram for better understanding mainstreaming is provided as well as an outline of the five steps required in developing a National Action Plan.

Part 2 provides guidance on initial planning considerations ahead of embarking on a NAP development process.

Part 3 provides guidance on how to go about doing a DRM Situation Analysis as a baseline from which to develop a NAP.

Part 4 provides guidance on how to logically convert the key issues identified in the Situation Analysis into solutions and actions. These actions are then packaged into a NAP matrix in the form of Strategies, Objectives and Actions.

Part 5 provides guidance on how to go about preparing an implementation plan for the NAP. This includes, *inter alia*, a method for costing the NAP.

Part 6 discusses the need to establish an enabling framework for the effective, efficient and coordinated implementation of the NAP.

DRM is a new and extremely challenging field. Perhaps because it is relatively new, the field is characterized by an abundance of complex literature, concepts and terminology (see Annex 1 for a glossary of terms). To ensure that the guide is accessible to all, an attempt has been made to cut through this complexity by keeping the guide as concise and readable as possible. More detailed information often of a technical nature can be located in the annexes.

The NAP development process described in this guide results from experiences obtained by a core team of the PPN who, over the period 2006-2008, assisted Vanuatu, Marshall Islands and Cook Islands develop whole-of-country and fully-costed DRM national action plans. This guide represents the accumulated knowledge from these experiences. It is however important to note that the process and tools described in this guide are in no way intended to be prescriptive. Rather it is anticipated that interested parties will take what they find useful from the guide and adapt it to their own unique country contexts.

1.2 Disasters and Development

Pacific Island Countries are highly vulnerable to natural and human-induced disasters. Risks result from exposure to natural hazards such as cyclones, earthquakes, volcanoes as well as anthropogenic hazards such as climate change and pandemics. Although the frequency and types of disasters may vary considerably across the Pacific; there are generally the same high social, economic and environmental costs that continue into the medium and long term.

Disasters can greatly reduce the ability of Pacific Island Countries to achieve their sustainable development goals - in the worst case, disasters can even reverse the benefits of existing development! Thus mitigation and risk reduction measures are crucial to try and minimise, or preferably avoid, disasters from happening; however, due to their development context many Pacific Island Countries are constrained by limited availability of human, institutional and financial resources.

There are a number of development related trends that increase the disaster risk profile of Pacific Island Countries. These include: rapidly changing population dynamics, urbanisation, loss of traditional knowledge, and changing social, economic and environmental conditions associated with globalisation and modernisation.

In the case of small island states, a single disaster event can cause a debilitating shock to a national economy. The World Bank estimates the economic cost of disasters in Pacific Island Countries at between 2-7 percent of GDP per annum. This rises to an average of 46 percent of GDP during disaster years. It is predicted that the cost of a 1-in-100-year cyclone in any of the capital cities of Fiji, Solomon Islands, Vanuatu, Samoa or Tonga would result in potential economic losses of up to 60 percent of GDP. In the 1990s the cost of extreme events in the Pacific Island region is estimated to have exceeded US$1 billion[1]. This includes the cost of Cyclones Ofa and Val, which hit Samoa in 1990/91, causing losses of US$440 million (greater than the country's average annual GDP). In Niue, Cyclone Heta is estimated to have caused an impact of about NZ$37.7 million, which is approximately 25% of its GDP[2].

[1] Bettencourt and Warrick (2000) in The World Bank (2000). Cities, Seas and Storms, Managing Change in Pacific Economies.

[2] Mackenzie, E., Prasad, B. and Kaloumaira, A (2005), Economic impact of natural disasters on development in the Pacific.

Costs associated with a disaster are not only related to the intensity of the hazard however, they are also a function of the degree of preparedness prevailing in a country and its ability to respond effectively and minimise damage.

Despite the need to strengthen preparedness and risk reduction, many agencies continue to be reactive rather than proactive by regarding disasters as environmental or humanitarian issues, rather than events that can be avoided. Some of the factors that constrain the adoption of modern disaster risk management approaches in Pacific Island Countries include the following:

- Disaster management has been largely considered in terms of response and recovery from disasters without consideration of risk reduction options as an integral element of development planning at all levels.
- Generally, there is a lack of government policy, organisational structures and legislative framework to underpin disaster risk reduction and disaster management in a holistic, coordinated and programmatic manner.
- Decision-making processes at the national, sectoral, provincial and community levels do not explicitly reflect considerations of hazard and vulnerabilities assessment.
- There is inadequate allocation of national financial resources for disaster risk reduction at all levels.
- A lack of, or inadequate, quality information about hazards and vulnerability to support decision-makers at all levels.
- The absence of, or weak, information systems available for each key hazard, which can provide 24-7 monitoring and early warning to communities at risk.
- Communities at risk have limited disaster risk reduction efforts to minimise their exposure to risks; and coordinated disaster management arrangements, which can be utilised in times of disaster.

1.3 Understanding the Disaster Risk Management Concept

While there is no universal definition of the term 'risk reduction', this term is often seen as being equivalent to vulnerability reduction. At times risk and vulnerability are seen as synonymous and not as separate realities. UN International Strategy for Disaster Reduction (UN-ISDR) in their recent publication, *Living with Risk*, defines disaster risk reduction as the systematic development and application of policies, strategies and practices to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impact of hazards, within the broad context of sustainable development. The report goes on to state that disaster reduction policies have two-fold aims: for communities to be resilient to natural hazards while also ensuring that development efforts do not increase vulnerability to hazards. Disaster management on the other hand is the organisation and management of resources and responsibilities for dealing with all aspects of emergencies/ disasters, in particular preparedness, response and recovery (relief/rehabilitation).

The term Disaster Risk Management (DRM) is used to refer to disaster risk reduction (DRR) and disaster management (DM) combined, (see Figure 1. Disaster Risk Management) refers to the arrangements for and practices of reducing or mitigating hazard risks in communities (DRR) and for preparing for responding to and recovering from disasters in communities when they occur (DM). Thus disaster risk management involves proactive management of disaster risks and reduction of vulnerability, expanding beyond the traditional approach to disaster preparedness, response and recovery, and adopting a strategic approach to improve and strengthen development effectiveness and efficiency by placing the emphasis on both disaster risk reduction and disaster management.

1.4 Pacific Regional Response

Pacific Leaders made commitments in 2005 to address these issues in a systematic manner when they endorsed the Pacific Disaster Risk Reduction and Disaster Management Framework for Action, 2005-2015: Building the Resilience of Nations and Communities to Disasters (Regional Framework). The Regional Framework is the Pacific response to the implementation of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, and also draws on the guidance set by the International Strategy for Disaster Reduction (ISDR). It calls for an 'all hazards' and integrated approach to disaster risk management in support of sustainable development. Pacific Leaders have also endorsed the Pacific Islands Framework of Action on Climate Change (PIFAC), 2006-2015, which too calls for specific actions against the impacts of climate change, including adaptation to the effects of extreme climatic events. The Pacific Plan further outlines a number of key objectives including a call for national governments to strengthen policies and plans for the mitigation and management of natural disasters through the development of NAPs.

These regional and international instruments, together with the Johannesburg Plan of Implementation and the Mauritius Strategy for Further Implementation of the Barbados Plan of Action, that were also endorsed by the Pacific Leaders, outline key principles and strategies for strengthening DRR & DM in the Pacific.

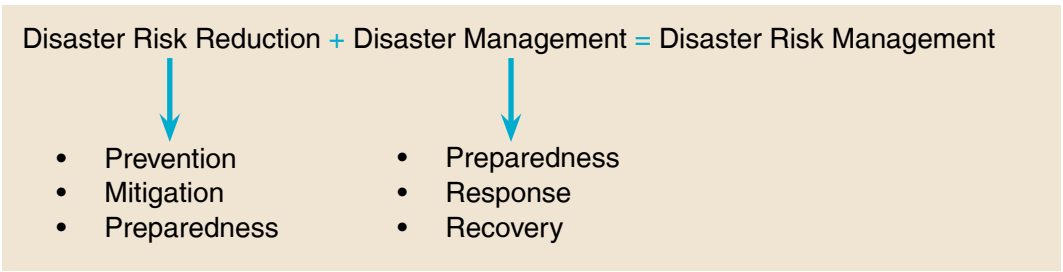

Figure 1: The conceptual relationship between DRM, DM and DRR.

The Pacific Regional Framework

The vision under the Regional Framework is for "safer, more resilient Pacific island nations and communities to disasters, so that Pacific peoples may achieve sustainable livelihoods and lead free and worth while lives". Its mission is "building capacity of Pacific Island communities by accelerating the implementation of DRR & DM policies, planning and programmes to address current and emerging challenges." The Framework is divided into six themes and includes a set of regional and national strategies/activities.

Theme 1 Governance – organisational, institutional, policy and decision-making frameworks
Theme 2 Knowledge, information, public awareness and education
Theme 3 Analysis and evaluation of hazards, vulnerabilities and elements at risk
Theme 4 Planning for effective preparedness, response and recovery
Theme 5 Effective, integrated and people-focused early warning systems
Theme 6 Reduction of underlying risk factors

The Regional Framework provides a number of key principles to guide Pacific Island Countries in their disaster risk reduction and disaster management efforts (Box 1). A copy of all the actions proposed under all themes can be found in Annex 15.

BOX 1 – PRINCIPLES ENSHRINED IN THE REGIONAL FRAMEWORK

- Disaster risk management is a sustainable development issue, and requires a balanced approach addressing social, economic and environmental goals.
- Disaster risk management fundamentally involves supporting communities in understanding and managing their hazards and disasters.
- Disaster risk management is everyone's business and requires a whole-of-country commitment to addressing issues and involves the formation of public/private partnerships and co-opts the support of communities and other stakeholders in decision-making.
- Effective disaster risk management requires a strong governance framework with clear policies and legislation, accountable institutional and organisational arrangements and connections across and within levels of government, sectors and communities.
- Disaster risk management addresses all hazards and comprises disaster risk reduction, which includes prevention, mitigation and adaptation, and disaster management, which includes preparedness, response, relief, recovery and rehabilitation.
- Effective mainstreaming of disaster risk management is facilitated by developing capacity for disaster risk management at national, local and community levels.
- Developing time-series hazard information and the undertaking of robust vulnerability assessments as a basis for underpinning key decisions by national, sectoral and provincial government agencies, civil societies, NGOs and communities.
- Recognising and encouraging the value of traditional knowledge and its integration with scientific information in the design of risk reduction and risk management strategies and activities at all levels.
- Adoption of regulatory and incentive-based instruments in DRR & DM.

1.5 What does Mainstreaming Disaster Risk Management mean?

Mainstreaming is defined as a process of including or integrating an idea into an area of strategic intervention.[3] Mainstreaming in the context of disaster risk management in the Pacific is about integrating the key principles of disaster risk management into the national vision and development goals, as well as its operationalisation into governance arrangements (such as national policies and institutional arrangements) and action strategies for programmes at all levels. Effective disaster risk management mainstreaming results in disaster risk management practice being embedded as core business responsibility of governments in each Pacific Island Country. This includes integration of disaster risk management considerations into development planning and budgetary processes. Mainstreaming disaster risk management has three broad phases (see Figure 2):

Phase 1: involves integrating the principles of disaster risk management into development plans, goals and strategies at the national level – i.e. into national sustainable development strategies or equivalent. A country's national development plan typically articulates a national vision and core principles to guide national development. The vision captures the ideal in terms of a country's aspirations. The national development plan also defines broad national development strategies and outlines key areas of focus and specific enabling actions that a country will pursue within a certain timeframe. See Box 2 for an example from the Cook Islands.

Phase 2: involves the use of comprehensive and extensive action planning approaches and methodologies to identify specific disaster risk management initiatives that can be implemented at national, local and/or community level to facilitate increased safety and resilience to hazards. The end product of the process of applying strategic disaster risk management planning approaches and methodologies is a Disaster Risk Management National Action Plan. The National Action Plan consolidates priority goals, objectives, strategies and actions and provides an implementation programme to address these in a whole-of-country approach.

Phase 3: This phase involves linking prioritised (over the medium term) and costed disaster risk management action plans with national fiscal and budgetary processes. The prioritisation and the preparation of a costed disaster risk management action plan is an integral aspect of improving the effectiveness of disaster risk management. A well-costed medium-term action plan will also help countries and their communities to engage with development partners to seek their support to complement national efforts. A prioritised and costed disaster risk management action plan provides a framework for outcome-focused systematic development efforts at national, local and/or community level as well as increased effectiveness for targeting assistance for priority development needs, goals and strategies.

[3] Definition of Mainstreaming is adapted from 'Tools for Mainstreaming Disaster Risk Reduction (2007) ProVention Consortium Secretariat, Geneva, Switzerland

BOX 2 – DRM AND NATIONAL SUSTAINABLE DEVELOPMENT PLANS

In Cook Islands, Te Kaveinga Nui, a 15 year Visionary National Development Framework, contained national development values and targets that are of importance to the people of the Cook Islands.

Te Kaveinga Nui has as its national vision:

> To enjoy the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment.

One of the strategic development goals identified is A safe, secure and resilient community.

Vanuatu developed a similar strategic goal as part of their national development plan calling for a Safe, Secure and Resilient Vanuatu.

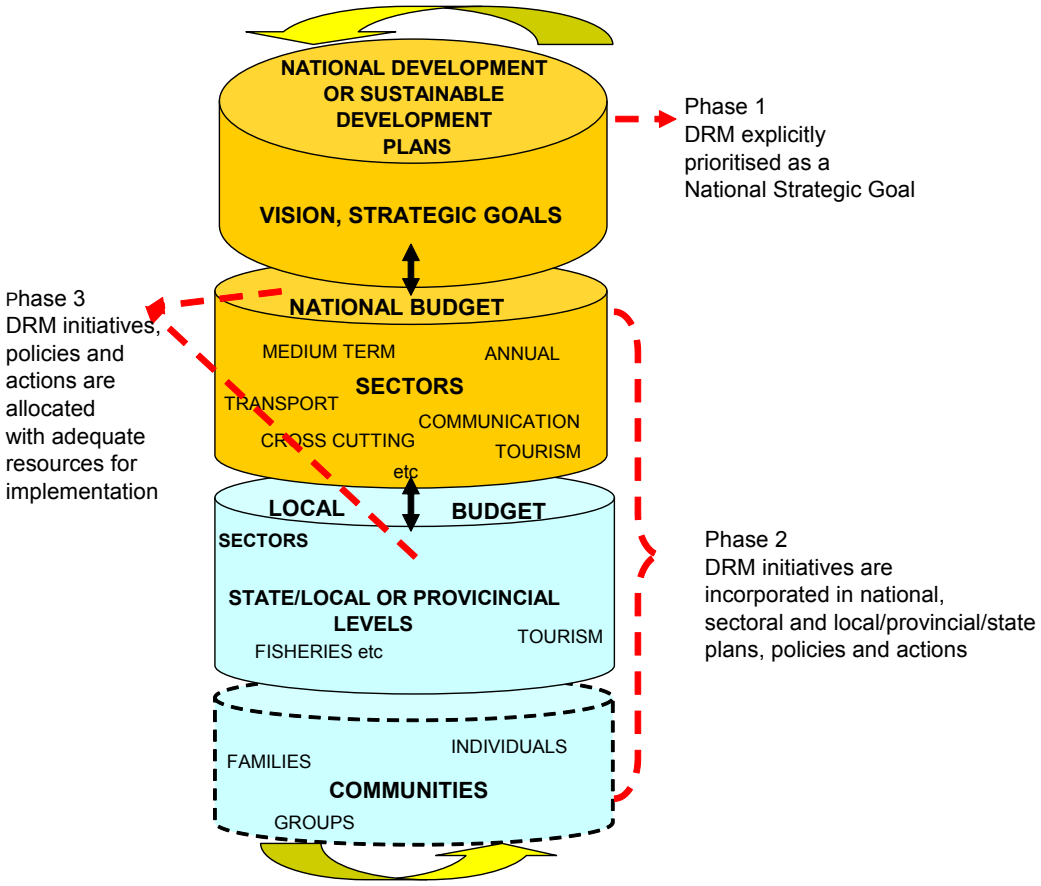

Figure 2: Conceptual Framework for Mainstreaming DRM.

1.6 Developing a National Action Plan – What does it involve?

The development of a National Action Plan is a relatively major undertaking and typically involves SOPAC, development partners and the host country. The NAP is developed over a series of three or four country engagements. A donor round table normally follows once the NAP is officially endorsed by government.

Figure 3 below provides an overview of the five steps involved in developing a National Action Plan. The various arrangements and tasks under each step are elaborated on in subsequent sections. Annex 2 provides additional information relating to the objectives and outcomes of the five steps as well as how it relates to the three mainstreaming phases described above.

