

EU-SOPAC (EDF8) Project Report 6

Reducing Vulnerability of Pacific ACP States

**PROCEEDINGS OF THE FIJI NATIONAL WORKSHOP 2
JJ'S ON THE PARK, SUVA, FIJI
28 March 2003**

Compilers:

Owen White and Bhaskar Rao (Director, MRD)
SOPAC Secretariat
April 2003

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SOUTH PACIFIC APPLIED GEOSCIENCE COMMISSION

c/o SOPAC Secretariat
Private Mail Bag
GPO, Suva
FIJI ISLANDS
<http://www.sopac.org>
Phone: +679 338 1377
Fax: +679 337 0040
www.sopac.org
director@sopac.org

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RECORD OF PROCEEDINGS

Opening

The second Fiji Stakeholder consultations were held at JJ's on the Park, central Suva on Friday 28th March 2003.

Bhaskar Rao, Director Mineral Resources Department and Chair of the meeting called the meeting to order at 9.15 am. The meeting opened with a short prayer by Mr Joeli Rokovada, Director, NDMO.

Following a brief welcome, participants, SOPAC, EU project and MRD staff briefly introduced themselves and were invited to actively participate in the consultations.

The full invitation list, together with a list of actual participants is included in Attachment A.

Project Introduction

Deputy Director SOPAC Dr Russell Howorth gave a brief historical overview of the development of the EU project from initial discussions held as part of Lomé IV of which eight of the Pacific Island Countries including Fiji were members.

He highlighted the fact that this was the second such consultation for Fiji and part of a process to finalise project tasks in the eight countries, with the other newer ACP countries (party to the Cotonou Agreement) to follow at a later date.

The project represents a new approach to the gathering of data such that this becomes eventually useful for decision making and encouraged all stakeholders to help develop the project concept further from where left off earlier after the first meeting in December. Links to the WSSD, particularly in respect to Chapter 7, on the special vulnerabilities of small island states were highlighted.

The idea was to use ICT to help manage new and existing information to help better the people in the region particularly to improve their livelihoods through reducing vulnerabilities.

Project Activities in Fiji – Outline, Status and Meeting Objectives

The Chair presented an overview of the project for Fiji, outlining the key areas that form part of the project (Water and Sanitation, Aggregates and Hazards) and the objective of the project in providing data in a form that is useful for both planners, Government, individuals and the community. The project area was highlighted as being the region from around Rewa to Momi / Nadi and to include the coastal regions, catchments and area offshore.

This selection was based on a number of reasons based on it being:

- An area of most rapid population growth,
- An area of dense tourism and related infrastructure, with more being planned;
- An area susceptible to natural hazards, amongst them tsunamis, earthquake, coastal erosion, earthquake, storm surge not to mention aspects accentuated by industry and population growth – namely, pollution, sanitation and erosion.

- It includes the watersheds for some of Fiji's major rivers, vital as support for agriculture and for water resources for a growing group of people.

The purpose of the project was to integrate data from various sources to help produce better maps that highlighted vulnerable areas, and assisted planners, governments, rural authorities and communities to help reduce or better manage risks from planned development. Various products could be produced from the data including a GIS based information system, maps, planning documents etc.

This meeting was the second consultation, an earlier one held in December 2002, was aimed more at Government officials. This meeting targeted a broader group and would be followed by meetings at the community level.

The objectives of the meeting then were to target information at a broader group, identify further tasks and to fine-tune areas which could be looked at in detail, given that the initial area was rather broad.

Details of the presentation are in Attachment B.

Project Activities Discussion

NLTB asked if NGO's had been consulted or invited to the meeting as they could make valuable input into the delivery of the project outputs. Deputy Director SOPAC hinted on the same, adding that during the earlier introductions he had noted some key absentees from the NGO and other agencies. He further stated that he wanted the project to be not just another information gathering exercise.

Chair in reply stated that a number of agencies including NGO's had been invited but only some had followed up by actually attending. He agreed to a suggestion that the list of invitees be made available and that participants go back and follow through with dissemination of information in order to include them in the project consultations.

SOPAC Project Team Presentations

Risks and Solutions

Robert Smith outlined through examples some of the risks posed to infrastructure and communities in the project area, and as to how Geoscience could assist in highlighting problems to communities and developers and propose solutions.

Details of this presentation are in Attachment C.

