

**Infrastructure and Asset Management Project – IAMP  
Coastal Infrastructure Management and Disaster Management  
Component**

**Review of IAM – I Outputs and IAM – II Strategies**

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**“While hazards are inevitable, and the elimination of all risks impossible, there are many technical measures, traditional practices, and public experiences that can reduce the extent or severity of economic, environmental and social disasters”  
(United Nations Secretarial General – 1999)**

## TABLE OF CONTENTS

REGIONAL INITIATIVES.....	iv
Regional Disaster Management Arrangements .....	v
CLARIFYING STATEMENT.....	ix
Disaster Management, IAM-Risk Management and Emergency Response.....	ix
SUMMARY OF RECOMMENDATIONS .....	x
INTRODUCTION .....	1
Terms of Reference.....	1
Approach.....	1
SUMMARY OF FINDINGS .....	3
General Assessment (IAM-1) .....	3
Hazard Analysis.....	3
Risk Analysis and Evaluation .....	3
Treatment Options .....	3
ENHANCING IAM-II STRATEGIES .....	5
Recommend improvements/modifications to or changes in emphasis in, IAM-II project design. ....	5
Establish the Context .....	5
(1) Policy and Legislation.....	5
(2) Community Safety Unit/Disaster Management Unit.....	5
B. Hazard Analysis .....	6
C. Identify, Analyse and Evaluate Risk.....	7
D. Treating Risks .....	7
Identify key risks or barriers to achievement of objectives and stated outcomes, or to the sustainability of the benefits and reforms expected after completion of IAM-II.....	9
(1) Maintaining the Community Confidence.....	9
(2) PUMA Capacity.....	9
Program Support System .....	9
Monitoring and Evaluation Support System.....	10
(3) Resourcing the Project .....	10
(4) Departmental Buy-In .....	10
Review the reasonableness of budgets and suggest any improvements for IAM-II	11
Identify and comment on any supporting activities that must be achieved by implementation agency for IAM-II or any supporting agency. ....	12
1. Credibility Category.....	12
2. Sustainability Category .....	12
3. Observation.....	12
Consider and recommend any changes to the proposed implementation/procurement arrangements for IAM-II. ....	13
National Disaster Management Arrangements .....	13
Program Implementation .....	13

### Attachments:

1. Terms of Reference
2. Comparison Chart – IAM-I and IAM-II
3. Kiribati Hazard Assessment Example
4. List of Consultations undertaken and document reviewed
5. Newspaper article “Samoa Observer” dated 20 May 2003.

## LIST OF ACRONYMS

<b>Acronym</b>	<b>Meaning</b>
CHARM	Comprehensive Hazard and Risk Management
CIM	Coastal Infrastructure Management
GoS	Government of Samoa
CSU	Community Safety Unit
IAM	Infrastructure Asset Management
ISDR	International Strategy for Disaster Reduction
MNRE	Ministry Natural Resources and Environment
NDMO	National Disaster Management Office
NGO	Non governmental Organisation
PUMA	Planning and Urban Management Agency
Regional Agency	South Pacific Regional Environment Program (SPREP), South Pacific Community (SPC), Forum Fisheries Authority (FFA) and SOPAC.
SOPAC	South Pacific Applied Geoscience Commission
UN	United Nations

## REGIONAL INITIATIVES

### Regional Disaster Management Arrangements

The Pacific is a very diverse region in which countries range from being large resource based entities through to smaller atoll countries that have very few natural resources other than the resources of the sea. In most countries there is a strong dependence on the subsistence sector, which makes them particularly vulnerable to external influences such as those associated with environmental hazards, drought, plant and animal disease, earthquakes and cyclones.

The 1990's was declared by the United Nations (UN) as the International Decade for Natural Disaster Reduction (IDNDR). The aim of the IDNDR was to unite countries from around the world in their quest for safer communities and sustainable development. In 2000 the UN established the International Strategy for Disaster Reduction (ISDR) to replace the IDNDR so that global momentum in risk reduction could be maintained in the twenty first century. The ISDR global vision evolves around two key statements:

- “To enable all communities to become resilient to the effects of natural, technological and environmental hazards, reducing the compound risks they pose to social and economic vulnerabilities within modern societies”; and,
- To proceed from protection against hazards to the management of risks through integration of risk prevention into sustainable development”.

Regionally, the 1995 Madang Forum Meeting framed and released a vision that was linked to vulnerability to natural hazards. This vision not only provides a common goal for the region to strive for, but also places before the key political, policy and development partners, a challenge that can only be effectively met through a demonstrated commitment to the integration of effective risk reduction strategies.

#### **Regional Vision**

**“Vulnerability to the effects of natural hazards, environmental damage and other threats will be overcome”**

A second initiative to come from the Medang Meeting was the mandate for SOPAC to coordinate disaster management and risk management within the region.

It was widely acknowledged that a key factor that would influence the effectiveness of the ISDR and associated regional initiatives will be the capacity of countries to develop whole of country risk management programs that incorporate the expertise, experiences and resources of government, NGOs and regional partners.