Steps	National Action Plan Development Tasks	Who is Responsible?
1	Preparing for the NAP planning process • Initial planning considerations • High Level Advocacy	PPN in consultation with the country
2	Situation Analysis • Information collection • Stakeholder engagements • Identification of key issues by sectors or thematic areas	Country NAP Teams and PPN
3	Action Plan Development • Validation and prioritisation of key issues • Problem-Solution tree analysis • Action matrix development	Country NAP Teams and PPN
4	Implementation Plan Development • Institutional arrangements • Costing • Financing strategy • Communications strategy • Monitoring and evaluation	Country NAP Teams and PPN
5	Towards Implementation • Government approval • Donor Interactions	Country NAP Teams and PPN

Figure 3: The five steps involved in developing a National Action Plan.

PART 2

Preparing for the NAP Process

2.1 Introduction

Countries wishing to prepare a DRM NAP in line with the call and principles of the Pacific Regional Framework for Action need to liaise with SOPAC's Community Risk Programme. SOPAC has the mandate to oversee, coordinate and support the development of DRM in the region and has a dedicated and resourced programme of support for NAP roll-out. It also coordinates the organisations that form part of the Pacific Disaster Risk Management Partnership Network (PPN). Representing nearly 50 organisations (including donors, NGOs, etc.), the PPN was established to support NAP development and implementation under the leadership of SOPAC.

2.2 Initial Planning Considerations

Upon receiving an official request for assistance from a PIC, SOPAC will initiate a preparation and planning process for discussion with partner organisations that will be involved in the process. This initial planning involves discussion on the programme of tasks for each step (see Figure 3), resources required (finances and man power), and the timetable for each step. A small expert team is assembled from SOPAC and participating partner organisations to facilitate support to the PIC.

A programme of engagement is prepared in consultation with relevant officials of the host Government. Agreement is reached on the various stages of the National Action Plan, proposed timings and milestones.

2.3 Institutional Arrangements

Participating countries are encouraged to put in place institutional arrangements to support the NAP development planning process. Two such institutional arrangements are the 'National Action Plan Task Force' and the 'National Action Plan Reference Group'. These may be new structures that are set up temporarily, or existing structures may be used where relevant.

The National Action Plan Task Force is 'tasked' with developing the National Action Plan for the country concerned. The National Action Plan Reference Group provides oversight of the process and, being of senior government standing, provides the link to Cabinet. Annex 3 provides more detailed information on the composition and roles of these important institutional structures.

2.4 High Level Advocacy

'Advocacy' can be defined as an attempt to influence the decision or opinions of decision-makers in order to achieve a desired end.

In the context of developing DRM NAPs 'high level advocacy' is defined as the mechanism through which political support and support within the upper echelon of bureaucracies can be co-opted to facilitate the mainstreaming of the disaster risk management ethos into national policy, planning and budgeting systems.

It is extremely important that a NAP development process be preceded by a process of 'high level advocacy' and that senior politicians and officials are kept abreast of progress.

SOPAC is active in the field of high level advocacy for DRM NAP development in the Pacific. The approach used by SOPAC is described in Annex 4.

PART 3

Conducting a Situation Analysis

3.1 Introduction

A situation analysis is a short study that is undertaken to collect and analyse information relevant to a planning process. It is an important study as it captures the base-line situation and provides the initial analysis on which the plan is built.

In the context of a DRM NAP planning process, the scope and format of a situation analysis can be tailored to the information needed. No two Pacific Island Countries are the same, and the situation analysis ensures that the planning process is sensitive to these differences. This applies equally to the hazard context, vulnerability context and the status of DRM mainstreaming.

The situation analysis can be structured along either thematic or sectoral lines. For the former, one would assess the DRM country situation by establishing to what degree internationally and/or regionally, agreed frameworks and thematic guidelines are being implemented. A sectoral approach on the other hand would focus the analysis within the key DRM sectors of the country.

Outputs can vary depending on the needs of the planning process. Typically they include Thematic or Sectoral DRM Briefing Papers which, apart from providing a concise description and analysis of the theme/sector, concludes with a list of KEY DRM ISSUES. For the purposes of the DRM NAP planning methodology presented here, the KEY ISSUES are important building blocks for subsequent steps. Likewise the situation analysis provides the platform to develop an action plan for disaster risk management based on country-specific priorities.

Why do a Situation Analysis?

- To map out country-specific stakeholders, organisation and institutional arrangements, and development planning and budgetary allocation processes.
- To assess disaster risk management initiatives and capacities at all levels of government, local government and the community, including donor support.
- To carry out an assessment of key development risks specific to the country.
- To identify key issues relating to these aspects of risk.

3.2 How to Conduct a Situation Analysis

The process for conducting a situation analysis can take many shapes or forms, and is largely dependent on the country context as well as the skills and expertise across the allocated teams; however, it is still possible to outline a generic process that can be adapted to each country situation, illustrated in Figure 4 below.

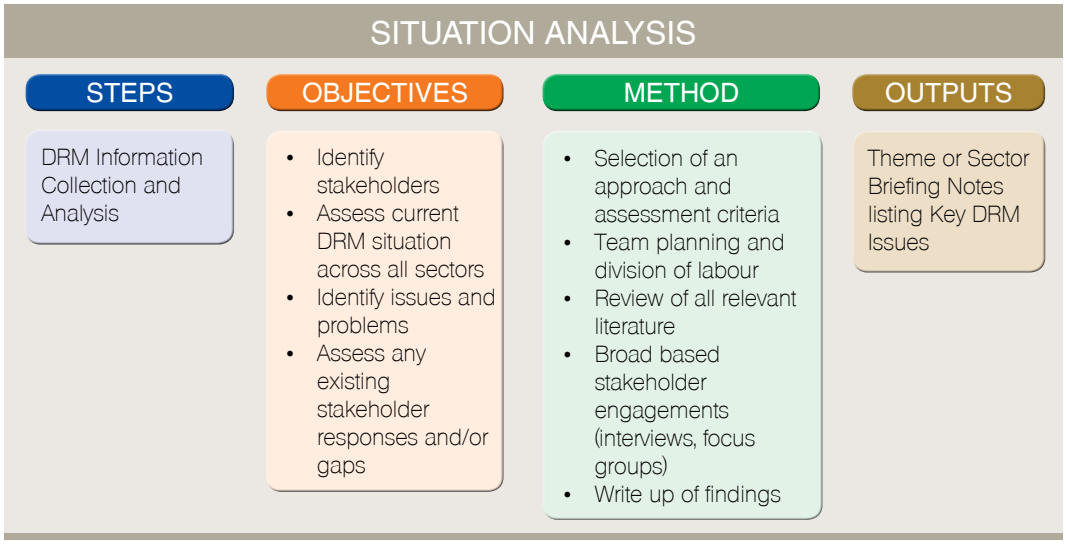

Figure 4: Situation Analysis Process.

Selection of an approach and assessment criteria. It is important to decide early on whether the analysis will take a thematic or sectoral approach. Other analytical tools to be used (e.g. questionnaires, guiding frameworks, etc.) also need to be determined. Annex 5 provides an indication of the kind of checklists that could be used in undertaking a situation analysis.

Team planning and division of labour. The size and composition of the team to undertake the situation analysis will influence the scope and nature of the study. It is good to strive for a team of DRM experts with differing professional backgrounds. In most cases an expert team from the PPN works together with a team of nationally appointed focal points.

Desk-based review of all relevant material relating to the status of disaster risk management in the country. This should draw on all relevant policy documents (legislation, national action plans, National Sustainable Development Strategies, etc.), as well as documentation relating to specific disaster risk management themes and key sectors.

Broad based stakeholder consultations for validation and further collection of information. This can take the form of one-to-one semi-structured interviews and/or focus group meetings in order to draw from a broader range of stakeholders.

Identification of Key Issues. From the desk review and stakeholder consultations it is possible to identify Key Issues relating to DRM implementation in all relevant sectors and at all levels of governance (including civil society, communities and private sector).

3.3 Format for Presenting Findings

Due to the cross-cutting nature of DRM, it is not unusual that an excessive amount of information is generated during the situation analysis. Consideration then needs to be given to how best to present the findings in a useful and practical way. National politicians, office bearers and decision makers are unlikely to take the time to read through voluminous DRM reports. In order to facilitate greater accessibility to and uptake of the findings it is important to ensure that the analysis provided is crisp, concise and easily readable. One way to ensure this is to present the findings as a series of short expert briefing papers that are organised along either thematic or sectoral lines. Box 3 provides an example of one way of structuring findings for a sector-based DRM situation analysis.

BOX 3 – OUTLINE FOR SECTOR BRIEFING NOTES

Description of the sector	:	This would include the main policy mandate for the sector; key performance indicators relating to the sector, etc.
Hazard context	:	Key hazards and their relative impacts and frequencies.
Vulnerability context	:	To what extent is the sector vulnerable to disasters? What key aspects within the sector make it vulnerable to disasters?
Preliminary root causes	:	What are the root causes which may help to explain the vulnerability and hazard context?
Responses	:	What are the main responses to address vulnerabilities and hazards?
Gaps and Key Issues	:	What are the gaps and key DRM issues facing the sector?
Inter-sectoral integration	:	What is the extent of collaboration with other sectors on DRM issues?
Stakeholders identified	:	Who are the interested and affected parties.
Key Literature	:	Important sectoral reports and items of policy and legislation.

PART 4

Developing the National Action Plan

4.1 Introduction

Developing the NAP involves workshopping the findings of the Situation Analysis with a National Forum of stakeholders convened by the NAP Task Force. The purpose of the workshop(s) is to facilitate a thorough analysis of the Key Issues (problems) by identifying their root causes. Problems are converted into solutions using a tool called Problem-Tree Analysis. The actions required to carry out these solutions are identified. These actions are then taken through a process of 'prioritisation'. The prioritised actions are transferred into a NAP matrix. The information in the NAP matrix is validated several times when new information is known to the Task Force and additional information is added as required (e.g. means of verification, lead and supporting agencies, etc.). The main output is the core of the NAP; i.e. the matrix of actions.

Figure 5 below presents an outline of the NAP development process. It needs to be stressed that although the process follows a certain internal logic, it is not cast in stone and can be adapted to meet the specific requirements of the stakeholders.

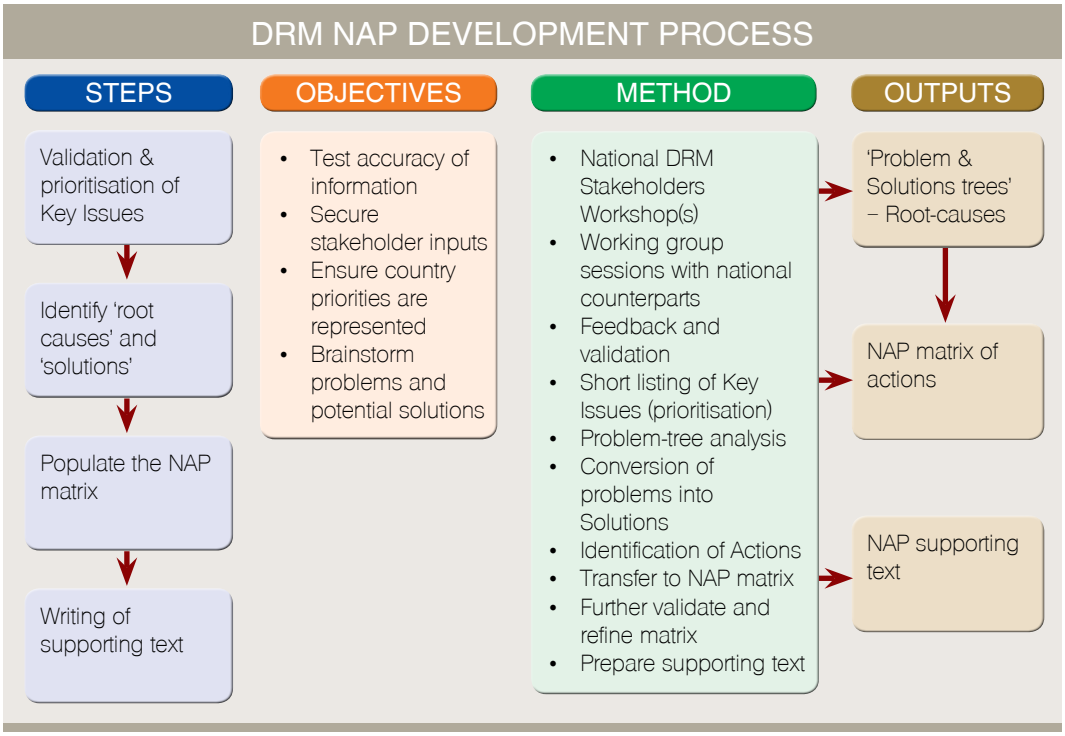

Figure 5: DRM National Action Plan Development process.

4.2 National DRM Stakeholders' Workshop

NAP development kicks off with the convening of a National DRM Stakeholders' Workshop. Workshop participants are drawn from representatives of the public and private sectors, NGOs and communities. In addition to the Task Force members, policy/planners and officers involved in Disaster Risk Reduction and Disaster Management are to be invited from each ministry/department. Representatives from the local government and outer islands should also be invited if feasible.

The main objectives of the National DRM Stakeholders' Workshop are to i) raise awareness of DRM and the NAP process amongst the participants; ii) validate the key issues to be addressed in the NAP; and iii) add additional priority issues. Depending on the number and scope of issues identified, it may be necessary to shorten the list by screening the issues using a prioritisation exercise. While the NAP strives to be all-encompassing, it is also important not to be too ambitious as this might render the NAP unworkable.

The National Workshop therefore seeks to:

- promote an understanding of the links between disasters impact and sustainable development;
- raise awareness and understanding of the need for a strategic and integrated national planning on Disaster Risk Reduction and Disaster Management; and
- promote understanding of the need to mainstream Disaster Risk Reduction and Disaster Management into national planning and budgetary systems.

Annex 6 provides a proposed format for the structuring of such a workshop.

4.3 Validation and Prioritisation of Issues

The Encarta English Dictionary defines validation as: "confirming the truthfulness of something". Up until this point in the process, engagement with stakeholders has been piecemeal and largely linked to interviews and focus group discussions as part of conducting the Situation Analysis. The National Stakeholders Workshop now provides a valuable opportunity to validate (or verify) the information and analysis conducted by the Task Force-PPN Partnership with a broader array of interested and affected parties. In this way the process is ensuring that all voices are heard and that the issues identified truly represent the interests of the citizens.

The process of validation has an additional spin-off. It begins the process of instilling a sense of ownership of the NAP amongst key national stakeholders. This is crucial when it comes to NAP implementation as the level of 'buy-in' will be important in ensuring the sustainability of the initiative.

The most common way of doing validation is simply to run through the key issues with the participants in a systematic way, taking discussion and recording the consensus view on each issue. New information emerging from the discussions should be captured and, if appropriate, added to the Sector Analysis findings.

Participants at the National Workshop are likely to raise a number of issues in addition to those already identified in the Situation Analysis. While this is to be welcomed (ideas raised at this stage will enrich the quality of the outcomes), it is possible that the list of issues will snow-ball and become too much for the planning process to handle. It may then be necessary to assist the workshop participants to reduce the scope of the issues to be included in the NAP. Prioritisation is a democratic, logical and structured way of going about doing this.

Prioritisation simply means ordering a list of things (normally issues or actions) in terms of their relative importance related to a certain topic or objective.

Before beginning with the prioritisation exercise, it is important to first identify some criteria to guide the group's decision making. This helps reduce the influence of personal or professional values/biases and keeps the participants focused on evaluating each issue's merits in relation to the topic at hand. Annex 7 provides an example of criteria that could be used when evaluating and prioritising DRM issues and actions.

Prioritisation is much like voting. Those issues with the most votes are the ones that the participants agree should be taken forward. The issues that emerge from the validation and prioritisation exercises are therefore the 'key issues' or 'key problems' that the NAP planning process will seek to address.

4.4 Problem-Tree Analysis

Problem-Tree Analysis[4] is a method often used in the design of development interventions. It is essentially a planning tool that is used to focus discussion on the short comings of any current situation in an organised and logical way. It goes further to assist in the identification of logically consistent solutions/objectives as well as in identifying and selecting the most appropriate strategies to achieve these. By focusing on logical connections between causes and effects, Problem-Tree Analysis provides a rigorous and logically structured method to planning.