ISM Introduction

Reginald Sanday outlined briefly the concept of Island Systems Management, this being based on the fact that islands are small regions that required the development of whole-of island approach to dealing with issues. This was particularly because of the inter linkage of issues and events, with events on land or upstream affecting communities downstream and in the near-shore. A participatory and whole-of-ecosystem approach was therefore necessary.

Details of this presentation are in Attachment D.

CHARM Introduction

J.Rokovada, Director NDMO presented a brief on the application of CHARM (Comprehensive Hazard and Risk Management) principles in the assessment and mitigation of hazards in Fiji.

This involved the identification of hazards, risks and the taking of risk management decisions based upon the types of risks. This was a different approach from the previous “reactive” stance to disasters.

Imagery (GIS/RS)

Wolf Forstreuter presented a brief overview on the use of imagery, particularly remote sensed or satellite imagery on the project both for use as a backdrop and as a means to measure change over time.

Project Discussions: General

Prior to presentations Chair and Deputy Director both requested participants to keep thinking about the project and how it could help assess or mitigate problems in their area of interest, or how the project outputs could assist ongoing or proposed tasks they were undertaking. Reducing the key areas to be working in to two or three could also help the project develop more focus.

Shangri La noted two important uses of the Project information within the tourism industry in particular the use of information within existing tourism plans, and resort management and to underpin decision making for new project developments (citing proposed Shangri-La development at Natadola in the coming 2-3 years).

Save the Children fund expressed the importance of ensuring that the potential project benefits translate into knowledge at the micro, “grass roots” level and noted that the information produced by this project could be of use and value to various NGOs, but that the project had to both advocate this value, and show how NGOs could pass on benefit through the use of this information.

SOPAC commented that the special data can be used to create (for example) simple animated models, which could be used as a tool to take the project to the community

Representative from current USP ICM (integrated coastal management) project operating in the Namatakula area (Warwick – Fijian Resorts) of the Coral Coast indicated that the USP project is focusing in particular on biological and social issues and problems.

It was felt that the SOPAC Project can contribute to their work by providing data and information in relevant areas, and that the two projects should seek to work together to share expertise and information.

Representative from USP marine studies department informed the workshop of the study focus of a number of post-graduate students within her department, would fall within similar areas geographically and in study type (marine pollution, sedimentation and so on).

Land Use Planning (Agriculture), Mr Wata, commented on the need for land conservation with regard to agriculture and the role of the Land Use Conservation Board, the planned development of a land-use policy – integrated development/use and the need to develop community management focus.

Navua Rural Authority spoke of their need for basic data for the assessment of EIA's and of development in their area. Noted that with the increasing number of tourism developments proposed in their area, a rise in the incidence of river mining, the project, and partnership with it is considered very important. The question to be answered is how it can contribute to effective decision-making? Noted that there is often a reliance on consultants in decision-making, and that it is also key to identify who needs the information generated, and how best to disseminate it.

NLTB spoke of the interest in the area, and particularly the Lami-Suva-Nausori corridor where they aim to use GIS type information to develop a better land-use classification (land for agriculture, industry, other development etc) based on studies of soil, slope, hazards and other data. Key needs – Information wrt planning for identification of most vulnerable areas; input into environmental policy and decision making and understanding of long term environmental considerations

Ministry of Tourism highlighted their current work and interest in project. Work related to that with the ICMP (with USP), with FLIS developing a database for the Sigatoka-Coral Coast

area and work with tourism investors to highlight and address risks to tourism infrastructure and communities.

Project Discussions: Focussing the Project

Several participants asked about the spatial extent of the project given earlier indications that it was to be a 2km coastal strip that was to be studied. Deputy Director, SOPAC clarified that if the ISM concept of ridge to Reef was to be used whole catchments should ideally be considered, due to events upstream eventually impacting downstream areas. The 2km more probably applied offshore from the reef edge, with the inland limit being the river catchments.

Navua Rural Authority, Forestry, Fiji Hardwood Corporation indicated their interest to be the broader Navua area, inclusive of the Navua Catchment. The area is one of development and one where there is logging or proposed logging, and also known Mahogany stands (5 plantation stations). Mahogany harvesting could have deleterious effects on the environment through erosion and there was need for development of risk management strategies to reduce potential risks. The extensive exploration at Namosi by Nittetsu and any future mining also would have significant impacts that could be assessed utilising this base data.