The CHARM guidelines were produced to assist countries of the Pacific Region in achieving this goal. The processes outlined within the CHARM Guidelines have been modelled on the international risk management standard (AS.NZS: 4360:1999) however they have been specifically designed for use in the Pacific Region (see Figure 1.1).

<b>Normal Management</b>	<b>Risk Management (AS/NZS 4360:1999)</b>	<b>Disaster Risk Management (Qld)</b>	<b>CHARM</b>
<b>Problem Definition</b>	<b>Establish the Context:</b> <ul style="list-style-type: none"> <li>Establish strategic, organisational and risk management contexts</li> <li>Develop risk evaluation criteria</li> <li>Define the structure</li> </ul>	<b>Establish the Context:</b> <ul style="list-style-type: none"> <li>Identify issues and establish risk management framework</li> <li>Develop risk evaluation criteria</li> </ul>	<b>Establish the Context:</b> <ul style="list-style-type: none"> <li>Sensitise senior political and policy officials</li> <li>Identify strategic issues</li> <li>Identify existing frameworks for management of CHARM</li> <li>Identify national development priorities</li> <li>Review project appraisal criteria</li> <li>Develop Training support program</li> <li>Develop risk evaluation criteria</li> </ul>
<b>Research</b>	<b>Identify Risks</b> <ul style="list-style-type: none"> <li>Identify what can happen</li> <li>Identify how and why it can happen</li> </ul>	<b>Identify Risks:</b> <ul style="list-style-type: none"> <li>Identify and describe hazards, community and environment</li> <li>Scope and analyse vulnerability</li> <li>Establish risks</li> </ul>	<b>Identifying Risks</b> <ul style="list-style-type: none"> <li>Identify and assess hazards</li> <li>Identify and assess vulnerability in key sectors</li> <li>Identify risks</li> </ul>
<b>Analysis</b>	<b>Analyse Risks:</b> <ul style="list-style-type: none"> <li>Determine existing controls</li> <li>Determine likelihood and consequence</li> <li>Estimate level of risk</li> </ul>	<b>Analyse Risks:</b> <ul style="list-style-type: none"> <li>Determine Likelihood</li> <li>Determine Consequence</li> <li>Estimate level of risk</li> </ul>	<b>Analyse Risks</b> <ul style="list-style-type: none"> <li>Determine Likelihood</li> <li>Determine Consequence</li> <li>Assign level of risk</li> </ul>
<b>Decision Making</b>	<b>Evaluate Risks:</b> <ul style="list-style-type: none"> <li>Compare against criteria</li> <li>Set risk priorities</li> <li>Accept risk or not</li> </ul>	<b>Evaluate Risks:</b> <ul style="list-style-type: none"> <li>Compare against criteria</li> <li>Set risk priorities</li> </ul>	<b>Evaluate Risks</b> <ul style="list-style-type: none"> <li>Decide on risk acceptability</li> <li>Set risk priorities</li> </ul>
	<b>Treat Risks:</b> <ul style="list-style-type: none"> <li>Identify treatment options</li> <li>Evaluate treatment options</li> <li>Select treatment options</li> </ul>	<b>Treat Risks:</b> <ul style="list-style-type: none"> <li>Identify mitigation, preparedness, response and recovery options</li> <li>Evaluate options</li> <li>Select options</li> </ul>	<b>Treat Risks:</b> <p><b>Managing Existing Risk:</b></p> <ul style="list-style-type: none"> <li>Evaluate treatment options</li> <li>Select and prioritise treatment options</li> <li>Allocate responsibilities against core business functions of agencies</li> <li>Develop an implementation plan based on gaps</li> <li>Link with regional partners</li> <li>Close the programming gap through new project proposals</li> <li>Implement the plan</li> </ul> <p><b>Managing Future Risk</b></p> <ul style="list-style-type: none"> <li>Identify options for project design changes</li> <li>Liaise with national authorities and development partners</li> <li>Incorporate changes.</li> </ul>
<b>Implementation</b>	<ul style="list-style-type: none"> <li>Prepare treatment plans</li> <li>Implement plans</li> </ul>	<ul style="list-style-type: none"> <li>Plan and Implement Treatments</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate and monitor implementation</li> </ul>
<b>Monitor and Review</b>	<ul style="list-style-type: none"> <li>Monitor and review</li> </ul>	<ul style="list-style-type: none"> <li>Monitor and review</li> </ul>	<ul style="list-style-type: none"> <li>Undertake formal program reviews</li> </ul>

Figure: 1.1 CHARM Process

CHARM assists countries to move the focus away from departments and agencies supporting a wide range of non-coordinated activities, towards a broader and more integrated programming approach that will promote the achievement of sustainable outcomes.

The regional CHARM strategy is managed by SOPAC through their Community Risk Program. They achieve this objective through a network of partners including SPREP and SPC. A number of Memorandum of Understandings have also been established with regional and Australian based disaster management agencies. The key elements of the community risk program target:

1. the strengthening of disaster management capabilities
2. the identification of scientific solutions that provide a knowledge base for the mitigation of hazards and the reduction of vulnerability
3. the mainstreaming of risk management practices into national development planning.