In the context of the NAP planning process (Figure 3) the Problem-Tree Analysis facilitates the structured identification of solutions to address the short comings identified in the form of the Key Issues (at this stage of the planning process it may be useful to rephrase the key issues into problem statements (Box 4). From these solutions, objectives, actions and strategies can be formulated for the National Action Plan Matrix. The problem-tree analysis is a critical step in the planning process since it strongly influences the design of possible interventions. It may therefore be prudent to ensure that a skilled facilitator with experience in the problem-tree methodology is available to lead the process.

The problem analysis normally includes:

- verification of the key issue to be analysed;
- identification of all associated problems, causes and effects related to the key issue/core problem;
- clustering of similar issues that are identified;
- establishment of a cause-effect hierarchy between the problems; and
- visualisation of the cause-effect relations in a diagram.

[4] Alternatively referred to as root cause analysis, problem/solution analysis or objectives analysis.

BOX 4 – RECASTING KEY ISSUES INTO PROBLEM STATEMENTS

Sentence structure is very important to the logic of the problem-analysis framework. Below are some pointers to guide you:

- Stay away from very big, vague or over-ambitious concepts, e.g. no infrastructure. It is better to be as precise as possible, e.g. there is no paved road from X to Y.
- Never state the problem as the absence of a solution, e.g. there is a lack of 'something'. This acts to predetermine your solution, excluding the possibility for alternative solutions.
- Do not use 'non-existent' things as problems, e.g. no existence of NGOs. It also predetermines your solution.
- Stay away from value-laden or judgmental statements, e.g. the government is lazy.
- Where possible do not use jargon and acronyms.

A problem-tree analysis generally consists of the following three stages:

i) The analysis of problems related to the key issues (creating an image of reality).

ii) The analysis of objectives (the image of a future, improved situation).

iii) The analysis of strategies (the comparison of different clusters of objectives).

The down side of problem-tree analysis is that it is a fairly complicated methodology to use. The best way to learn the methodology is to attend a skills development course on problem-tree analysis. Such courses normally require a couple of days to fully explain the methodology and train students. For the purposes of this guide what follows below is an example of the kind of problem and solution trees that are likely to emerge during a NAP planning process. A more detailed explanation of the methodology is provided in Annex 8.

i) The analysis of problems related to the key issues (creating an image of reality)

In the example provided in Figure 6, the problem tree that is generated is an agreed 'image of reality' that has emerged from the analysis of the core problem. With the facilitator's skill and the group's joint reasoning capacity, the problem has been analysed in a structured manner with an inherent internal logic. The root causes of the prioritised disaster risk management problem have been identified, and are agreed upon by the participants. The latter is important given that many of the participants will also be responsible for implementation of the Action Plan.

ii) The analysis of objectives (creating an image of a future, improved situation)

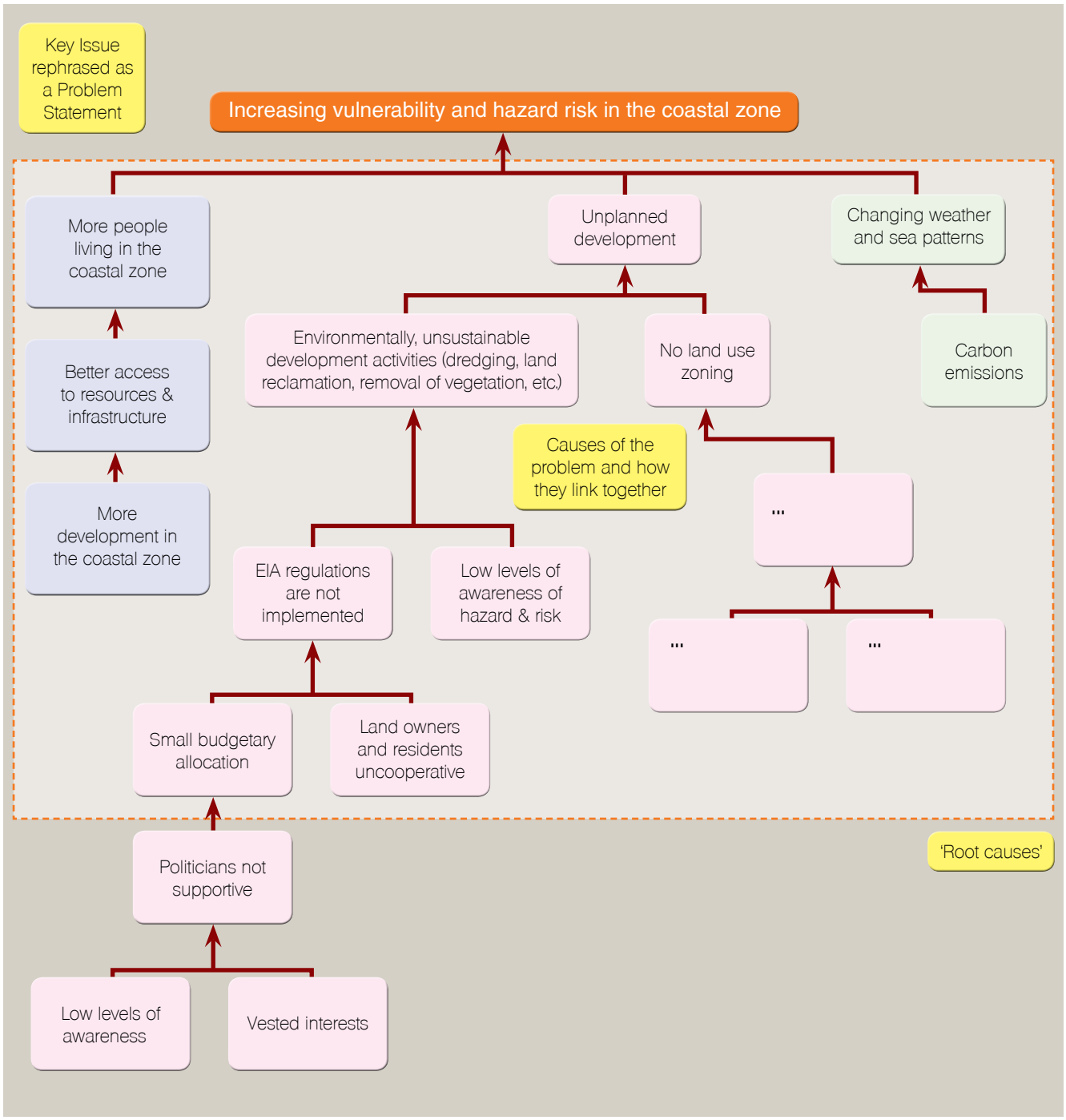

Figure 6: An example of a Problem Tree.

The problem tree is now ready to be converted into a 'solutions' or 'objectives' tree (Figure 7). This involves the translation of all the negative situations in the problem tree into realised positive states and verification of the resultant hierarchy of objectives.

Further examples of problem and solution trees, this time addressing the core problem of 'contaminated drinking water' are provided in Annexes 9 and10.

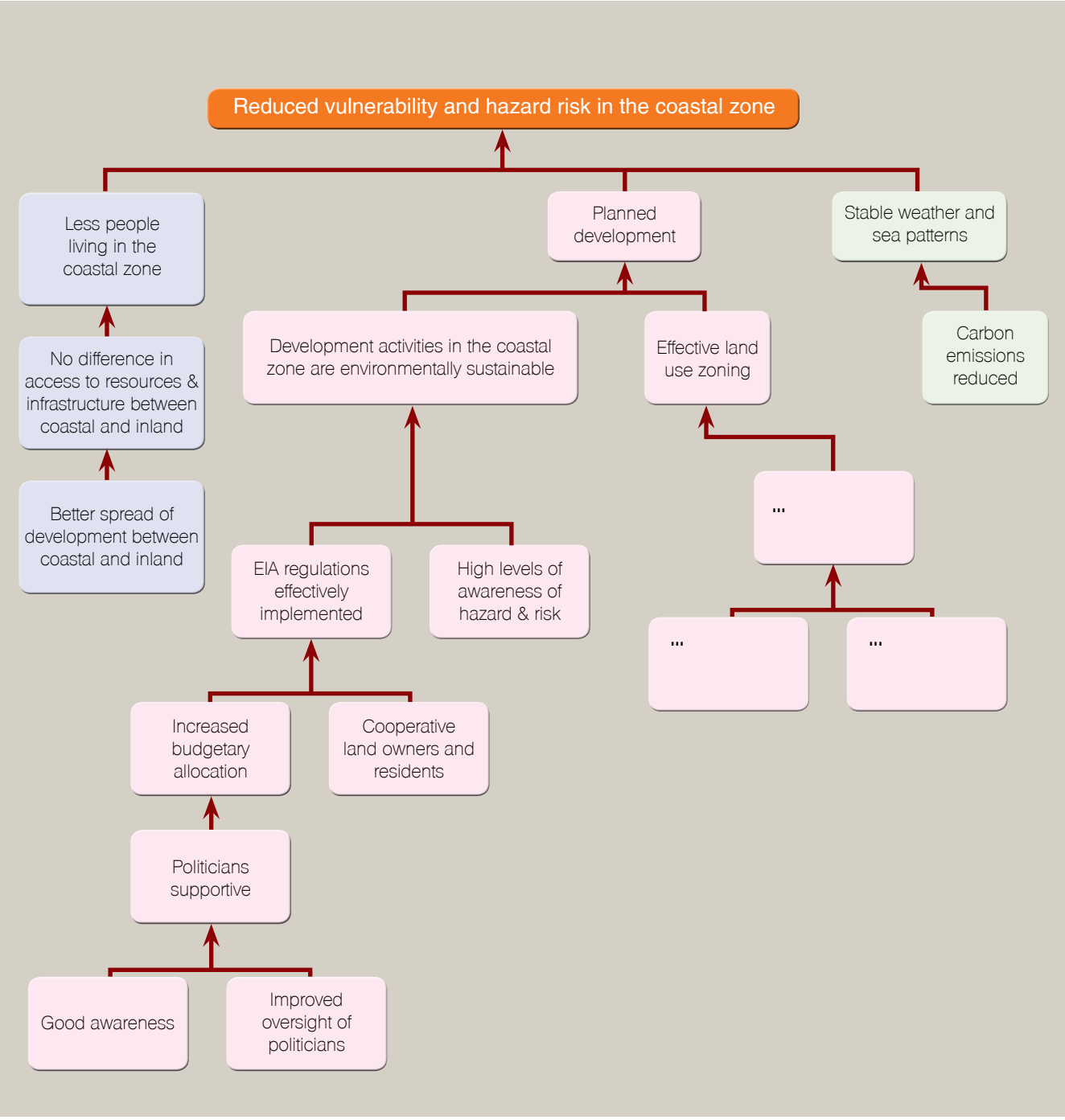

Figure 7: An example of a Solution Tree (also termed an Objectives Tree).

iii) The analysis of strategies (comparing different clusters of objectives)

After having formulated the desired future situation the selection of possible interventions starts. To analyse the strategies for implementation the following steps are taken:

- Identification of the different possible groups of objectives contributing to a higher objective (clustering) Figure 8.
- Choice of a strategy for the intervention, choosing the scope of the project (scoping).

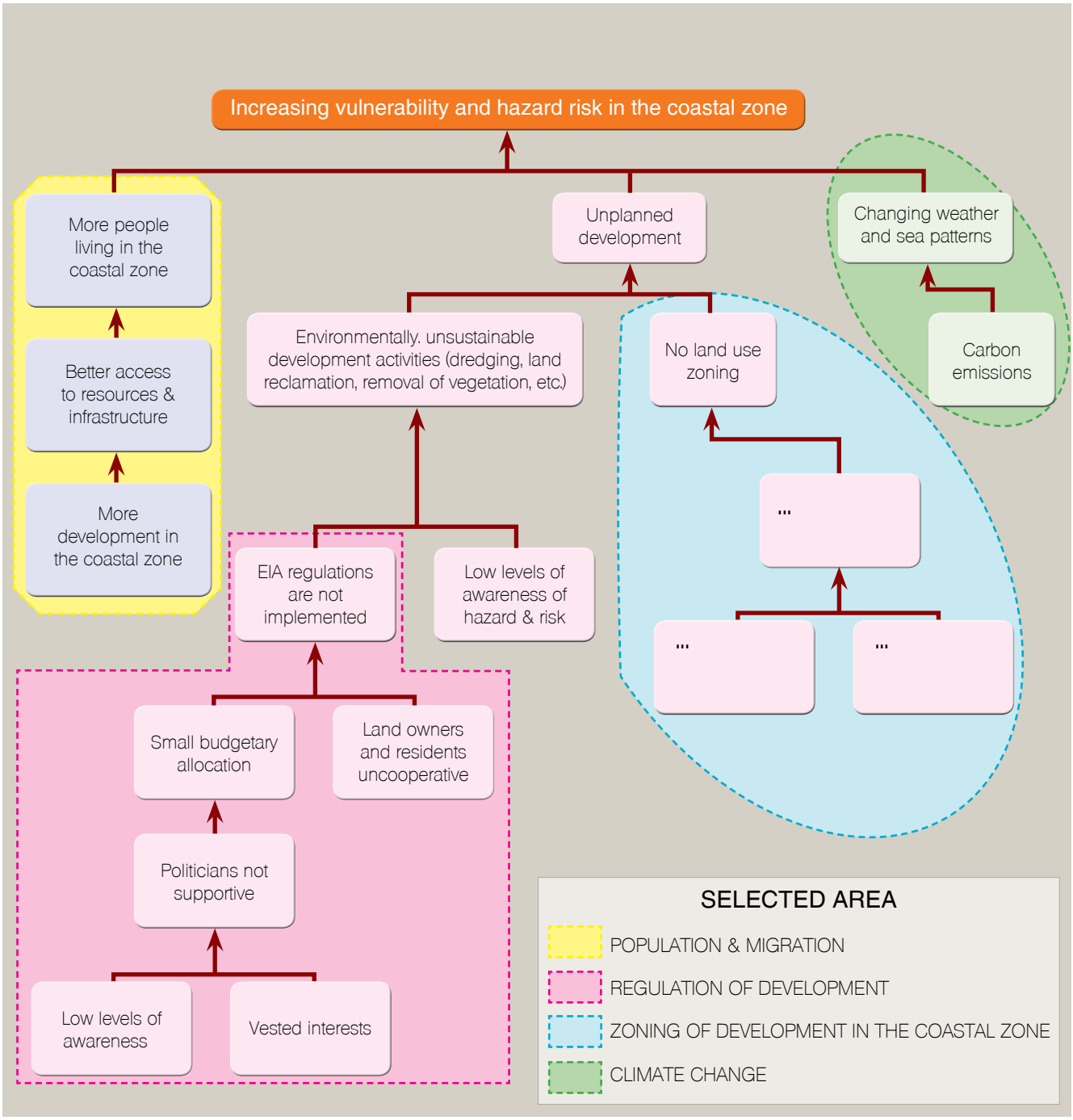

Figure 8: Identification of strategies (or themes).

4.5 Matrix development

From the Objectives Tree the group can now decide on the most appropriate hierarchy for presenting the Objectives in the action matrix. It is now relatively straight forward to determine appropriate activities that would be required to achieve the selected objectives. Some of the objectives themselves may be reorganised into Goals or Activities depending on the most logical level in the matrix hierarchy of Goals, Objectives and Activities.

NAP matrices may take different forms depending on the needs of the country. Often national ministries of planning have established formats which they prefer to use in order to ensure consistency and compatibility of the country's planning architecture (e.g. sector plans, master plans, divisional plans, etc.). Examples of different matrix formats are provided in Annex 11.

Once the matrix has been populated with the relevant information it is good to once again verify that nothing has been lost in the process of transferring data and that the participants are happy with the syntax that it used.

Depending on the host country's needs it may be necessary to include information for monitoring purposes such as verifiable indicators, milestones, etc. It may also be necessary to begin to include timeframes and to identify lead and supporting agencies. Remember this is your 'plan of action' – so the more clearly things are spelt out the better!

4.6 Supporting text

Congratulations! The core of the NAP has now been completed. All that remains is the drafting of the supporting text. Supporting text would normally include:

- a summary of the DRM Situation Analysis;
- a summary of DRM institutional arrangements in the country;
- a summary of the Regional DRM Framework showing the linkages between the country NAP and the Regional Framework;
- a diagrammatic depiction of how the NAP links up with the country's National Sustainable Development Plan, as well as Sector Plans and Master Plans;
- a description of the methodology used in developing the NAP; and
- the NAP matrix of actions.

Supporting text should also include the details of the Implementation Framework (to be discussed in the next section).

PART 5

Developing an Implementation Framework

5.1 Introduction

An NAP is only as good as its implementation. To maximise the scope for the NAP to be implemented it is critical to do some planning around implementation arrangements. Who will coordinate the implementation of the NAP? Are new institutional arrangements required? What is the NAP likely to cost? How will implementation be monitored and evaluated? How will the NAP be communicated to the public? How will the NAP be communicated to donors? These are all pertinent questions relating to NAP implementation and should form part of any implementation framework.