NLTB spoke of their interest for the Lami-Nausori corridor and the need for acquisition of base line data such as slope stability, land use and land classification, catchment areas, landscapes etc in order to develop a comprehensive land-use plan for the area. Following discussions and clarifications of the limit of project impact (ridge to reef), and pointing out that if Nausori were to be studied then we might have to stretch resources for half of Viti Levu, it was agreed to initially limit the area from Lami-Nasinu/Vatuwaqa.

The Sigatoka catchment region, based on discussions on needs expressed from Tourism, USP (ICMP), FSP, MRD and Sigatoka Town Council was recognised as a third area of project implementation. This is given that the Sigatoka River is the major supplier of water for the area; storm surge and coastal erosion are key hazards as is the impact of effluent and nutrients into the watershed and near shore environment. Deforestation of catchments also had severe impacts. FSP was involved with community and with other partners in community development to address these issues.

Chair highlighted the request during first consultations by LAWARM (Agriculture) for studies of siltation and bathymetry of the then major river systems in the area, the Navua, Vatuwaqa, and Sigatoka areas. These fall conveniently into the above areas of interest identified.

Mark Williams FLIS informed meeting of the role of FLIS and FLIC and their plans to write a major paper on data sharing which would have obvious impacts on the project. The objective was to make the sharing of data within government agencies more manageable and less expensive.

Deputy Director whilst commending this introduced the concept of a final home for the project data, hinting at FLIS as custodian of Fiji land data to be the obvious choice with several other local nodes.

Agreed Directions / Focus

There was general consensus on the three areas:

- (a) The Sigatoka broader catchment and coastal region;
- (b) The Navua River and neighbouring smaller catchments, and
- (c) The greater Lami-Nasinu area and catchments therein

The idea was now to work out more specific tasks with the help of the participants, SOPAC-EU project staff and MRD and to then establish a timeframe for project commencement by May 2003. This would be further developed at meetings with stakeholders at the community level.

Comments were invited on other areas of the project and in general and the following suggestions made:

- (a) Presentations to DSC, FLIS
- (b) Involvement of the Land Conservation Board, Ministry of Agriculture
- (c) Provincial and Tikina Councils
- (d) Department of Environment

Attachments

Attachment A – Participants List and Workshop Agenda

Name	Organisation	E-mail
Akosita Lewai	Forestry Department	akosita@msd.forestry.gov.fj
Asesela Wata	Ministry of Agriculture	acokanacagi@govnet.gov.fj
Bashkar Rao	Mineral Resources Department	brao@mrd.gov.fj
Batiri Thaman	University of the South Pacific	thaman_b@usp.ac.fj
Ben Gouldby	SOPAC	ben@sopac.org
Flyod Robinson	Partners in Community Development Fiji	admin@pcdf.org.fj
Franck Martin	SOPAC	franck@sopac.org
Gary Biondo	Shangri La's Fijian Resort	gbiondo@shangri-la.com
Jeremaiya Taganesia	Mineral Resources Department	jerry@mrd.gov.fj
Joeli Rokovada	National Disaster Management Office	jrokovada@govnet.gov.fj
Jonetani T Taivetaua	Ministry of Tourism	jonetani.t.tagivetaua@govnet.gov.fj
Josaia Maka	Navua Rural Local Authority	3460105
Josevata Kanabibicibi	Fiji Hardwood Corporation Limited	katarina@fijihardwood.com.fj
Lanieta Veileqe	University of the South Pacific	veileqe@yahoo.com
Luna Wong	Mineral Resources Department	
Maciu Palu	Suva City Council	
Manoa Malani	Ministry of Tourism	mmalani@govnet.gov.fj
Marika Kuilamu	Ministry of Tourism	mkuilamu@govnet.gov.fj
Mark Williams	Fiji Land Information System	mwilliams@lands.gov.fj
Mereoni Buatoka	Fiji Land Information System	mbuatoka@lands.gov.fj
Owen White	SOPAC	owen@sopac.org
Quan Chung	SOPAC	quan@sopac.org
Reg Sanday	SOPAC	reginald@sopac.org
Robert Smith	SOPAC	robert@sopac.org
Russell Howorth	SOPAC	russell@sopac.org
Samisoni Matasere	Native Lands Trust Board	smatasere@nlbt.com.fj
Samuela Uluikadavu	Fiji Hardwood Corporation Limited	samu@fijihardwood.com.fj
Sandeep Narayan	Lami Town Council	sandeepcd8@hotmail.com
Setefano Nauqe	Partners in Community Development Fiji	snauqe@pcdf.org.fj
Silika Tuivanuvou	Native Lands Trust Board	silika@nlbt.com.fj
Stephen Booth	SOPAC	stephen@sopac.org
Subha Ram	SOPAC	subha@sopac.org
Sue Hardacre	Save the Children Fund	scf@sopacsun.sopac.org.fj
Susanne Pohler	University of the South Pacific	pohler_s@usp.ac.fj
Tevita Dawai	National Planning of Fiji	tdawai@govnet.gov.fj
Tevita Taukeinikoro	Telecom Fiji	ttaukei@tfl.com.fj
Viliame Baleivanualala	Mineral Resources Department	vili@mrd.gov.fj
Wolf Forstreuter	SOPAC	wolf@sopac.org