Each of these components has a range of corresponding activities that are designed to strengthen national disaster management and risk management capabilities. The rationale for CHARM is to integrate recognised risk management practices within development planning processes. This is conceptualised in figure 1.2.

Programs for other regional organisations such as SPREP (environmental strategies) and SPC (agriculture, boat safety, animal husbandry and plant control) should be investigated to see whether they can support or add value to Samoa's risk and vulnerability reduction efforts as they apply to national development priorities.

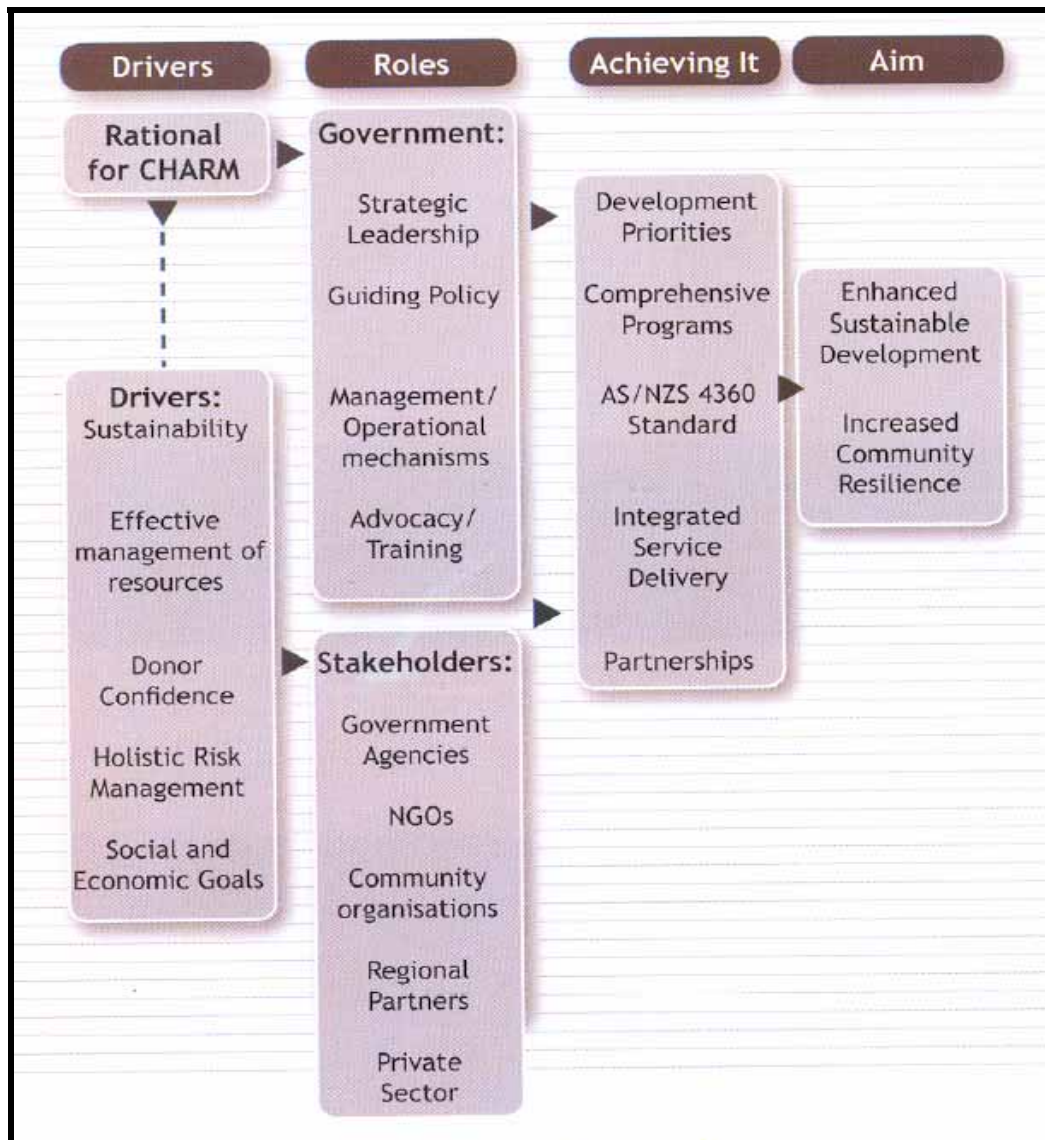


Figure: 1.2 - The Drivers for CHARM and Effective Risk Management

## CLARIFYING STATEMENT

### Disaster Management, IAM-Risk Management and Emergency Response

**Myth:** Disaster management is about managing disasters.

**Fact:** Disaster management and risk management being undertaken under IAMP are very similar. Both are designed to enhance national development, strengthen community resilience and increase community safety through deliberate risk reduction strategies that have been designed around formal hazard analysis. The **Comprehensive Hazard and Risk Management (CHARM)** concept has been designed and introduced to the region to assist national governments to achieve these risk reduction objectives, and provides a means through which a comprehensive range of treatment options can be identified that target:

- **The management of existing risk** – as identified through hazard analysis processes.
- **The minimisation of future risk** – through regulatory and land use management associated with the EIA
- **The management of residual risk** – generally people safety and resource protection focused.