Decisions concerning an implementation framework are best conducted with inputs from senior government officials. This is important as i) they have the power to facilitate institutional restructuring (if necessary); ii) they have the power to allocate budgets and resources; and iii) their role as champions of the NAP is invaluable.

5.2 Institutional Arrangements

Institutional arrangements for DRM as well as for national planning and budgeting are likely to differ in each country. These two sectors are the most important when it comes to implementation and mainstreaming. Consideration needs to be given to the following:

- What will be the future role of the NAP Reference Group and NAP Task Force?
- Is the national Disaster Management (DM) agency equipped to also carry out Disaster Risk Reduction (DRR), or is there a need for restructuring.
- Who will be responsible for overseeing implementation, including monitoring and evaluation?
- Who can provide ongoing support to agencies tasked with implementing NAP actions?
- Who can assist with fundraising?

These are just a few relevant questions to get you going. There are likely to be many more strings that need tying up! Annex 12 provides a list of additional questions to stimulate your thinking.

5.3 Costing of the NAP

Costs are normally broken down into Government costs (normally costs absorbed into existing line budgets) and incremental costs (costs that require funding).

While costing of the plan can be a laborious process, it is important for the following reasons:

- A clear cost breakdown allows government to see how much of the NAP implementation can be absorbed into existing line budgets and work programmes and how much would need additional resourcing.
- This in turn allows government to integrate the additional costs into their medium-term budgeting framework, a key aspect of mainstreaming.
- It is easier for line departments and agencies to include additional costs and activities in their annual budget requests.
- It is easier for donors to incorporate specific actions, or clusters of actions, into their country funding programmes.

In most countries across the region the percentage of Government-to-donor funding falls between:

Government	15 – 20 percent
Donors	85 – 80 percent
Private sector funding	Varies

Costing can be a technical exercise and it is recommended that the services of an auditor be secured. Annex 13 provides detailed information on a costing methodology that has been used successfully in the Pacific. An example of programme costing can be found in Annex 14.

5.4 Financing Strategy

The financing strategy is to identify where and how incremental cost items could be paid for. It is primarily the responsibility of the technical experts within the country as well as the external expertise to develop the financing strategy. The components of the financing strategy include the following items.

- Identify potential donors and government budget lines.
- Develop an understanding of donor priorities and strategies in relation to the specific country and thematic issues.
- Identify potential donors most likely to be interested against key actions/initiative.
- Develop concept notes for either one or a set of similar initiatives.
- Develop project proposals, profiles and/or terms of reference using the indicative costing information within the public investment programme. For instance, a project profile requires a description of the project, estimate of costs and description of impacts (both positive and negative) of the project. This can be used as the basis to seek funding for certain components of the public investment programme.

Additional Guiding questions:

- Is the existing budget framework sufficient for managing the implementation of the National Action Plan/public investment programme?
- If not, what measures need to be considered to expedite the implementation of the National Action Plan/public investment programme?
- Which are the key international agencies active in the country?
- What are the current strategies/areas of interest for each of these international agencies?
- Which of these are particularly active/interested in Disaster Risk Management and Disaster Risk Reduction? (for Disaster Risk Reduction there may be many links here e.g. donors supporting rural electrification, such as the European Union could come into this category).
- What specific programmes within each international agency could be associated with disaster management and/or disaster risk reduction?
- How does the donor-engagement process work? For instance, how often does the government of a country formally meet with donors? What form does this take e.g. donor round-table meetings?
- Is there an existing country-specific process for developing project proposals/concepts that can be used to bid for financing for a particular range of actions?

5.5 Communication Strategy

These questions are intended to help determine, the view of the Task Force, Government executives (and hopefully others who deal directly with media or awareness campaigns); as to how best the National Action Plan and its specific initiatives can be communicated with maximum effect.

- What is the major objective of the National Action Plan exercise (and which needs to be communicated)?
- What are the specific goals in relation to the communication?
- Who do you want to influence?
- What do you want to achieve? Do you want to just inform the public and other stakeholders that the National Action Plan has been completed or do you want to inform them about the specifics of the National Action Plan and the role they need to play in implementing it?
- What is the most appropriate media to use and for which sections of the community (community groups, NGOs, Government departments, donors)? Radio, TV, newspapers? Simple pamphlets and brochures? Will these be read and easily understood?
- Is it useful to communicate in English or the language of the country; or both?
- Should the communication go beyond the country to the region? If so, to who and why?

5.6 Monitoring and Evaluation

It goes without saying that monitoring and evaluation is a critical part of project oversight and the details of how the NAP is going to be monitored needs to be included in the implementation framework. This process should be enabled by the prior identification of verifiable indicators as part of the matrix development (see section 4.5); however additional questions remain, such as who will be responsible for monitoring and evaluation and how often and how is it going to take place? It is often useful to take the lead from monitoring and evaluation frameworks that already exist within government. In this respect the following questions would inform the design of the monitoring and evaluation framework:

- What types of monitoring mechanisms exist in Government to monitor and evaluate the progress of implementation of some major projects?
- What type of mechanism would you consider as suitable for the implementation of the National Action Plan and public investment programme?
- What are the mechanisms to monitor the extent of mainstreaming National Action Plan/ Disaster Risk Management into line ministries (at national and local government level) annual work programme?
- Is there an expectation that the requirements of the projects should be translated in some form into the Job Descriptions of for example the Task Force to help ensure the sustainability of outcomes? Would this work? If not why?

PART 6

Towards Implementation

6.1 Introduction

Congratulations! Your DRM NAP now has a costed matrix of actions and supporting text explaining the implementation arrangements. It is now ready to be taken to Cabinet for final endorsement. Endorsement by government is crucial for the NAP to attain 'official' status so that political support and resources can be committed for its implementation. Once again this highlights the importance of the High Level Advocacy process that should ideally accompany the NAP development process.

6.2 National Approval Process

The following steps need to be considered as part of the National Approval Process:

- Cabinet ministers to be briefed before the NAP is submitted for endorsement; and
- a policy paper or papers may need to be prepared for Cabinet reflecting proposals for mainstreaming, institutional restructuring, etc.

6.3 Country and Donor Discussions

The success of the NAP will be largely determined by the resources that are secured for its implementation. Given that a large proportion of NAP costs are met by donors, it is crucial that the donor community is engaged as soon as possible after the NAP has been officially endorsed. It may even be a good idea to give donors the 'heads-up' in advance, so as to avoid unnecessary delays. One way of engaging with donors is to hold a donor 'round table' specifically for the NAP. It may also be in the interest of countries to be proactive by preparing and circulating a number of project or programme concepts in advance. Remember the Pacific DRM Partnership Network has been established specifically to provide support for NAP implementation. In the Pacific region, SOPAC is a key player when it comes to fundraising for NAP implementation and PICs are requested to take up contact with them in this regard.

Conclusion

Mainstreaming of disaster risk management can be achieved through stakeholder based systematic integration of vulnerabilities to disasters and disaster risk considerations into national and sectoral plans and decision making and budgetary processes. The ideal will be to incorporate disaster risk considerations at the time of the review of national and sectoral plans. In the event this is not possible, the second best option will be to undertake specific effort to incorporate disaster risk management into the existing national plan and budgetary process, linked to sectoral level integration. The latter may require the development of a specific national action plan on disaster risk reduction and disaster management, which includes a step-wise programme of developing national policies on disaster risk management, as well as key strategies that can help operationalise national policy on building resilience at all levels. A National Action Plan will also include a specific Implementation Framework for implementing the key strategies (of the National Action Plan) across all sectors and across all communities as well as across all levels of government using domestic and development partner resources. For the mainstreaming exercise to be effective, political commitment as well as commitment from all stakeholders is vital.

Several tools are available to support strengthening of different components of the National Sustainable Development Strategy (NSDS) based mainstreaming exercises. Details about situation analysis, root-cause analysis and solution analysis can be found in publications such DFID's Tools for Development (Department for International Development 2002); World Bank_OECD's Managing for Development Results (The World Bank and OECD-DAC 2006); UNDESA's Guidance in Preparing National Sustainable Development Strategy (OECD 2001; United Nations Division for Sustainable Development 2002); UN Millennium Projects guide to achieve millennium development goals (United Nations Millennium Project 2005). The UNDP and UN Millennium Project have also developed several MDG-based costing tools, including for energy and wastes (United Nations Millennium Project, 2005).

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UN ISDR (2002). Living With Risk . A Global Review of Disaster Reduction Initiatives. Preliminary version, July 2002. Prepared as an inter-agency effort coordinated by the ISDR Secretariat with special support from the Government of Japan, the World Meteorological Organisation and the Asian Disaster Reduction Center (Kobe, Japan). http://www.unisdr.org/unisdr/Globalreport.htm.

USEFUL FURTHER READINGS:

ISDR (2008) Gender Perspectives: Integrating Disaster Risk Reduction into Climate Change Adaptation. Good Practices and Lessons Learned

ISDR (2008) HFA, Indicators of Progress: Guidance on Measuring Reduction of Disaster Risk and Implementation of the Hyogo Framework for Action www.unisdr.org

USEFUL WEB LINKS:

Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (http://www.unisdr.org/eng/hfa/hfa.htm)

World Bank (http://worldbank.org/topics) Select Disaster Management.

UNDP/BCPR/DRU (http://www.undp.org/cpr/disred/english/news/seatsunami.htm)

UN/ISDR (http://www.unisdr.org)

SOPAC (http://www.sopac.org)

Provention Consortium. Mainstreaming disaster risk reduction into development (http://www.proventionconsortium.org/?pageid=16)

Pacific Disaster Net. (http://www.pacificdisaster.net)

Annex 1

Glossary of commonly used DRM terms

ACCEPTABLE RISK
The level of loss a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions. In engineering terms, acceptable risk is also used to describe structural and non-structural measures undertaken to reduce possible damage at a level, which does not harm people and property, according to codes or "accepted practice" based, among other issues, on a known probability of hazard.

ACCIDENT
An unexpected and undesirable event which may result in an emergency or disaster.

AFFECTED POPULATION
Primary: People requiring immediate assistance during an emergency situation.
Secondary: People who at a certain point will require long-term social and economic assistance as a direct consequence of a disaster situation.

AFTERSHOCK
A smaller earthquake that follows the main shock and originates close to its focus. Aftershocks generally decrease in number and magnitude over time. Aftershocks that follow the main shock have to be considered as the same event as the main earthquake.

ALARM/ALARM SIGNAL
A sound or signal that is used to alert the community to the imminent occurrence of a dangerous event.

ALERT
A notice indicating that precautions should be taken because a dangerous event is expected to affect the specified community or area in the near future.

BIOLOGICAL HAZARD
Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Examples of biological hazards: outbreaks of epidemic diseases, plant or animal contagion, insect plagues and extensive infestations.

CHARM
A comprehensive hazard and risk management tool and/or process within the context of an integrated national development planning network/process.

COPING CAPACITY

The manner in which people or organisations use existing resources and abilities to face adverse consequences that could lead to a disaster. In general, this involves managing resources, both in normal times, as well as during adverse conditions. The strengthening of coping capacities usually builds resilience to withstand the effects of natural and other hazards.

CYCLONE/HURRICANE/TYPHOON

Depending on where you live, the terms hurricane and typhoon are regional names for a strong "tropical cyclone." All originate in tropical or sub-tropical waters and must spawn winds in excess of 74 miles per hour.

- Hurricane – North Atlantic Ocean
- Typhoon – Pacific Ocean east of the International Date Line
- Severe tropical cyclone – southwest Pacific Ocean, southeast Indian Ocean
- Tropical cyclone – southwest Indian Ocean

The most intense tropical cyclone on record is Typhoon Tip in the northwest Pacific Ocean, which on October 12, 1979 had winds gusting as high as 190 mph.

CYCLONE

Violent destructive windstorm. System of winds turning round a calm area of low pressure.

DAMAGE

Unwanted changes or losses resulting from a natural or human-caused event.

DAMAGE ASSESSMENT

Identification and qualitative and quantitative recording of the extent, severity and location of the effects of a destructive event.

DECLARATION OF DISASTER

Official declaration by the authorities of a political-management jurisdiction to meet the need for extraordinary action. Needed to request international assistance.

DIRECT EFFECTS

Those effects having a direct cause and effect relationship with the event.

DIRECT LOSSES

Adverse effects caused by a disaster, such as the loss of life, injuries, loss of goods and services, and infrastructure damage.

DISASTER

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

DISASTER MANAGEMENT

The organisation and management of resources and responsibilities for dealing with all aspects of emergencies/disasters, in particular preparedness, response and recovery (relief/rehabilitation).

DISASTER RISK MANAGEMENT

The systematic management of administrative decisions, organisation, operational skills and abilities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.

DISASTER RISK REDUCTION

The conceptual framework of elements considered with the possibilities to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

DISASTER WARNING SYSTEM

Arrangements and procedures to alert to and warn the community of the possibility of a disaster event and suggest actions that should be taken to reduce its impact.

EARLY WARNING

The provision of timely and effective information, through identified institutions, that allow individuals exposed to a hazard, to take action to avoid or reduce their risk and prepare for effective response. Early warning systems include three primary elements (i) forecasting of impending events; (ii) processing and dissemination of warnings to political authorities and population; and (iii) undertaking appropriate and timely actions.

EVACUATION

The short-term transfer of persons from their normal place of work or residence because of a threatened or actual impact of a hazard.

LEVEL OF RISK

An expression of the severity of a risk derived from consideration of likelihood the event will occur and the potential consequences that may arise.

LIKELIHOOD

How likely it is that a specific hazard will occur within a given time frame.

MITIGATION

Measures taken to reduce the loss of life, livelihood and property by disasters, either by reducing vulnerability or by modifying the hazard, where possible. The process of implementing measures that reduce the intensity and severity of the impact of potential hazards.

NATURAL HAZARDS

Natural processes or phenomena occurring in the biosphere that may constitute a damaging event. Natural hazards can be classified by origin namely: geological, hydro meteorological or biological.

PREPAREDNESS

The process of implementing measures that are designed to ensure that, should a hazard threaten, communities, resources and services will have the knowledge and understanding to cope with the effects.

PREVENTION

Activities to provide outright avoidance of the adverse impact of hazards and means to minimise related environmental, technological and biological disasters. Depending on social and technical feasibility and cost/benefit considerations, investing in preventive measures is justified in areas frequently affected by disasters. In the context of public awareness and education related to disaster risk reduction, changing attitudes and behaviour to contribute to promoting a "culture of prevention".

RECOVERY

Decisions and actions taken after a disaster with a view to restoring the living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery (rehabilitation and reconstruction) is an opportunity to develop and apply disaster risk reduction measures.

REHABILITATION

Restoring peoples lives back to normal, as well as essential services, including the beginning of the repair of physical, social and economic damages.

RESIDUAL RISK

Risks that cannot be avoided and/or the remaining level of risk after risk reduction measures have been taken.

RESILIENCE/RESILIENT

The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase its capacity for learning from past disasters for better future protection and improve prevention measures.

RESPONSE

The process of implementing measures taken in anticipation of, during and/or immediately after, a hazard impact to ensure its effects are minimised.

RISK

The probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human-induced hazards and vulnerable conditions. Conventionally risk is expressed by the notation Risk = Hazards x Vulnerability. Beyond expressing a possibility of physical harm, it is crucial to appreciate that risks are always created or exist within social systems. It is important to consider the social contexts in which risks occur and that people therefore do not necessarily share the same perceptions of risk and their underlying causes.

RISK ASSESSMENT/ANALYSIS

A process to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend. The process of conducting a risk assessment is based in a review of both the technical features of hazards such as their location, intensity, frequency and probability; and also the analysis of the physical, social, economic and environmental dimensions of vulnerability, while taking particular account of the coping capabilities pertinent to the risk scenarios.

Annex 2

The NAP process and how it contributes to the mainstreaming of DRM

1. Advocacy

Objective

To ensure political support and commitment for Disaster Risk Management Mainstreaming

Who is this for?

Head of Government, Cabinet Ministers, Head of Agencies, Donors, Media, Private Sectors and Community Representatives

Available Tool

High Level Advocacy Team Country missions/ Consultation

Outputs

- Government and Political commitment and support to develop a Disaster Risk Management National Action Plan
- Establishment of national advisory and working teams for the development of a National Action Plan
- Development of a draft National Action Plan planning process

2. Situation Analysis

Objectives

To assess existing capacity for Disaster Risk Management through reviews and consultations under the following:

- Review institutional arrangements, policies and legislation across the sectors at all levels
- Identify key hazards, risk and vulnerability characteristics and issues at all levels
- Assess existing disaster risk and disaster management programmes, resources and capacity across the sectors at all levels
- Identify key players/stakeholders at all levels
- Identify key Disaster Risk Management issues and/or gaps that constrains sustainable development

Who is this for?