Fiji 2nd Stakeholder Meeting to discuss Risk and Vulnerability Reduction Strategies in the Southern Corridor of Viti Levu, Suva, 28 March 2003

Programme

Aim of Workshop:

1. Alert stakeholders to the Island Systems Management Project (ISM) and its scope of work
2. Obtain stakeholder input into project activities (eg. Hazard Analysis, Map of area)
3. Identify important activities and tasks if ISM is to become institutionalised and risk exposure reduced
4. Identify site specific work within the project site and Who is to do what (including contributions by stakeholders)
5. Establish steering committee, monitoring and reporting arrangements, meeting schedules and identify costs

Resource Persons:

Mr Bhaskar Rao, Meeting Chairman, Director, Mineral Resources Department

Mr Viliame Baleivanualala, MRD

Mr Joeli Rokovada, Head National Disaster Management Office, Fiji

Dr Russell Howorth, SOPAC Deputy Director

SOPAC staff

09.00 – 09.10	Welcome, Introductions, Outcomes & Housekeeping Matters Mr Bhaskar Rao, MRD
09.10 – 09.15	Introductory Remarks -- Dr Russell Howorth, SOPAC
09.15 – 09.35	Introduction to Project -- Mr Bhaskar Rao
09.35 – 09.45	Discussion
09.45 --10.15	Examples of the various risks and threats to infrastructure and communities in the region chosen and what geoscience could do to highlight the problems (in the form of GIS) and other solutions – Robert Smith, SOPAC Marine Geologist
10.15 -- 10.30	Tea/Coffee Break
10.30 – 10.45	An Integrated Island Systems Management Model – Reg Sanday, SOPAC
10.45 – 11.15	Spatial Presentation of Southern Corridor – Wolf Forstreuter, SOPAC
11.15 – 11.45	Hazard Analysis of Region using CHARM Methodology – Joeli Rokovada, Head NDMO
11.45 – 12.30	Discussion in Plenary – Identification of Hazards of Region – Bhaskar/Joeli
12.30 – 13.00	Lunch
13.00 – 14.30	Group Work : Who should do what in Hazard Mitigation – Bhaskar Rao/Vili Baleivanualala
14.30 – 15.00	Group Presentations
15.00 – 15.15	Coffee/Tea Break
15.15 – 15.45	Group Work: Composition of Steering Committee, monitoring and reporting arrangements, meeting time scales, costs – Bhaskar
15.45 – 16.15	Presentation in plenary. Questions & Answers
16.15 – 16.30	Sum Up of workshop outcomes & Closing -- Bhaskar Rao

Attachment B – Presentation: Project Overview

Integrated Data Sets for Island Systems Management

**Southern and Western Coastal Zone
Viti Levu**

stakeholder Mtg II

Project background

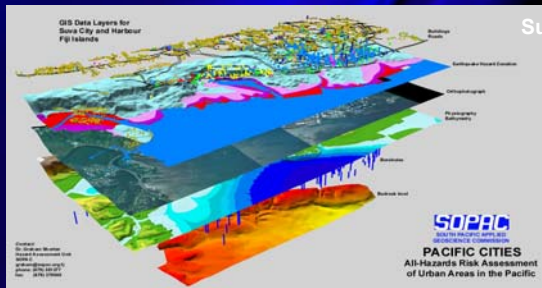
- The project is funded by the European Union and implemented through SOPAC
- Has 3 Key Areas of interest
 - Hazards assessment & mitigation
 - Aggregates
 - Water & Sanitation
- Must assist ultimately the population at large
- Project must be useful – not reside on shelf
- Hence need for multi-stakeholder participation