**CIM strategies** focus primarily on the management of **existing and future risk** related to infrastructure (including housing). Disaster management focuses more on reducing the **“residual risks”** achieved principally through utilising the outputs of hazard and risk analysis processes (i.e. hazard mapping).

For clarification purposes residual risk may be defined as:

“Risk that cannot be eliminated through mitigation or land use/regulatory strategies”

Residual risk also applies in circumstances where mitigation strategies have been identified, however implementation of treatment strategies to protect infrastructure has been delayed. In such cases the emphasis is generally placed on the protection of people and resources as an interim strategy.

For example: If village houses/communities (or part thereof) are considered to be within a high risk zone, then the risk analysis should include an assessment of the knowledge and adequateness of warning systems, the availability of alternate shelters or safe havens for people and resources. Where clinics and schools have been identified in high-risk zones, treatment strategies should seek to ensure that the resources contained within the structures are protected.

**Emergency response** is the direct action taken in response to an existing or emerging threat. For a cyclone this would be the action taken before and immediately after impact. This function is usually coordinated from a high political/government level utilising the plans and procedures developed as part of the residual risk treatment option processes.

## **SUMMARY OF RECOMMENDATIONS**

- R1.** Consideration is given to the conduct of a number of workshops to overview the CIM processes and new legislation/policies and particularly their implications for departments, donors and regional agencies agencies.
- R2.** Consideration be given to renaming the NDMO to Community Safety Unit or if preferred, Community Safety and Emergency Response Unit. It is strongly suggested that the title not contain the word disaster.
- R3.** That the PUMA link with the SOPAC Community Safety Program to map out a professional development strategy for the new NDMO/Community Safety Officer/Community Safety and Emergency Response Officer (s).
- R4.** That provision is made within the IAM-II budget to establish and appropriately resource the Community Safety Unit within MNRE.
- R5.** Consider maintaining the current focus just on cyclone induced hazards until the CIM Planning process has covered a majority of districts.
- R6.** Consideration is given to the conduct of a pilot “risk and potential consequences” mapping exercise related to climate change influences during the second half of the IAM-II phase.
- R7.** That the risk assessment process be expanded to include a focus on protecting people and critical resources that are associated with identified infrastructure situated within high-risk zones.
- R8.** That PUMA obtain information from SOPAC on the Community Vulnerability Index Project and its potential for application to the CIMP risk assessment processes.
- R9.** Consideration is given to the expansion of CIMP risk assessment processes to ensure that risks related to community safety and resource protection are identified and are included as residual risk treatment options.
- R10.** That the PUMA/Community Safety Unit utilise hazard mapping outcomes and residual risk treatment options as outlined in IAM-I District CIM Plans as the basis for the identification and design of its annual work plans and other support activities.
- R11.** Consideration is given to the conduct of a flood risk assessment pilot for Apia Town to identify treatment options to minimise the impact of flash flooding.

## **INTRODUCTION**

The Infrastructure Asset Management Project (IAMP) is an adaptable project funded under an International Development Association (IDA) loan. The objective of the IAMP is to ensure that “transport and coastal infrastructure assets are economically, environmentally and socially sustainable and managed by an effective partnership of all stakeholder’s. The project has two main phases:

1. IAM-1: Meeting Vital Priorities and Strengthening Management (1999 – 2002)
2. IAM-2: Investing for Sustainable Growth and Protection (2002 – 2006).

Significant achievement has been made during IAM – I. Many of the institutional, policy and legislative outputs have created the enabling environment to undertake risk treatment for Coastal Infrastructure and communities within a whole of government framework that is linked to the priorities of government as outlined in the “Strategies for Developing Samoa 2001 – 2004”.

The challenge for the Government, PUMA and the MNRE will be to demonstrate [through achievement] to communities that the CIM Planning process is not just another planning exercise. The coordination of the whole of government effort, together with that of the donors and regional agencies is therefore central to the achievement of CIM objectives.

From a neutral third party perspective, it is considered the work being undertaken through the IAMP/CIM process has positioned Samoa as a significant leader within the region in the field of community safety and risk reduction.

### **Terms of Reference**

The Terms of Reference (ToR) for this mission are included within this report at Attachment 1.

The key focus has been to review the outcomes of IAM-1, and through the lessons learned, critique and improve the design of IAM-2 risk assessment and disaster management. The critical elements considered during this process were to ensure that the treatment options as outlined in District CIM Plans addressed:

- Immediate risk reduction strategies
- Residual risk management strategies - that will be required to cover immediate risk issues until treatment options as identified within CIM Plans can be actioned)
- Future risk elimination through EIA.

### **Approach**

The mission was undertaken during the period 14 – 29 May 2003 however only ten days was assigned for in-country review and consultation. The approach adopted for the in-country component of the mission involved four key strategies.