- Entities and stakeholders that have a role in disaster risk reduction and disaster management at all levels

Available Tools

For collecting information:

- Existing national reports/studies
- Sector/thematic screening guides
- Institutional & Organisational analysis
- Stakeholder analysis
- Risk and vulnerability guiding questions

Outputs

- Sector/thematic briefing notes covering hazard context, vulnerability and risk context, responses and issues or gaps

3. Action Development Process

Objectives

To develop the Disaster Risk Management National Action Plan based on issues collected from the situation analysis through the following process:

- National workshops and workshops with the national advisory working teams
- Risk Analysis and prioritisation
- Root-cause analysis
- Problem-solution tree analysis
- Development of action strategies
- Development of action matrix
- Vision and goals development exercise

Who is this for?

- Head of Agencies or their representatives, National Action Plan multi-disciplinary and multi-sectoral development teams

Available Tools

- Risk analysis and prioritisation of issues (adapted from CHARM)
- Root-cause analysis
- Problem-solution tree analysis
- Disaster Risk Management Mainstreaming indicators (e.g. Tearfund)

Outputs

- National Action Plan with strategies to trigger sector and/ or provincial, outer islands, and communities Disaster Risk Management planning and actions

4. Costing the Plan of Actions

Objective

To develop a costed implementation programme including monitoring and evaluation strategies for the National Action Plan

Who is this for?

- National Development Planning and Budgetary Ministries
- Agencies and Sectors tasked by the National Action Plan
- National Action Plan implementation, monitoring and evaluation unit(s)
- Disaster Risk Management focal points and members within each stakeholder grouping
- Donors and partner organisations

Available Tools

- Programme/project planning cycle and appraisal
- National Action Plan Costing Tool

Outputs

- A costed National Action Plan implementation plan linked with medium and annual budgetary cycle
- National Action Plan implementation arrangements
- Strategies for engaging donor consultation for the National Action Plan
- Communication strategies

Mainstreaming: Phase one – DRM is explicitly linked to the National Development Goals and Priorities

Mainstreaming: Phase two – DRM is incorporated in national, sectoral and local development plans and policies

Mainstreaming: Phase three – DRM initiatives are allocated with funds and resources for implementation

Annex 3

Appointment of a National Task Force and National Reference Group

National Task Force

The rationale for the appointment of a Task Force is to have a singular representational point of reference/contact/coordination for both the development and implementation of the National Action Plan. The Task Force makes it possible to then synthesise ideas and concepts into a single National Action Plan document. As the National Action Plan is eventually to be endorsed by Government it is crucial in terms of the longer term sustainability of the entire Disaster Risk Management effort that a Task Force is appointed.

The Task Force forms the main point of contact for the Partnership Network. The role of the Task Force is to provide counterpart support to the Partnership Network team which provides assistance for the development (and subsequent implementation) of the National Action Plan. The Task Force also provides a leadership role for any in-country consultation that may be required and serves as the link to national government on the reporting of the progress of National Action Plan development. The reporting to national government is typically channelled through the National Action Plan Reference Group which is comprised of the senior most officials of Government Ministries and/or Departments.

Choosing the right Chair for the National Action Plan Task Force is critical to the success of the process. The Chair should be proactive, a natural leader or champion, a strong team player who has a good understanding of national Disaster Risk Management and planning and budgetary issues and be at a senior level within the Government system.

The Task Force should ideally include a mix of representatives from agencies and organisations whose input and commitment will be integral to the mainstreaming process. These may include but not be limited to the national equivalents of ministries covering planning, finance, development, the national disaster management agency, local government, health, education, public works and other sector ministries deemed appropriate according to the specific situation and priorities of the country. In addition the Task Force can also be drawn from a cross-section of non-Government and other organisations representational of community interests such as the Red Cross.

National Action Plan Task Force members should be chosen to ensure there is gender balance as well as for their capacity and ability to drive mainstreaming of disaster risk management from within their own agencies or organisations. From this perspective it is advantageous to choose senior staff who have a high degree of decision-making authority. All Nation Action Plan Task Force members will be expected to be fully engaged with the National Action Plan development process from beginning to end so members should not be so high level that their work commitments will preclude them from engaging fully.

National Action Plan Reference Group

The Reference Group is typically comprised of the members of the National Disaster Committee and is thus a composition of the senior most representatives of all Government Ministries and Departments.

The role of the Reference Group is to provide overall strategic direction and guidance to the Task Force through out the stages of National Action Plan development. The Reference Group also provides a direct reporting mechanism to Government on the NAP development process. The Reference Group will be expected to actively engage in the following activities:

- Provide oversight of the National Action Plan development process.
- Establish the reporting requirements for the Task Force.
- Receive and deliberate on reports of the National Action Plan process as may be submitted from time to time.
- Ensure that Cabinet/Council of Ministers is kept abreast of National Action Plan development.
- Ensure the availability of Task Force members for National Action Plan Task Force responsibilities.
- Endorse the draft National Action Plan and related Provisional Implementation Programme for onward submission to Cabinet.

Annex 4

SOPAC's approach to advocacy in support of a NAP

Advocacy in the Disaster Risk Management context

In the context of disaster risk management in the Pacific (and more so the effort to improve the implementation of disaster risk reduction and disaster management practices), 'high level advocacy' is defined as the mechanism through which political support and support within the upper echelon of bureaucracies can be co-opted to facilitate the mainstreaming of the disaster risk management ethos into national policy, planning and budgeting systems with an intended outcome of reducing the levels of risk to natural, human-induced, technological and other hazards, and in doing so increase community safety and resilience thereby contributing to sustainable national development.

Whilst the focus of advocacy efforts for Disaster Risk Management mainstreaming is at national level, it is pertinent to note that advocacy may also be used to influence decisions at local or community level.

Mechanisms to facilitate Advocacy

SOPAC is the regional inter-governmental organisation mandated to coordinate disaster risk management capacity building in the Pacific. As such it has taken the lead role in the development of Disaster Risk Reduction and Disaster Management National Action Plans for Pacific Island Countries.

As part of this leadership role SOPAC has established a High Level Advocacy Team. The Team has been comprised of SOPAC and at different times included partner organisations such as The World Bank, United Nations Development Programme – Pacific Centre, Pacific Islands Forum Secretariat and the Secretariat for the Pacific Regional Environment Programme.

Mobilising the High Level Advocacy Team

The SOPAC-led High Level Advocacy Team (HLAT) is mobilised in support of the programme for the development of National Action Plans for Pacific Island Countries when SOPAC or one of the Partners has received a request from a country. Following discussions with relevant Partners (if a Partner is involved at this early stage) and an exchange of letters between SOPAC and the country requesting support; the High Level Advocacy Team is mobilised. The effort to assist in the development of National Actions Plans is demand-driven thus the initiation of the process is lead by individual Pacific Island Countries.

Upon reaching an agreement to start the Disaster Risk Management National Action Plan development process, the SOPAC Director will inform the Manager of the SOPAC Community Risk Programme who will then commence arrangements for the engagement of the High Level Advocacy Team.

High Level Advocacy Team Mission Preparations

SOPAC facilitates all preparations for the High Level Advocacy Team which usually involves the following:

- Inform the head of the SOPAC High Level Advocacy Team and arrange a meeting and/or briefing.
- Facilitate exchanges with partner organisations to ascertain interest in participating in the High Level Advocacy Team mission.
- Establish contact with the relevant officials in the subject country to arrange High Level Advocacy Team schedule of appointments.
- Collate relevant information and data pertaining to the subject country and development information material and presentations for use during the High Level Advocacy Team.
- Convene a pre-departure High Level Advocacy Team briefing to finalise a specific approach and team roles.
- Ensure that all logistics and travel arrangements are finalised.

High Level Advocacy Team Country Mission

The first point of contact in-country for the High Level Advocacy Team is the SOPAC National Representative. Typically the SOPAC National Representative is the Chief Executive Officer/Permanent Secretary of the Ministry responsible for Foreign Affairs. In other instances however the SOPAC National Representative is the head of the Mining/Mineral Resources/Lands department. The High Level Advocacy Team will work through the SOPAC National Representative in making advocacy presentations to the following target groups:

- Head of Government (President/Prime Minister);
- Selected members of Cabinet/Council of Ministers; and
- National Disaster Council/Committee.

Focus of the High Level Advocacy Team Presentations

The High Level Advocacy Team presentations are intended to present a compelling case for a Disaster Risk Management National Action Plan for the subject country as an essential element to facilitate the commencement of the mainstreaming process at national level and also to provide a catalyst for mainstreaming activities at local and community level, civil society and the private sector.

The High Level Advocacy Team will structure its presentations to take account of the following:

- Current global and regional instruments relevant to disaster risk management.
- Range of national hazards and associated risk levels.
- Disaster impact on the economy – this is to be supported by evidence drawn from research.
- Nature of existing disaster risk management in place – with an emphasis on policy and governance, preparedness, emergency response and mitigation arrangements.
- Preliminary overview of issues that may need to be addressed to either supplement existing country efforts to initiate a new set of actions.
- The role of a Disaster Risk Management National Action Plan.
- Disaster Risk Management National Action Plan planning and consultation process – highlighting country roles and roles of the Partners – the team that is involved in the process.

A different emphasis may be required in terms of each specific presentation conducted during the mission and the High Level Advocacy Team will determine the appropriate modality.

Follow up on High Level Advocacy Team Mission

A High Level Advocacy Team mission report will be developed following the mission. This will provide an outline of the key issues arising from the mission which will help to inform the process of national action planning. The report of the High Level Advocacy Team mission is to be augmented by the development of a draft planning process which will be considered by partner organisations. This draft planning process is provided to the nominated in-country contact for the National Action Plan and liaison will continue until a process is finalised.

Annex 5

Situation Analysis Checklists

Individual countries can add additional items to the checklists below to reflect their own context.

Institutional Arrangements for the Sector and General disaster risk management aspects:

- Main government and non-governmental agencies that manage or are involved the sector.
- Main policies, legislation and plans, at national, provincial (if relevant) and local levels that provide the mandate of the sector and who is responsible for implementation/ enforcement.
- Statistics: number and demographic profile of the population, particularly the more vulnerable groups (e.g. depending on the sector for livelihoods or livelihoods is impacted by the sector development; women and children).
- Key national and local priorities/issues relevant for the sector.
- Key hazards affecting the sector.
- Relevant issues or gaps.

Organisational Process and Capacity:

- Focal points for risk reduction and for disaster management.
- Level of resources committed for disaster management (e.g. emergency response) and disaster risk reduction (e.g. awareness raising, mitigation) initiatives.
- Capacity of the organisations responsible for risk reduction and disaster management in terms of:
    - number of staff;
    - annual budget and expenditure for disaster risk management;
    - equipment or technology used for disaster risk reduction and disaster management;
    - existing initiatives/programmes for disaster risk reduction and disaster management; and
    - main donors and development partners (national, local and regional/international).
- Line of communication and linkages to development and budgetary planning.
- Decision making and planning processes.
- Inter-departmental/ministerial arrangements.
- Relevant issues or gaps.

Level of data available on the impacts of disasters, state of the environment/ resource (from monitoring programme) and information needs of each agency involved in the management of the sector including the following:

- Damage (loss of life, economic damage cost estimates).
- Social impacts.
- Environmental damage etc.
- Water and land resources capacity, quality and other characteristics
- People's perception and priorities.
- Information needs of the responsible agencies for the effective and efficient executing of its disaster risk management responsibilities.
- Relevant issues or gaps.

Awareness Programmes:

- Existing and planned awareness programmes and target audiences.
- Capacity for development and dissemination/release of awareness programmes.
- Effectiveness of previous programmes and future needs.

Hazards Risk Assessment:

- Key hazards affecting the country considering the following key features:
  - Location and extent. Does the hazard affect the whole country (nation wide) or limited to one island or area? – the name of the hazard, and extent/coverage of its impacts or potential impacts?
  - Frequency and probability of occurrence. How often are hazard events likely to occur (in both the short and the long term)?
  - Intensity/severity. How severe are the events (e.g., flood levels; speed of winds and volume/rate of rainfall during typhoons/cyclones; magnitude and intensity of an earthquake) likely to be?
  - Duration. How long will the hazard event last (from a few seconds or minutes in the case of an earthquake to months or even years in the case of drought)? – (also consider that a hazard event may last only a few minutes but affect the whole country or a number of communities).
  - Predictability. How reliably can responsible agencies predict when and where events will happen?
- Socio-economic trends and characteristics that either increase, or reduce, people's vulnerability to hazards/risk.
- Sectors of society that are most affected by the above.
- Existing initiatives to address these issues.
- Requirements and priority needs to address these issues.

Annex 6

Proposed programme for a National DRM Workshop

(i) Official Opening and appropriate protocols

(ii) Session One: Setting the Scene – Presentations

- National Workshop Programme and Introductions
- Pacific Disaster Risk Management Partnership Network: Operationalising the Regional Framework and other drivers of Disaster Risk Reduction and Disaster Management at regional and national level
- Disaster as a Development Issue: An overview
- Disaster Risk Reduction and Disaster Management Mainstreaming and Principles

(iii) Session Two: Current National Situation – Disaster Risk Reduction and Disaster Management

- Situation Analysis – Preliminary findings covering:
- Hazard context, vulnerability context, institution arrangements, existing capacity and programmes, key stakeholders, issues etc.

iv) Session Three: Selection of Key Issues to include in NAP

- Validation of Key Issues identified in the Situation Analysis
- Addition of any new priority issues
- Prioritisation of issues (if required)

v) Way forward and Closure

The workshop could include working groups and presentation to plenary following by general discussions.

Annex 7

Prioritisation criteria

1. Is the problem statement clear or what is the problem being discussed here?	Consider need to clarify
2. Is this problem/issue significant? Consider: There is a major – extreme hazard involved in the problem; the risks involved if not addressed or minimised can set back development (consider the sector where the 'problem' originated from); the potential risk is high (may affect a lot of people, area, key development area etc)	If yes – go to question 3; if no then consider deleting from the process
3. Is the 'problem statement' a gap? Consider: Needs additional assistance/ is not adequately addressed by existing programmes or not addressed at all	if yes – go to question 4; if no then consider deleting from the process
4. Would the problem if not 'treated' cause any of the following:	• Potential loss of life or injury (y/n) • Damage to key buildings, roads, power and water services (y/n) • Trade and economic loss (y/n) • Environment damage and loss of food resource (y/n) • Spread of pests and diseases (y/n) • Damage to traditional sites, fishing grounds and marine reserves (y/n) • Affect cultural values (y/n)
Count the (y) answers; an issue with 4 or more 'y' answers could be considered a "priority"	

Annex 8

How to do Problem Tree Analysis

Problem–Tree Analysis generally consists of the following three stages:

i) The analysis of problems related to the key issues (creating an image of reality).
ii) The analysis of objectives (the image of a future, improved situation).
iii) The analysis of strategies (the comparison of different clusters of objectives).

i) The analysis of problems related to the key issues (creating an image of reality)

Let us consider the following example where the Key Issue or Core Problem identified is: 'Increasing vulnerability and hazard risk in the coastal zone'.

Participants are first encouraged to discuss and decide if they are happy with the way in which the core problem is formulated. The facilitator will need to provide guidance on whether the problem statement is at an appropriate level, and whether it conforms to the guidelines for the formulation of problem statements. The participants and facilitator should not be afraid to revisit the formulation of the core problem statement if necessary.

Once agreement has been reached that the problem statement accurately represents the consensus view, that it is situated at an appropriate level, that it is not too vague or ambitious, then participants are asked to brainstorm associated problems, causes and effects. Participants are given pieces of coloured card on which to write their contributions. The facilitator then takes one card at a time and asks the proponent to explain what is meant by the statement on the card, why they think this is a problem and how it relates to the core-problem. Others are invited to contribute to the discussion and if all agree, the card is placed on the board. The same process is followed for each card.

Each card that is presented is discussed in relation to other cards that have gone before it. Cards that contain statements that overlap, or that are closely associated, will arise. The facilitator will ensure that these cards are placed together in 'clusters'. Normally, there will be clear 'cause-effect' relationships between cards and cards should be strategically placed to illustrate the 'cause-effect' relationships.