Integrated Data sets

- Many technical projects collect data
- How is this data used in making decisions
- Is data available to as broad a group as possible
- Is it in a form understood by as many as possible
- Reducing vulnerability to communities requires that timely and adequate information is given to
 - Planners, Government, Administration
 - Developers , Industry
 - Communities at all levels

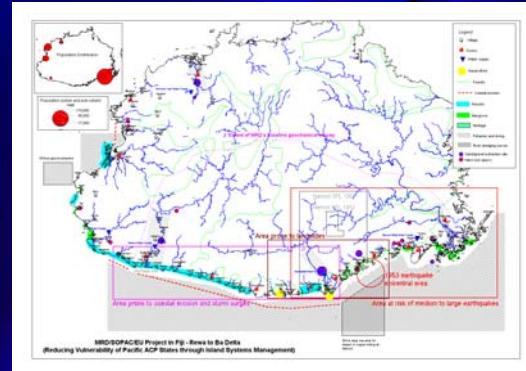
*All information has potential value but
that value can only be realised if the
information is used*

Concept of an integrated data set



Suva

Project Area



Why this area?

- Area of growth
- Significant investment or planned investment in infrastructure
- Area with a number of hazards/hazard types
- Project can impact a significant portion of population
- Some existing data sets

Types of data

- Multi-beam survey of offshore – near shore to 3500m
- Multibeam study of major rivers and estuaries
- Satellite imagery – Ikonos & others
- Geological hazards – landslides/seismicity, coastal erosion and processes
- Infrastructure (water, utilities)
- Resources – aggregates, water
- Land use, agriculture, fisheries and forests
- Mining and mineral exploration

Possible Outputs

- Maps
- Databases, GIS
- Risk assessments
- Hazard Zonation(s)
- Planning guidelines and
- Education leading to
- “Better communities through reduced vulnerabilities to natural hazards, and better access to resources.”


Where are we at?

- Project concept late in 2002
- First stakeholder meeting (Govt Officials) in December of 2002.
- 2 nd stakeholder meeting (March 2003)
- Community level Workshops (April 2003)
- Project timeline, and concept finalised to commence May 2003

Meeting Objectives

- Introduce project to a broader group
- Stakeholders to identify tasks, problems etc that need to be addressed
- Ownership of project by Fiji and particularly the region impacted
- Develop the project log-frame further – tasks, timelines, costs, responsibilities and outcomes
- Develop project steering or coordinating committee

Attachment C – Presentation: Risks and Solutions



Islands System Management: Mapping with technology and GIS

Robert Smith
South Pacific Applied Geoscience Commission
(SOPAC)

www.sopac.org
director@sopac.org


1

Geoscience – Mapping- GIS Contributing to Development

- For the purpose of this presentation these terms are used to denote the collective disciplines of geological (& physical) and GIS sciences as used in our organisation SOPAC, in the study of earth and ocean interactions through TIME.
- Specifically, I want to focus on a few examples which illustrate how coastal process studies, mapping coasts and seas, lagoon circulation, water quality and monitoring activities when merged bring meaning to Island system management
- Dealing with processes which change with time

2

An overview of island developments – impacts and risks



- Deforestation
- Urbanization - Rural
- Sewerage
- Reclamation
- Dredging
- Seawalls
- Agriculture
- Sedimentation
- Marine Pollution
- Mining
- Aggregate mining
- Ports and Harbours
- Storm Surge, Tsunami

3

Paradise

- Blue skies, clean tropical waters, beautiful beaches and healthy coral reefs. Secure & safe for people & property



4

So to have some understanding of what we're trying to develop or what resources we have where they are how best to use them we need some appreciation of why things appear as they are.

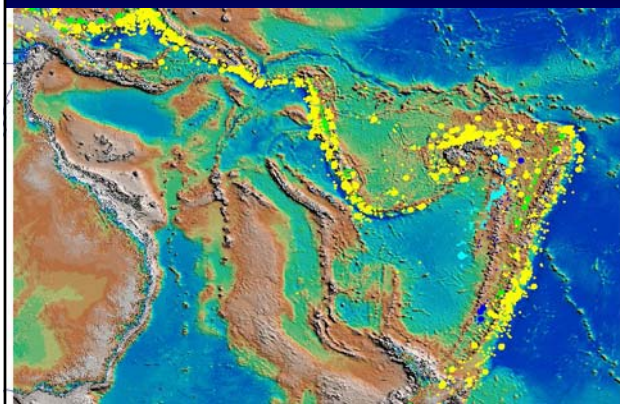
This requires mapping which without we have no clue where we are or what we have.