1. Review of literature and consultation with key stakeholders (see attachment for details).
2. Assessment of IAM-1 and proposed IAM-2 outputs utilising the process outlined in the CHARM guidelines. This will assist in the validation of outputs, the alignment of synergies between the programs and the identification of gaps.
3. The alignment of IAM 1 and 2 outputs and activities with the nine priorities of government. This will provide some direction to the development of priorities for the rollout of IAM – 2 programs.
4. The identification of strategies to strengthen Disaster Response Planning and Coordination capacities.

## **SUMMARY OF FINDINGS**

### **General Assessment (IAM-1)**

The IAMP and the CIMP strategies are without doubt, excellent initiatives. The work outputs prepared by GoS officers and consultants during IAM-I are considered to be among the best community risk reduction efforts being undertaken by a government in the region. Key milestones have included:

- Coastal hazard surveys for all islands
- Endorsement of the CIM Strategy by Cabinet
- Completion of CIM Plans for fifteen (15) districts
- Implementation of Codes of Environmental Practice (CEOP) for use on construction works
- Implementation of Environmental Impact Assessment processes related to government sector projects.

These outputs combined, will now form the foundations upon which to build more effective and sustainable risk reduction efforts in Samoa.

### **Hazard Analysis**

The CIMP process has quite deliberately targeted Cyclones as the predominant hazard with a focus on flooding, landslip and coastal erosion. This is a sound first phase strategy. It is acknowledged that GoS officials (and particularly PUMA) have recognised the need to expand the risk assessment process across a broader range of hazards. The key to this expansion will be community confidence that action will follow planning, and also the number of strategic partners that can help deliver the agreed treatment options.

For IAM-I, the CIM Planning process adopted a very methodical approach to analysing the hazards in order to produce hazard maps. Information was obtained through GIS, Aerial Photographs, Anecdotal Evidence, Reports and through Field Trips, which included extensive consultation with community leaders.

### **Risk Analysis and Evaluation**

The CIMP has targeted critical infrastructure as the focus of its risk analysis emphasis. While this is a sound strategy, it must be understood that vulnerable infrastructure often leads to even more vulnerable and less resilient communities. National development strategies remain vulnerable when both infrastructure and people are at risk and therefore risk reduction strategies should be all encompassing to include community safety and protection of resource options.

### **Treatment Options**

Treatment options have been identified through an extensive community engagement process combined with the use of a detailed cost benefit analysis. District CIM Plans

outline the agreed treatment options in addition to defining clearly the responsible partner for implementing action for each strategy.

It has to be accepted that for one reason or another there will be delays in implementing some treatment options. Although there has been general agreement with community leaders on the best [cost effective] options to reduce risk to infrastructure, there will still be expectations that some immediate action will follow the completion of District CIM Plans. CIM Plans developed under IAM-I make no provision for residual risk treatment options to be employed as an immediate risk reduction strategy. Such plans may not remove the direct risk to the infrastructure (i.e. Clinic or School), however they can significantly reduce the loss of resources within such infrastructure and thus enable a rapid return of services after a cyclone event.

## ENHANCING IAM-II STRATEGIES

### **Recommend improvements/modifications to or changes in emphasis in, IAM-II project design.**

The linkages and outputs between IAM-I and IAM-II have been scoped against the processes of the CHARM concept (see Figure 1.1). The results of this assessment are discussed in the following paragraphs, however they are also displayed in table form at Attachment (2) for simplified reading.

#### **Establish the Context**

##### **(1) Policy and Legislation**

IAM-II proposes to add to the already impressive list of IAMP achievements with the development of policy and/or legislation related to land registration, land management and compensation. In all, the first phase of the IAMP-CIM program has or will introduce a number of new initiatives that will have a significant bearing on the programs undertaken or funded by all government departments, donors, regional agencies and communities. Their understanding and compliance with the changes will be critical to the success of the CIM Plan treatment options implementation.

**R1.** Consideration is given to the conduct of a number of workshops to overview the CIM processes and new legislation/policies and particularly their implications for departments, donors and regional agencies.

##### **(2) Community Safety Unit/Disaster Management Unit**

The National Disaster Management Office (NDMO) was previously positioned within the Office of the Prime Minister and Cabinet. The responsibilities of the office were very much aligned with developing disaster plans and the provision of training to government officers and NGOs. Professional development and programming assistance to this office was in the main provided through the SOPAC Regional Disaster Management Project. NDMO's typically operated outside of the mainstream of government and rarely utilised technical information such as hazard and risk analysis outputs (i.e. hazard mapping) to guide their activities.

The transfer of the disaster management responsibilities to MNRE, together with the implementation of CIM Plans now provides an opportunity to realign the functions of the office to reflect a greater Community Safety responsibility that focuses on the implementation of residual risk treatment options as outlined in CIM Plans. Under this strategy, the Community Safety Office would address immediate community safety matters, in addition to dealing with the national planning requirements for effective response, relief and recovery. Should this view be supported, there would be a requirement to modify the MNRE Organogram that currently indicates that the Disaster Management Unit has responsibility for risk management and hazard management. Both are whole of government functions.