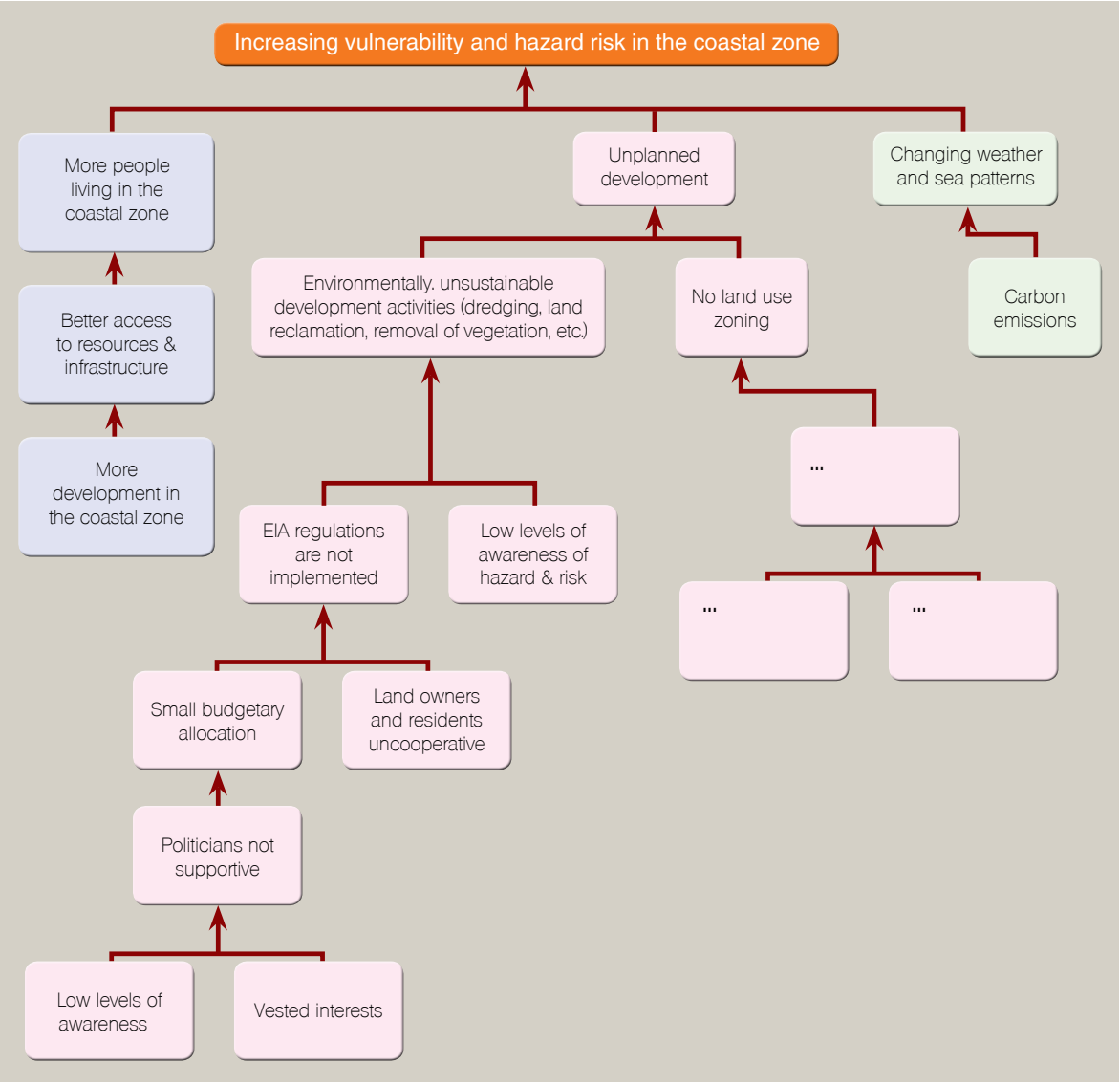
For the core problem of 'Increasing vulnerability and hazard risk in the coastal zone', the following kinds of associated problems, causes and effects might be raised:

- More people living in the coastal zone
- Changing weather and sea patterns
- Carbon emissions
- Unplanned development
- No land use zoning
- Small budgetary allocation
- Politicians not supportive
- More development in the coastal zone
- EIA regulations are not implemented
- Better access to resources & infrastructure
- Vested interests
- Low levels of awareness
- Environmentally unsustainable development activities (dredging, land reclamation, removal of vegetation, etc)

The facilitator initiates discussions with the participants regarding the cause and effect linkages between the above points. For example, a cause of the 'EIA regulations are not being implemented' is a 'small budgetary allocation'. One of the causes of 'a small budgetary allocation' is that 'politicians are not supportive'. The facilitator should probe each of the problems further, much like a child asking 'why' over and over.

Additional causes that emerge from the dialogue can be added to the problem tree in the agreed logical place. The problem tree is developed vertically, much like an organogram, with causes arranged under effects and with the core problem at the top. Cards are moved around by the facilitator in dialogue with the participants. Causes that are logically placed at the bottom of the tree are termed the 'root causes'. At the end of the exercise the resultant problem tree in the above example could look like Problem Tree Example 1.

Problem Tree Example 1



In the above example, the problem tree that is generated is an agreed 'image of reality' that has emerged from the analysis of the core problem. With the facilitator's skill and the group's joint reasoning capacity, the problem has been analysed in a structured manner with an inherent internal logic. The root causes of the prioritised disaster risk management problem have been identified, and are agreed upon by the participants. The latter is important given that many of the participants will also be responsible for implementation of the Action Plan.

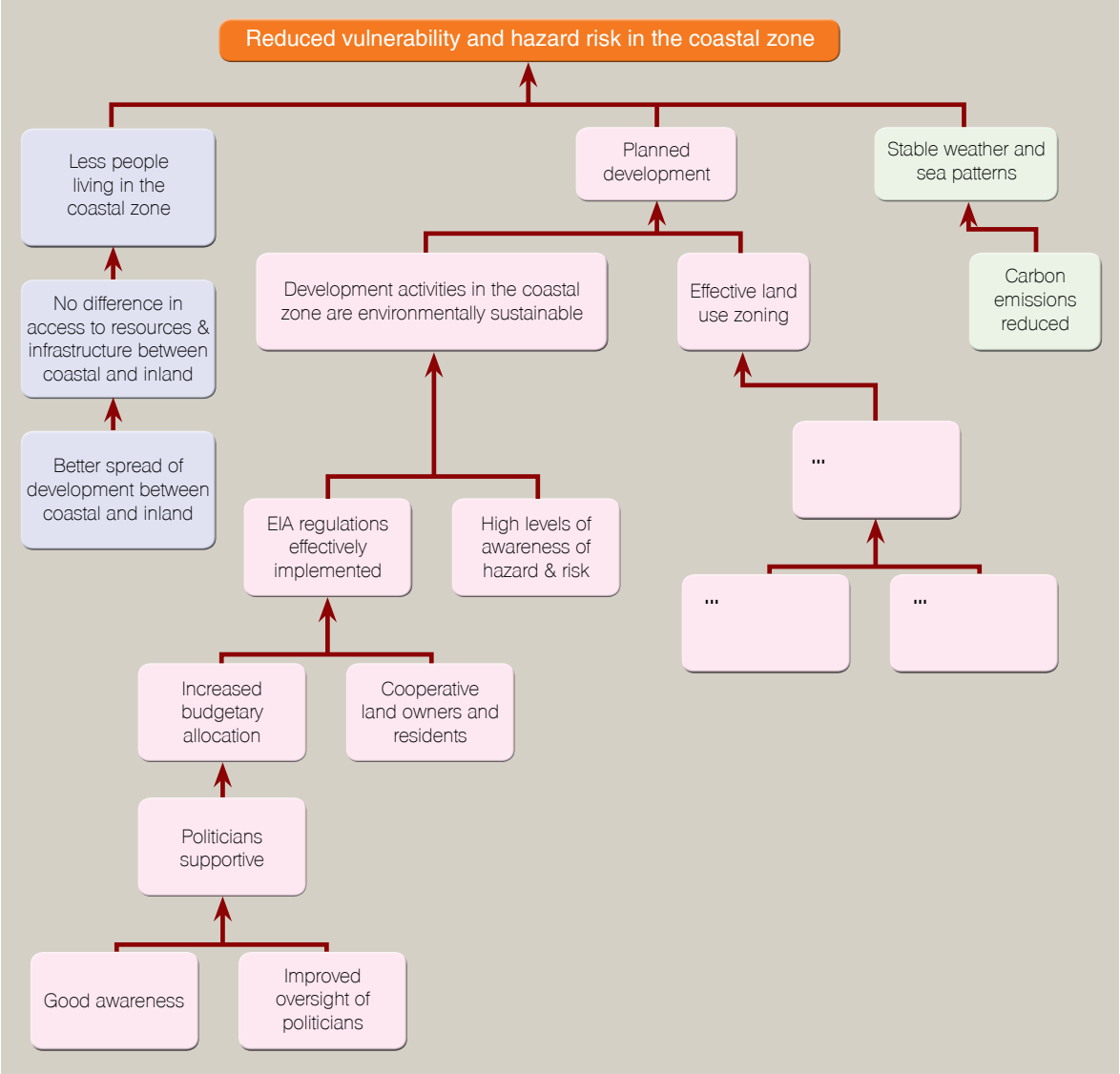
ii) The analysis of objectives (creating an image of a future, improved situation)

The problem tree is now ready to be converted into a 'solutions' or 'objectives' tree. This involves the translation of all the negative situations in the problem tree into realised positive states and verification of the resultant hierarchy of objectives;

Using the example above, one would begin with the root causes and convert these into objectives. The resultant objectives analysis tree represents the 'future desired state' (see Problem Tree Example 2). The logic is that if all the objectives are achieved the 'core problem' will simply disappear. For example, the root cause:

- 'Low levels of awareness [of politicians of increasing vulnerability and hazard risk in the coastal zone]' would change to 'Politicians have good awareness' [of increasing vulnerability and hazard risk in the coastal zone].
- 'Politicians are not supportive' would then change to 'Politicians are supportive', and so on.

Problem Tree Example 2



The facilitator and participants once more go through the objectives tree to verify that the logic is still maintained. Objectives can be rephrased or moved if need be.

iii) The analysis of strategies (comparing different clusters of objectives)

After having formulated the desired future situation the selection of possible interventions starts. To analyse the strategies for implementation the following steps are taken:

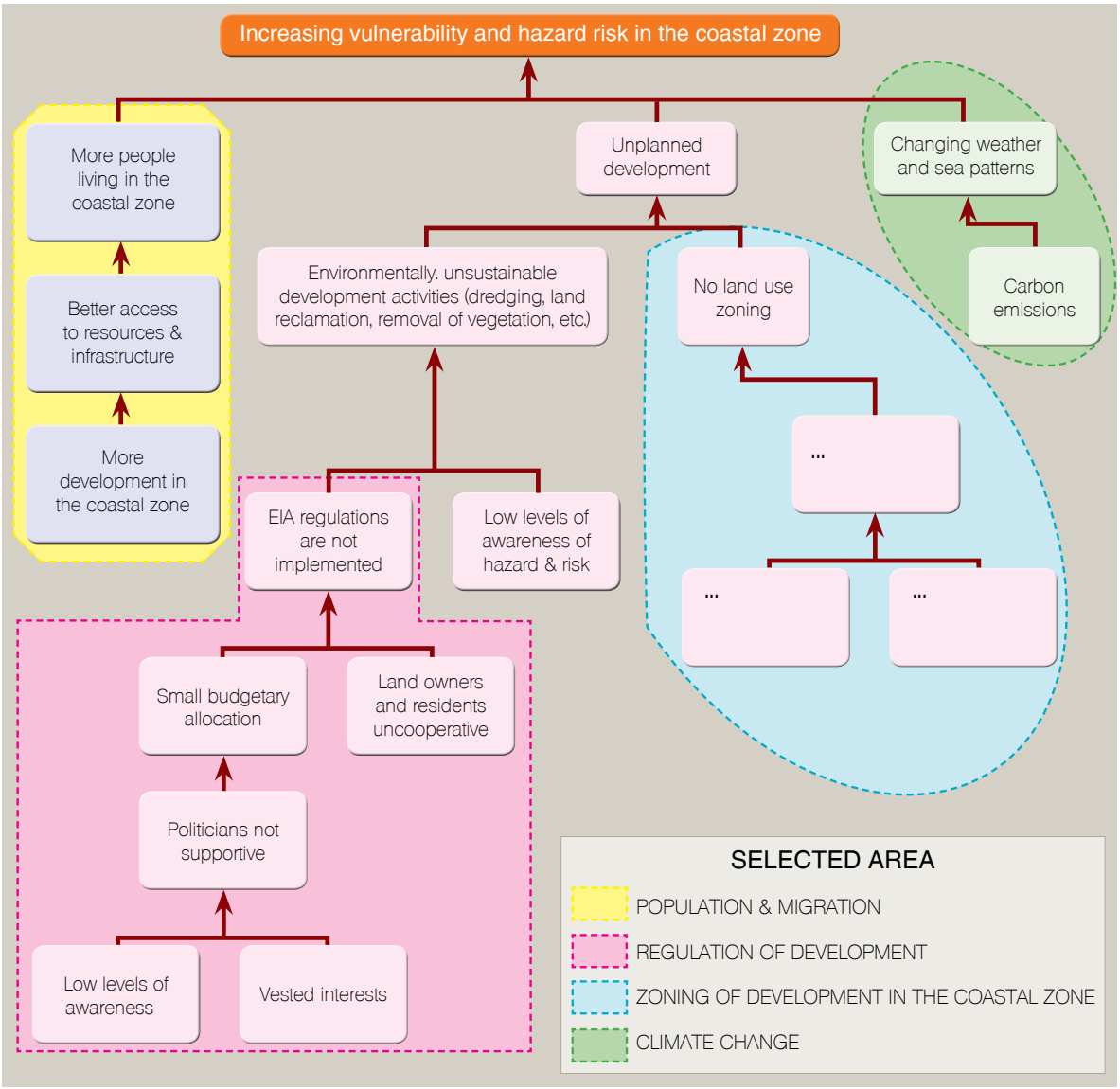
- Identification of the different possible groups of objectives contributing to a higher objective (clustering) Problem Tree Example 3.
- Choice of a strategy for the intervention, choosing the scope of the project (scoping).

Related issues are already clustered in the objectives tree. At this point you may find it useful to draw a circle around these clusters and to assign them labels (see Problem Tree Example 3). Thus in the example above the following clusters might be identified: population & migration; regulation of development; zoning pf development in the coastal zone; and the climate change cluster.