The title “Community Safety Officer” removes the negative connotations associated with the word disaster. The CHARM acronym was developed for the same reason with considerable success. The SOPAC Regional Disaster Management Project has now been retitled the “Community Risk Program”. These two examples are part of a growing trend aimed at changing community and government perceptions of the work of disaster management officials.

In terms of professional development for the staff, MNRE should link closely with the SOPAC Community Risk Program. They offer a range of support programs including training. SOPAC have also established an MOU with the Queensland Department of Emergency Services. Under this arrangement, national officers are offered opportunities for work assignment in Queensland that is closely linked with an ongoing mentoring program.

The unit will also have to be appropriately resourced in order for it to effectively undertake its mandated roles and responsibilities. A suggested list of resources is included within the budget details under ToR item two (page 11).

**R2.** Consideration be given to renaming the NDMO to Community Safety Unit or if preferred, Community Safety and Emergency Response Unit. It is strongly suggested that the title not contain the word disaster.

**R3.** That the PUMA link with the SOPAC Community Safety Program to map out a professional development strategy for the new NDMO/Community Safety Officer/Community Safety and Emergency Response Officer (s).

**R4.** That provision is made within the IAM-II budget to establish and appropriately resource the Community Safety Unit within MNRE.

## **B. Hazard Analysis**

IAM-II should continue to maintain the narrow focus it has on cyclone impacts and the potential for flooding, landslip and coastal erosion – at least until the majority of District CIM Plans have been developed. One reason for this is that it will be extremely difficult to meet community expectations in respect to implementing action associated with the treatment options for the existing range of hazards. Adding more to this will run the risk of damaging the strong partnership arrangements with District and Village leaders and placing CIM at risk to losing grassroots support.

Further, there is already a significant amount of information contained within GIS databases on a range of hazards. During IAM-II, it is proposed to extend the GIS database and this should provide the foundations for expanded hazard analysis. There is ample opportunity for other hazards to be introduced during the Environmental Impact Assessment process.

PUMA have indicated a strong desire to incorporate climate change factors in the expansion of risk assessment across more hazards. Such an exercise should include an assessment of hazards and their impact on specific islands and sectors in order to identify potential or likely consequences and to determine immediate, residual and future risk treatment options. SOPAC and the Queensland Department of Emergency

Services have jointly developed the CHARM Guidelines to aid national governments in undertaking effective risk management. In Kiribati, officials have used these guidelines to map the potential consequences of climate change influences across islands and by sector (see Attachment 3). This provides an excellent management tool for government as it enables them to protect development programs, by way of initiating mitigation strategies long before the event becomes a disaster or major social issue. This may be a useful approach in Samoa.

The Strategies for the Development of Samoa (2001-03) outline the nine priorities of government and this should be used to identify priority hazards and sectors for which a broader hazard assessment should target. It is suggested that it may be useful to run a workshop during the second half of IAM-II to map out the risks; potential consequences and treatment strategies related to climate change influences from a national perspective. District and village level interventions could follow at a later date.

**R5.** Consider maintaining the current focus just on cyclone induced hazards until the CIM Planning process has covered a majority of districts.

**R6.** Consideration is given to the conduct of a pilot “risk and potential consequences” mapping exercise related to climate change influences with a more detailed assessment based on finding undertaken during the second half of the IAM-II phase.

### **C. Identify, Analyse and Evaluate Risk**

The process adopted for IAM-I is considered sound, although it has been recognised within the consultants report that some of the information available for this process may not have been as accurate as required. The focus on infrastructure alone is considered too narrow.

**R7.** That the risk assessment process be expanded to include a focus on protecting people and critical resources that are associated with identified infrastructure situated within high-risk zones.

**R8.** That PUMA obtain information from SOPAC on the Community Vulnerability Index Project and its potential for application to the CIMP risk assessment processes.

### **D. Treating Risks**

The focus of the CIM Planning process for IAM-II should be expanded to include a range of residual risk treatment options related to the protection of people and resources.

The NDMO/Community Safety Unit can address this issue from IAM-I activities by utilising the results of hazard mapping exercises to identify other programs and activities such as the development of evacuation plans, the design of education and awareness programs, strengthening of community warning systems and the development of relief distribution and damage assessment procedures.

Given the flood consequences associated with the heavy rainfall that impacted Samoa during the evenings of 18 and 19 May 2003, it is suggested that a special pilot project be established to undertake a full risk assessment of the central business district of Apia. The Samoan Observer dated 20 May 2003 (see Attachment 5) under the heading “Floods hurt business, drainage exposed” suggested that damage caused will top the \$35m in damage caused by the 2001 flood.

In the same article, a local businessman is quoted as saying “ If government is really serious about promoting the private sector as the engine room for economic growth, then fixing the infrastructure in town should be first priority”.

**R9.** Consideration is given to the expansion of CIMP risk assessment processes to ensure that risks related to community safety and resource protection are identified and are included as residual risk treatment options.

**R10.** That the PUMA/Community Safety Unit utilise hazard mapping outcomes and residual risk treatment options as outlined in IAM-I District CIM Plans as the basis for the identification and design of its annual work plans and other support activities.

**R11.** Consideration is given to the conduct of a flood risk assessment pilot for Apia Town to identify treatment options to minimise the impact of flash flooding.

**Identify key risks or barriers to achievement of objectives and stated outcomes, or to the sustainability of the benefits and reforms expected after completion of IAM-II.**

**(1) Maintaining the Community Confidence**

The success of IAM-II lies in the ability of PUMA and other implementing agencies to maintain strong partnerships with District and Village Leaders.

There will be expectations from Districts and Villages that action and immediate benefits will be flowing from the agreed CIM Plans – within a reasonable time frame. PUMA must ensure that such expectations are kept to realistic levels through frequent consultation, joint programming and monitoring exercises and information sharing.

This can be achieved through the introduction of project timelines that have been developed in consultation with Districts and also through the undertaking of residual risk strategies that are usually very low cost initiatives.

**(2) PUMA Capacity**

PUMA will have a significant role to play in coordinating the implementation of the CIM process and EIA related assessments for development projects. During IAM-I and IAM-II approximately forty-three District CIM Plans will be produced. Contained within each plan will be a range of treatment options covering an even broader range of sectors. Their capacity to maintain sustainable support to the program will depend very much on the supporting systems they establish. Examples include:

**Program Support System**

There will be a need/requirement to consolidate all district CIM Plan treatment options within a national CIM Plan. These must then be prioritised firstly on a sector-by-sector basis and then on an overall priority of sectors to establish the national CIM work plan for a given year. This will achieve several outcomes:

- It will ensure that the CIM Implementation is aligned with the priorities of government.
- It will provide PUMA with a useful management tool through which to more effectively allocate resources and manage the implementation of CIM treatment options.
- It will provide departments with guidance to the development of their corporate plan and annual operational plans as they apply to the CIM Planning implementation process.
- It will provide the GoS with a useful management tool through which to guide post cyclone impact reconstruction.
- It will provide a big picture of needs through which to identify synergies with existing or proposed national or regional programs.

PUMA will need to take a lead and guide departments in the development of the sectoral plans and then ultimately, the development of national priorities. This may require the conduct of a series of workshops.

## **Monitoring and Evaluation Support System**

The development of departmental corporate plans and annual operational plans that are closely aligned with the priorities of government and linked to the needs as outlined within CIM Plans is an important management tool. It has not been clearly established if all departments have developed such plans (despite a requirement to do so) and whether the plans follow a uniform format. It will be extremely difficult for PUMA to monitor and evaluate the whole of government CIM effort unless these documents are produced in line with a uniform format and quality. PUMA should seek to establish a number of monitoring and evaluation mechanisms at the district level so that to a degree, there is a form of self-evaluation. This will ensure that district and village leaders take further ownership of the process and that they can assess the level of their own input in addition to that of the government.

### **(3) Resourcing the Project**

The GoS will be confronted with a number of challenges during the implementation of the CIM Plan treatment options. One challenge relates to the ongoing funding of the range of treatment options. Another challenge will be related to having the national capacity to undertake the work on a sustainable basis.

PUMA must facilitate a process whereby potential synergies and partnerships can be identified and established with existing or proposed programs being supported through GoS Departments, bi-lateral donors, multi-lateral donors and regional agencies. It was not possible to identify all of the projects during the short time frame of this review, however it has been established that UNDP, ADB and the EU have projects with potential synergies to some CIM suggested treatment options. It is suggested that a meeting of representatives be held once a national CIM Plan has been developed to identify these synergies, potential partnerships and to identify gaps and priority issues.

PUMA will have a significant role in firstly gaining the support and commitment of donors (bi-lateral and multilateral) and regional agencies to the CIM strategy and secondly to maintaining that support through regular reporting and interaction. This can be achieved through inviting representatives from these organisations to be involved in the monitoring and ongoing assessment of the CIM implementation programs.

### **(4) Departmental Buy-In**

Although legislation and policy have been developed to enhance the position of PUMA, it is still not clear if there is a full buy-in to the CIM and EIA processes by departments. Failure to achieve a full commitment to CIM will considerably undermine the capability of PUMA to maintain resource support required to sustain agreed support to districts.

**Review the reasonableness of budgets and suggest any improvements for IAM-II**

Although provision has been made for the procurement of services to support the achievement of component activities, the IAM-II budget for C.6 National Emergency Management makes no provision for the purchase of goods in relation to establishing the Disaster Management Unit/Community Safety Unit within MNRE. Resources such as computers, colour photocopier/printer, scanner, office furniture, fixtures and fittings, stationery and a dedicated vehicle are required to ensure the unit can fulfil its mandated roles and responsibilities at the national and regional level.