Choice of a strategy

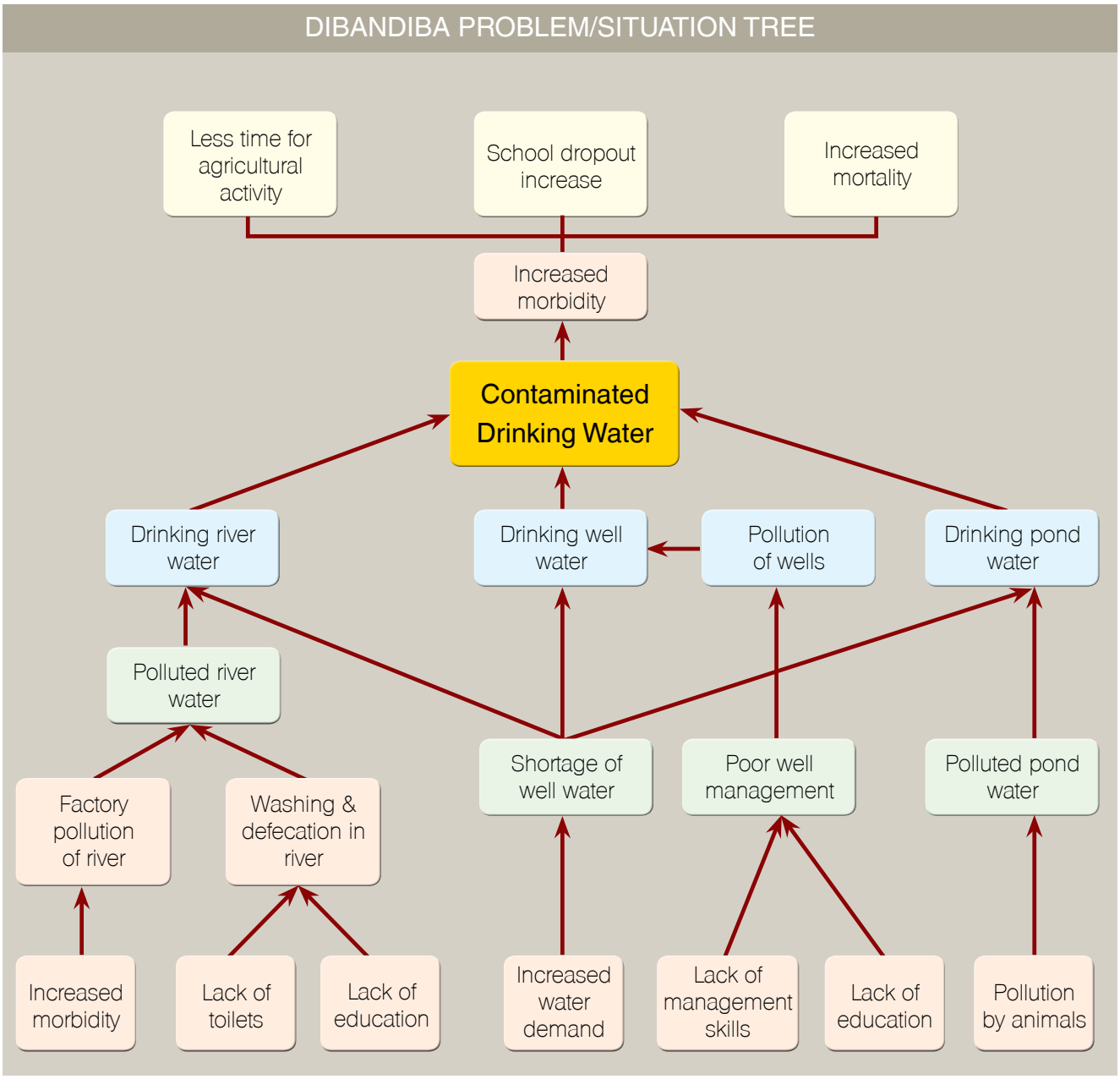
The different clusters identified form the range of strategy options available to address the core problem. The group will now need to decide which of these strategy options they wish to adopt. Ideally all achievable options would need to be adopted to holistically address the core problem. In the case of a National Action Plan, it may be possible to adopt all strategy options and later assign responsibilities to different institutional role players. Some options may be outside of the scope of the project. For example: 'reducing carbon emissions to reduce climate change' – while this is necessary, there will be limited scope for Pacific Island Countries to intervene, except perhaps on the level of international advocacy. From the Objectives Tree the group can now decide on the most appropriate hierarchy for presenting the Objectives in the action matrix. It is now relatively straight forward to determine appropriate activities that would be required to achieve the selected objectives. Some of the objectives themselves may be reorganised into Goals or Activities depending on the most logical level in the matrix hierarchy.

Problem Tree Example 3



Problem Tree dealing with the core problem of

'Contaminated Drinking Water'

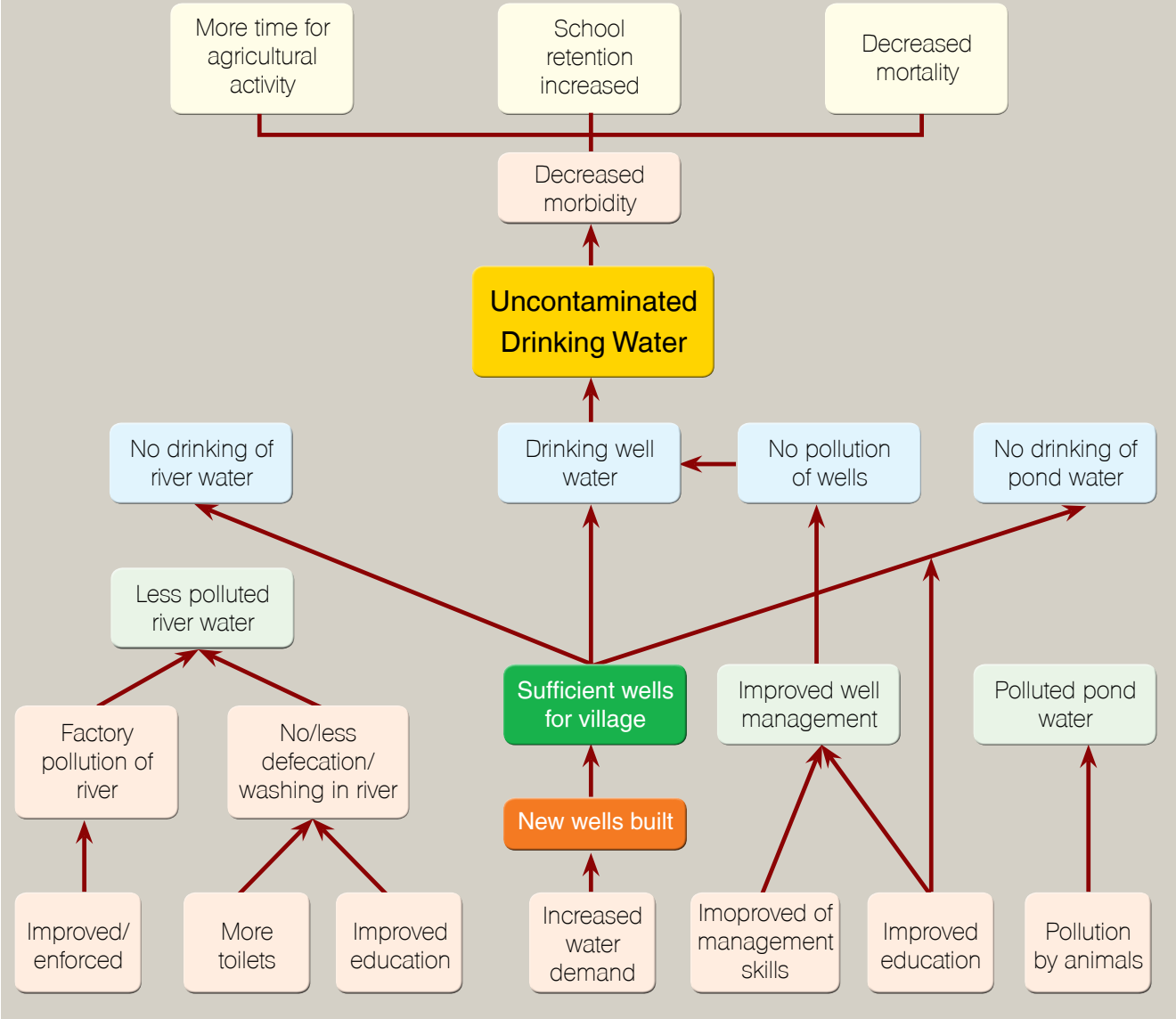


Annex 10

Solution Tree dealing with the idealised solution of

'Uncontaminated Drinking Water'

DIBANDIBA IDEALISED SOLUTION TREE



Examples of different NAP matrix formats

Example A

Goal 1: Outcome:					
Objectives	**Actions**	**Outputs**	**Output Indictors**	**Responsible Agencies**	**Timeline**
1.1	1.1.1 1.1.2 1.1.3				

Example B

I. Theme:					
BROAD OUTCOME					
STRATEGY	**KEY ACTIONS**	**SUB ACTIONS**	**RESPONSIBLE AGENCY**	**SPECIFIC OUTCOMES**	**ACTION LEVEL START/ COMPLETION DATE**
1.	1.1	1.1.1 1.1.2 1.1.3	1.1.1 1.1.2 1.1.3		

Example C

Strategies	Strategic Targets	Actions	Responsible Agencies
1.	1. 2.	1. 2. 3.	1. 2. 3.

Annex 12

Questions to inform NAP Implementation Arrangements

- What normally happens when major projects are established in ministries or departments in terms of implementation? Is a special structure established to coordinate implementation of the project?

- If so,
  - What would be the conventional requirements of such a structure?
  - How would it look diagrammatically?
  - Typically how many people might be involved in such a structure?
  - Are they specially recruited staff or are existing civil servants transferred to fill the various roles?
  - Would civil servants get paid an extra allowance for performing these roles in addition to their regular pay?

- If not,
  - How then is project implementation managed?
  - What are the normal requirements levied on ministries/departments for such implementation in terms of, for example, donor requirements?

Annex 13

A methodology for costing a National Action Plan

Introduction

The objective in this part of the guide is to describe a step-by-step process for estimating the total cost of implementing the proposed range of activities as specified in a NAP matrix. This is important for implementation, funding and monitoring and evaluation purposes.

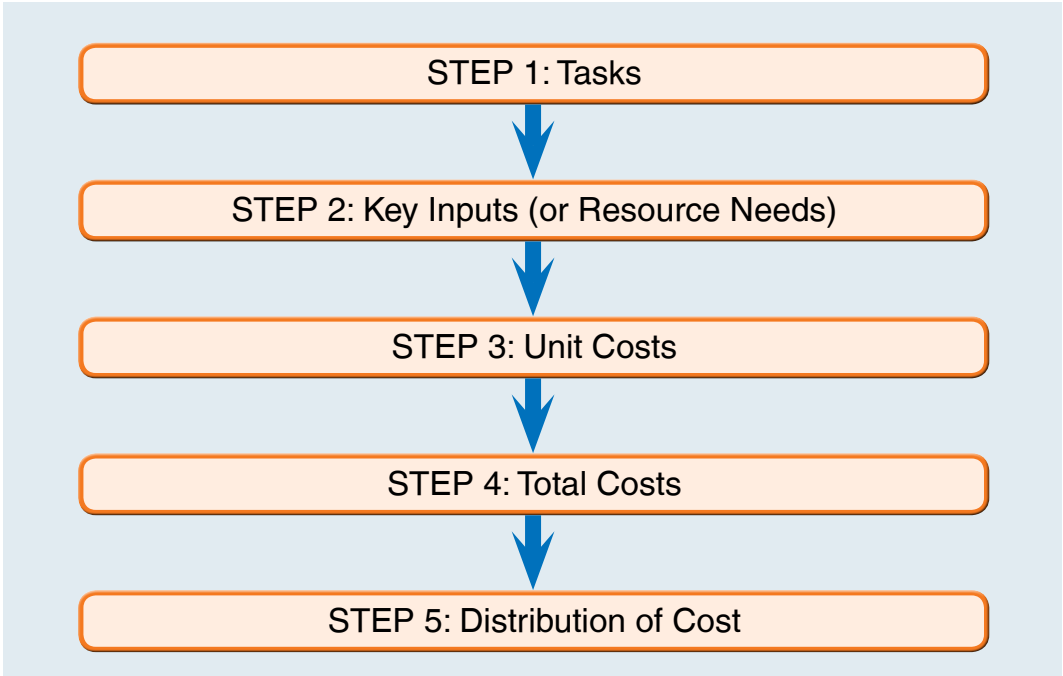
For the purposes of designing a financing strategy for the implementation of the NAP, this guide will show how the total cost estimate is broken down into the following:

(i) Government budget allocation: total cost of all actions and sub-actions that are covered by existing/forthcoming government budgets.

(ii) International Development Partner budget allocation: total cost of all actions and sub-actions that are covered by existing/forthcoming donor expenditures.

(iii) Incremental cost: those costs that are over and above items that are already accounted for in existing budget lines (national or donor) as above.

The following step-by-step guide is based on experiences of costing NAPs in Vanuatu, Republic of Marshall Islands and Cook Islands over the period 2006 to 2009. It is most effective to perform these steps with an appropriate TF member and/or technical expert who have first-hand experience of implementing this type of sub-action.



STEP 1: Identification of Tasks

The NAP matrix of actions is the starting point for the costing exercise. For each action (and/or sub-action) it is necessary to determine the series of actual tasks necessary to implementation. For instance, if the action is the running of a workshop for awareness raising purposes, then the series of tasks necessary to undertake the workshop will include venue hire, transportation of participants, food and refreshments, printing costs etc.

For this part of the exercise to be effective, it is important to perform this in consultation with those stakeholders that will be responsible for implementing those tasks, as well as those that have had actual experience of undertaking such activities.

STEP 2: What are the Resource Needs (or key inputs) for each Task?

Resource needs or key inputs are the types of inputs required to implement the actions in the NAP matrix. As in the example above, for the running of a workshop, the key inputs required are number of flights, number of meals, number of days of venue hire etc.

The types of resource needs (or key inputs) tend to vary by the type of cost. For the purposes of this exercise there are two main types of cost. Examples of resource needs (or key inputs) for operating and capital cost items are listed in the table below:

- Operating costs: outlays that do not constitute purchase of a physical item that would be repeatedly used over time.
- Capital expenses: relating to the purchase of physical assets that are used repeatedly over a long period of time.

OPERATING COST ITEMS	
COST CATEGORY	INPUTS REQUIRED
Workshop	Participants (no), Travel; DSA; reception, venue, printing and other items
Technical assistance	Amount of time for consultancy input
Personnel-related expenses	Government time in terms of salaries/wages and on cost (RMI)
Office equipment and supplies	General equipment and supplies (including computers) for the office
Maintenance and repairs	Maintenance and repairs for the office
Advertising/awareness raising	Advertising material; fees etc
Project management	Amount of time for project management
Community Consultation	Number of consultations, travel and related costs
CAPITAL COST ITEMS	
COST CATEGORY	INPUTS REQUIRED
Office building	Capital required for construction of new building or extension of existing structures
Office furniture and fixtures	
Retrofitting/disaster proofing	Capital required for retrofitting/disaster proofing existing structures
Equipment	Specialist DM equipment e.g. communication systems for emergency purposes

STEP 3: What are the Unit Costs?

Unit costs are the cost per input (or resource). These are required in order to estimate the total cost, by multiplying through by the key inputs (or resource needs) as in step 2 above. A unit cost is a cost per unit of key input (or resource) and is usually presented as a cost per unit of time or some measure of volume/weight, or activity e.g. $ per Hour or day; or $ per flight.

It is essential to review and ascertain the correct types of input variables, total numbers required and unit cost. Additionally, it is advisable to utilise expertise within the country to verify the input variables and these estimates.

STEP 4: Estimating the Total Cost

Estimating total costs can be a challenging process, particularly when there is an absence of already well established data sets. As such there are two approaches to estimating the total costs for NAP implementation:

[1] Total cost can be estimated by multiplying the number of key inputs required (from step 2) by the unit costs (from step 3) i.e.:

Total cost = Total number of units x Unit cost

This may seem relatively straight forward, but in some cases this level of information may not be readily available. In situations where it is unclear where (or whether) the data exists, it is advisable to take a flexible approach to data accumulation.

Where there are gaps in the data, then assumptions can be made relating to the inputs required and/or unit costs. For instance, for inputs required for holding a training workshop one can draw from recent and similar workshops in terms of number people attending, resources persons required, cost of hiring the workshop premises etc. In these situations it is important to record assumptions made in estimating inputs, unit costs and total costs.

[2] Total costs can be extrapolated from similar tasks or actions implemented in the country concerned. This approach was taken in costing the NAP for Vanuatu and RMI, where the process and costs of actions were modeled on comparative actions implemented by their respective Governments.

For instance, the implementation plan for Vanuatu referred to the introduction of DRR and DM issues as supplementary education material for year six level students. The tasks needed to develop the education material would include formation of a working group from the Project Management group which would meet with about 15 teachers for a two week period to develop two booklets – one for teachers and another for students. This would be followed up with two workshops for the Zone Curriculum Advisers who would in turn train the teachers. The costs were extrapolated from costs of similar activities that the Ministry of Education had undergone in the recent past.

In both approaches it is extremely important to ensure that the units used in the calculation of cost are consistent. For instance, if the unit cost of hiring an independent consultant for technical assistance is $500 per day, then the total cost is estimated by multiplying through by the number of days input by the consultant and not the number of months. This may seem relatively obvious, but when estimating costs for more detailed and complex inputs it is very easy to multiply through by the wrong units.

STEP 5: Distribution of Costs

For the purposes of designing a financing strategy for the NAP, it is necessary to identify the availability of funds to cover these total cost, and what additional funds may be required to finance the implementation of the NAP. In order to perform this calculation, it is necessary to break down the cost estimates as follows:

(i) Government budget allocation: total cost of all actions and sub-actions that are covered by existing/forthcoming government budgets

(ii) International Development Partner budget allocation: total cost of all actions and sub-actions that are covered by existing/forthcoming donor expenditures;

(iii) Incremental cost: those costs that are over and above items that are already accounted for in existing budget lines (government or donor) as above.

In most countries across the region the percent of Government to donor funding falls between:

Government	15 – 20 percent
Donors	85 – 80 percent
Private sector funding	Minimal

Example of a Programme Costing Process

This example is based on a typical series of activities required in a NAP matrix, based on recent experiences in a Pacific Island Country. It focuses on two related activities (or actions) as specified in the NAP matrix, with the objective of raising awareness of DRM issues specific to Outer Islands:

- Assigning an independent consultant to undertake an assessment of vulnerability issues in Outer Islands.
- Holding a workshop to discuss the findings of the assessment and to raise the awareness of Outer Island Disaster Risk Management issues.