It is acknowledged that the government has a fully equipped operations centre within the Police complex. It needs to be stated that the resources listed above are to enable the Community Safety officer to undertake day to day programming. This includes training, planning, education and awareness and other residual risk reduction functions. The Police complex is for operational use as and when the need arises – a very different function.

On average the Community Safety Officer will spend approximately 99% of time on non operational matters – hence the need for a well equipped office. Equipment to support the operational need will be identified during the development of plans and procedures related to community warning and damage assessment. This may include satellite telephones or other forms of communication equipment.

A review of other component [C.6] budgets suggests the following:

<b>Component Focus</b>	<b>Assessment</b>
Establish and equip the CSU	\$50k – new item
Upgrading the national disaster plan	\$20k is considered insufficient based on the significant change that has been undertaken as a result of government institutional reforms and the implementation of the CIM project. <b>Suggested \$35k</b>
Training and Equipment for improved readiness	\$100k. Capacity to link with regional programs that can find savings in this area. <b>Suggested \$85k</b>
Public and key organisational information awareness	\$20k. Budget is considered appropriate
Undertake simulation exercises	\$30k. Budget is considered appropriate
Review of feasibility for national emergency response fund or insurance scheme	\$40k. ForSec is currently considering the issue of insurance schemes so there may be the possibility of linking to this process. <b>Suggested budget \$30k</b>

**Suggested budget estimate Component C6:           \$250k**

**Identify and comment on any supporting activities that must be achieved by implementation agency for IAM-II or any supporting agency.**

There are probably two categories of issues that should be addressed prior to the launch of IAM-II.

**1. Credibility Category**

Those issues that will demonstrate to districts and village leaders that CIM is not a paper exercise. Actions may include:

- The roll-up of IAM-I CIM Plan treatment options into sector plans, followed by the development of a national plan based on priorities. The national plan should be used to guide departments in the design of operational plans. Essential to start the implementation process as soon as possible to maintain community confidence in the process.
- The appointment of staff and the resourcing of the Community Safety Office/Disaster Management Unit. To ensure the residual risk treatment options from IAM-1 are identified, and through this process, to provide guidance to the identification of IAM-2 CIM Plan treatment options.

**2. Sustainability Category**

- Workshop/Briefing for all departments, donors and Regional Agencies to overview the CIM Planning program, the policy and legislative changes and the implications that they may have on future programming and resource allocations.
- The establishment if CIM program monitoring and evaluation processes at both District and National Levels. This will ensure that the communication links remain established and also, that expectations can be managed through agreement on acceptable time lines for the implementation of IAM-I CIM Plan treatment strategies.

**3. Observation**

The PUMA office is located within a significant flood high risk zone. Safe guarding data, information and other key resources will be essential for such a vital component of the government national development strategies.

**Consider and recommend any changes to the proposed implementation/procurement arrangements for IAM-II.**

**National Disaster Management Arrangements**

The National Disaster Management Plan for Samoa was developed in 1996 through the assistance of the United Nations South Pacific Disaster Reduction Program (SPDRP) and reviewed more recently in 2002 by GoS officials. Since this time, considerable institutional reform has taken place within the government system including the transfer of disaster management responsibilities to MNRE.

The NDMO is currently not staffed owing to the recent retirement of the incumbent. Expectations are that the position will be filled in July 2003. Across the region, NDMO's are typically junior officers, relatively under skilled and poorly resourced. National disaster management institutional systems are generally inactive outside of the cyclone season. The implementation of strategies associated with the Component will therefore have to consider a wider range of "prerequisite" issues that will create the enabling environment that will lead to the achievement of stated outcomes. The prerequisite issues include:

- The establishment of the CSU within MNRE and recruitment of key staff.
- The development of a professional skilling strategy for key staff, through liaison with SOPAC. This should include a work experience assignment to fast track the learning process and the appointment of a mentor/advisor to guide the development of an implementation plan and strategies to address component objectives.
- The review and strengthening of existing national disaster management institutional systems to establish the management framework necessary to undertake the planning review tasks.

**Program Implementation**

There is a hierarchy within disaster management planning process. Training and the conduct of simulation exercises are used to facilitate the review/development of plans and/or the testing of completed plans. Tabletop exercises in particular, are very useful plan development tools. It is important that the hazard mapping be used to guide the development of special plans and procedures such as those for evacuation and damage assessment. The implementation strategy should therefore be designed around the following structure:

- Review of the National Disaster Management Plan
- Review of the Cyclone Support Plan
- The development of disaster assessment and relief procedures
- The development of organisational response plans (based on assigned roles and responsibilities from the above plans and procedures)

- The development of other special plans as identified through the CIM Planning process.

The identification of resources and other equipment will be a major outcome of the plan development and/or review processes. This applies more specifically to the requirements for community warning and alerting mechanisms and also to the resources needed to undertake rapid damage assessment.

The feasibility study on a national emergency response fund or insurance scheme can be implemented at any time. A number of countries around the Pacific have such schemes including Fiji. Queensland has a State Disaster Relief Arrangement (SDRA). With regard to insurance, the Forum Secretariat is currently investigating options however this is with little success at this time.