STEP 1: Identification of Tasks

For each of the two actions it is necessary to identify the tasks (or sub-actions) that will be required to undertake these actions. Examples of these are highlighted (in grey) below.

Action	Task (or sub-action)	Lead agency	Time frame
1.1 Assessment of Outer Island DRM issues	1.1.1 Hire consultant for 2 months, to undertake consultation in capital city and two Outer Islands 1.1.2 Consultant to consult with stakeholders in capital and two Outer Islands	NDMO	2 months
1.2 Awareness raising campaign on DRM issues of Outer Islands	1.2.1 Workshop in capital city on Outer Island specific issues relating to DRM with stakeholders from Outer Islands and policy makers	NDMO	1 week

STEP 2: What are the Resource Needs (or key inputs) for each Task?

Once the tasks have been identified, the key inputs for undertaking these tasks can then be recorded as follows.

For action 1.1 the resource needs can be recorded in the highlighted fields as follows:

		Consultancy		Travel			
		Number of days	Fee Rate	Number of days	DSA	Flight Cost	Sub-Total
Action 1.1	1.1.1	40	$350/day				$14,000
	1.1.2			20	100	1000	3,000

For action 1.2 the resource needs for holding a workshop can be recorded in the shaded columns as follows:

		Operating Cost							
		Work Shop							
	Sub action	# of days	# of participants	# of workshops	Rate of DSA	Flight pp	Cost of venue	Printing and other costs	Sub total costs
Object 2.1									
Action 1.2	1.2.1	5	50	1	100	300	250	300	

STEP 3: What are the Unit Costs?

For action 1.1 the unit costs can be recorded in the highlighted fields as follows:

		Consultancy		Travel			
		Number of days	Fee Rate	Number of days	DSA	Flight Cost	Sub-Total
Action 1.1	1.1.1	40	$350/day				
	1.1.2			20	100	1000	

For action 1.2 the resource needs for holding a workshop can be recorded in the grey shaded columns as follows.

		Operating Cost							
		Work Shop							
	Sub action	# of days	# of participants	# of workshops	Rate of DSA	Flight pp	Cost of venue	Printing and other costs	Sub total costs
Object 2.1									
Action 1.2	1.2.1	5	50	1	100	300	250	300	

STEP 4: Estimating the Total Cost

Note that the sub-total cost of holding the workshop is either calculated by multiplying the resource needs (such as # of days; # of participants etc) by the unit costs (DSA rate; flight cost per person etc). Alternatively, this can be estimated by the actual cost of a similar workshop that was held in the same city for roughly the same duration and number of people. These can be recorded in the highlighted fields as follows:

For action 1.1 the total cost can be recorded in the highlighted fields as follows:

		Consultancy		Travel			
		Number of days	Fee Rate	Number of days	DSA	Flight Cost	Sub-Total
Action 1.1	1.1.1	40	$350/day				$14,000
	1.1.2			20	100	1000	3,000

For action 1.2 the total costs for holding a workshop can be recorded in the shaded columns as follows:

		Operating Cost							
		Work Shop							
	Sub action	# of days	# of participants	# of workshops	Rate of DSA	Flight pp	Cost of venue & refreshments	Printing and other costs	Sub total costs
Object 2.1									
Action 1.2	1.2.1	5	50	1	100	300	1000	300	$5,300

In this particular example the break-down of workshop costs are as follows:

- Venue and printing costs: 1000+300 = $1300
- DSA costs: 10x100 = $1,000 (note that only 10 participants were entitled to DSA)
- Flight cost: 10x300 = $3,000 (note that this was only for the same 10 participants)
- TOTAL COST: 1300+1000+3000 = $5,300

STEP 5: Distribution of Costs

In this example the distribution of costs can be estimated in the following way:

(i) Government budget allocation: the venue for the workshop as well as lunch and refreshments is usually provided by the government department if it relates to a government initiative. Therefore, this can be recorded as a cost allocated by the government.

(ii) International Development Partner budget allocation: it appears that a donor has included the cost of an assessment on DRM issues specific to Outer Islands;

(iii) Incremental cost: those costs that are over and above items that are already accounted for in existing budget lines (national or donor) as above.

The distribution of costs can be recorded as per the table below in the highlighted areas. For action 1.1 the total cost can be recorded in the highlighted fields as follows:

	Sub-Total	Government	International	Incremental
1.1.1	$14,000	0	$14,000	0
1.1.2	$3,000	0	$3,000	0

For action 1.2 the total costs for holding a workshop can be recorded in the shaded columns as follows.

	Sub-Total	Government	International	Incremental
1.2.1	$5,300	$1,000	0	$4,300

The incremental cost component was simply calculated by subtracting the government allocated budget for the workshop (i.e. $1,000 for venue hire and refreshments/lunch) from the total estimated cost ($5,300).

Annex 15

Pacific Regional Framework for Disaster Risk Reduction & Disaster Management

Box 1: Overview of the Pacific Regional Framework for Disaster Risk Reduction and Disaster Management

Theme I: Governance: Organisational, Institutional, Policy and Decision-making Frameworks

a) Integrate the management of economic, social and environment risks into national planning and budgetary processes

b) Include disaster risk assessment in development and investment decision-making right down to the community level

c) Strengthen whole of government and stakeholder collaboration in disaster risk reduction and disaster management, identifying lead agencies, roles and responsibilities

d) Coordinate and harmonise development partner assistance to ensure effective use of resources

Theme II: Knowledge, Information, Public Awareness and Education

a) Strengthen training programmes to enhance professional development in disaster risk reduction and disaster management amongst all stakeholders

b) Expand and focus public awareness and education programmes to enhance community resilience through community-driven approaches, initiatives and info sharing

c) Strengthen collaboration among government and non-government agencies to more effectively underpin info management, public awareness and education

d) Develop strategic and, long-term approaches to the design, implementation and evaluation of public awareness, education and training programmes

e) Develop resources for, and delivery of, media-based public awareness and education programmes

f) Affirm, record and protect traditional coping mechanisms

g) Integrate traditional knowledge into information management systems

h) Integrate disaster risk reduction and disaster management training where appropriate into formal education programmes

i) Strengthen national capacity for conducting comprehensive disaster impact assessments, and cost-benefit analysis of disaster risk reduction and disaster management measures

j) Establish an integrated national information system, for collection and management of comprehensive data and information, for disaster risk reduction and disaster management

Theme III: Analysis and Evaluation of Hazards, Vulnerabilities and Elements at Risk

a) Adopt and apply the CHARM process (see Annex 16) to assist decision making in disaster risk reduction and disaster management planning

b) Conduct hazard and vulnerability assessments and mapping at all levels, which will include the collection of required baseline data

c) Promote and apply community-based disaster risk assessment tools and best practices

Continued next page

d) Collect and analyze comprehensive data on the direct and indirect impacts of disasters on development in both the short and the long term

e) Develop strategies to increase the engagement of communities and incorporate traditional knowledge in disaster risk reduction and disaster management processes

f) Strengthen capacity at all levels to utilise risk assessment products and tools to enhance disaster risk reduction and disaster management, such as Environmental Vulnerability Index (EVI) as a monitoring tool

g) Strengthen networks, in particular at the national level, for more effective hazard and risk assessment including data sharing

Theme IV: Planning for effective Preparedness, Response and Recovery

a) Review and strengthen disaster management planning arrangements ensuring clearly-defined roles and responsibilities, and an integrated approach involving all stakeholders

b) Ensure that the disaster management organisational structure includes an adequately resourced National Disaster Management Office (NDMO) and functional emergency operations centre(s) and other infrastructure

c) Develop and implement a disaster management Training Programme including Community Based Disaster Risk Management

d) Determine, establish and maintain effective and sustainable emergency communications systems

e) Strengthen emergency preparedness and response agencies

f) Establish a national disaster fund for response and recovery

g) Establish a contingency stockpile of emergency relief items

h) Adapt regional guidelines and models of best practice for national implementation

Theme V: Effective, Integrated and People-Focused Early Warning Systems

a) Establish and/or strengthen institutional capacities to ensure early warning systems are integrated into govt policies, decision-making systems at both national and community levels

b) Complete inventories and needs analysis of national early warning systems with inputs from all stakeholders to ensure that traditional knowledge and community needs are addressed

c) Upgrade or redesign existing national forecasting or early warning systems to cater for major hazards

d) Develop and implement a comprehensive programme for community awareness and preparedness

Theme VI: Reduction of Underlying Risk Factors

a) Ensure the participation by all stakeholders: government agencies, private sector and communities in adopting and applying risk reduction tools and sharing of risk reduction information

b) Support and enhance the capacity of social and planning systems to ensure vulnerable populations are less exposed to disaster risks and disaster impacts

c) Promote risk-sensitive resource-use policies and practices and ensure compliance

d) Implement appropriate building codes and monitor and report compliance by responsible national administrative bodies

e) Develop financial risk-sharing mechanisms, particularly insurance, re-insurance and other financial modalities against disasters

f) Promote food security as an important factor in ensuring the resilience of communities to disasters

Annex 16

A Summary of the CHARM Process

A BRIEF for National FACILITATORS in the IDENTIFICATION and ASSESSMENT of COMMUNITY RISKS Towards the Development of NAP

1. ESTABLISH THE RISK MANAGEMENT CONTEXT

1-1 TASKS

A. Determine the management mechanism that will guide the management and implementation of risk reduction activities at the village, district, island, provincial and national levels within the context of development planning processes.

B. Establish risk criteria or risk measuring RULES at the village, tikina, island and provincial levels.

1-2(i) How to Do It "A"

- Identify existing systems, processes, practices and plans for development planning.
- Develop an agreed process for communicating and consulting with representatives of key stakeholders.
- Develop an agreed process to facilitate monitoring and review of programmes.
- Determine best structure such as committees and working groups to be used for the risk reduction management process.
- Identify development projects being implemented and determine existing risks.
- Determine future risks of proposed development projects (future risks).

1-2(ii) How to Do It "B'

Risk measuring RULES comprise a set of factors by which to measure risks; these are developed with the full involvement of the community in light of what is "acceptable or not acceptable" to the community. Risk measuring RULES are based on economic, social/cultural, health and/or other sectoral impacts as determined by the community most affecting them eg.

- Potential loss of life or injury;
- Damage to key buildings, roads, power and water services;
- Trade and economic loss;
- Environment damage and loss of food resource;
- Spread of pests and diseases;
- Damage to traditional sites, fishing grounds and marine reserves.

2. IDENTIFY RISK

2-1 TASKS

A. List all the risks that have affected the village and island communities ie identify the risks associated with all the hazards;

B. List all the risks that you consider may affect the village and island communities in the future ie identify vulnerable sectors and potential areas of impact.

2-2 (i) HOW TO DO IT "A"

Identify the risks associated with all the hazards

A risk is a combination of the impact of a hazard and the vulnerability of the village /island community. As well as listing all risks that result from the interaction of a hazard with a vulnerable community, it is necessary to also identify the less obvious risks that are associated with these hazards.

One of the suggested ways of establishing risks is to do it through brainstorming.

Get some paper and write down the thoughts of the team on interactions between all hazards and the community.

Write a list of risks that reflect what the problems are in your communities.

Risk statement should be short and to the point.

NOTE: Risk identification is extremely important and it is good to take time to ensure everyone understands. Risk identification should be done as thoroughly as possible because a risk missed at this stage may not be picked up later.

2-2 (ii) HOW TO DO IT "B"

Identify vulnerable sectors and potential areas of impact.

Identify the key sectors that could potentially be affected by the hazards; some sectors maybe vulnerable to a range of risks eg agriculture sector.

Reference should be made to the ISLAND / PROVINCE / NATIONAL development priorities.

3. ANALYSE RISK

3-1 TASKS

A. Conduct an Analysis of the likelihood and consequences of the risks associated with all hazards for the village and island communities.

B. Determine the level of risk and give each risk a risk rate.

3-2 HOW TO DO IT

By using the descriptors provided below, (a) Determine the likelihood of occurrence of the risks; (b) Determine the possible consequences (for each risk); (c) Rate the risk in accordance with their potential consequences and the likelihood of occurrence as the guiding principle.

o Measures of Likelihood, Potential Consequences and Levels of Risk

A qualitative scale of likelihood and consequences for determining levels of risk is described in the Joint Australia/New Zealand Risk Management Standard (Joint AS/NZS 4360:1999) and reproduced below:

Likelihood Levels

Likelihood Level	Descriptor	Description
A	Almost certain	Is expected to occur in most circumstances
B	Likely	Will probably occur in most circumstances
C	Possible	Might occur at some stage or time
D	Unlikely	Is not expected to occur but could occur at some stage
E	Rare	May occur only in exceptional circumstances

Potential Consequence Descriptors

Consequent (Impact) Level	Descriptor	Description
1	Insignificant	No injuries, some/little damage, small number displaced for a short time, little disruption to community. Some impact on environment with no lasting effects, some/low financial losses.
2	Minor	Some injuries requiring medical treatment, possible deaths, minor building and infrastructure damage, minor temporary displacement, some community disruption. Significant impact on environment with some long-term effects, significant impact on revenue capacity and moderate financial loss
3	Moderate	Medical treatment required, loss of life is low, moderate building and infrastructure damage, temporary displacement, significant community disruption. Serious impact on environment with long term effects, high impact on revenue capacity and high financial loss.
4	Major	Extensive injuries, number of deaths, high level of building and infrastructure damage requiring external assistance, significant number displaced for short period, community functioning with difficulty. Severe impact on environment with long-term effects, serious impact on revenue capacity and major financial loss.
5	Catastrophic	Massive injuries requiring extended medical treatment, numerous fatalities, wholesale and severe building and infrastructure damages requiring external resources, large number displaced for significant period, community only partially functioning. Severe permanent damage to the environment severe impact on revenue capacity and huge financial loss.

Levels of Risk for Risk Rating

Consequence / Likelihood	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
A (almost certain)	H	H	E	E	E
B (likely)	M	H	H	E	E
C (possible)	L	M	H	E	E
D (unlikely)	L	L	M	H	E
E (rare)	L	L	M	H	H

4. EVALUATE RISK

4–1 TASKS

A. Decide what risks are acceptable and what risks are unacceptable

B. Rank the Unacceptable Risks in order of priority for risk reduction measures.

4-2 HOW TO DO IT

Compare each risk rating assigned during the analysis process with the risk evaluation RULES as discussed in Establish the Context.

Rank all risks in order of priority for reduction measures. Document all acceptable risks. At this stage, the future focus of the process should be on those risks judged unacceptable. The acceptable risks also need to be documented as any of them may become unacceptable in the future.

There is no formal process or format to assist with determining the acceptability or otherwise of risks. Decision can only be reached following extensive consultations with all community members (village, women, youth, small business, etc).

5. RISK REDUCTION MEASURES

5-1 TASKS

A. Identify risk reduction options;

B. Select the best options that can be used to reduce risks;

C. Select a strategy for recommendation;

D. Plan and implement the risk reduction project.

5-2 HOW TO DO IT

1) List risks – in rank order from evaluation process

2) Determine the risk reduction option for those risks

Identify the full range of risk reduction options to eliminate or reduce risks to acceptable levels.

3) Decide which are the best options for the Unacceptable risks.

Assess the options based on factor such as:

- Cost and benefit
- Risk severity and potential for its reduction
- Sustainability of economic and social goals

4) Select and prioritise appropriate Risk Reduction measures

Discuss the risk reduction options until a single measure or mix of measures emerges as the most sensible, efficient and cost effective way of dealing with the identified risk.

A suggested way of selecting risk reduction measures is to choose a mix of the following strategies

- "Must Do", "Should Do", and "Could Do)".
- List the risk reduction measure in order of priority.

5) Allocate responsibilities by matching Risk Reduction Measures against Core Business Functions.

- What can be done at the village level
- What can be done at Island Council / District / Province level
- What needs to be submitted to Government for inclusion in Strategic Development Plans or agencies whose core business it is to attend to these risks.
- What can be submitted to NGO for donor funding

6) Identify and Assess existing and proposed projects against the Risk Reduction Measures (Gap Analysis)

Once core functions have been identified, agencies will be required to identify existing and proposed projects associated with their agency and determine if the risk reduction measures you want implemented by them are included in their plans.

7) Develop an Implementation Plan

This can best be done on a sector by sector basis (Agriculture, environment, fisheries). Ensure timelines, linkages with other agencies and the first things required are identified so as to have a coordinated approach in the implementation of activities.

Determine where external assistance is required

8) Coordinate and implement Risk Reduction Plans

Coordinate the implementation of the endorsed measures in accordance with the Provincial approved bottoms up approach. Monitor the progress of the implementation of risk reduction measures.