And mapping come in many forms :

Take the overall geological setting of Fiji within the SW Pacific.

5

Regional setting with seismicity



6

With mapping – both on and offshore

Then, we can :

- understanding where we build and not build
- ensure we appreciate the risks we are taking ?

For example

7

Consider these coral cay islands



8

**Not 3 different islands but the same island
viewed at different points in time**



9

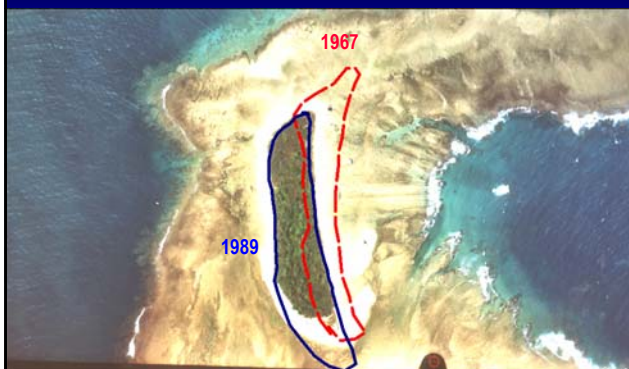
Makaluva in 1998 with 1989 coastline



Coast in 1989

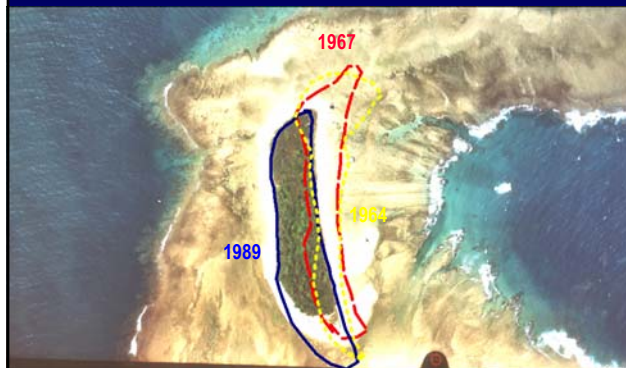
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Makaluva 1998-1989-1967



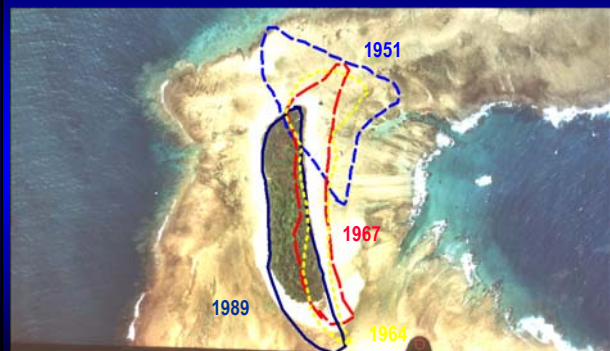
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Makaluva 1998-1989-1967-1964



12

Makaluva 1998 – 1989 -1967-1964 -1951

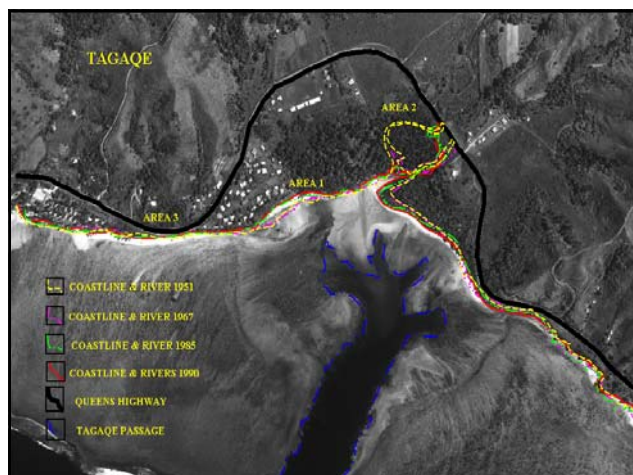


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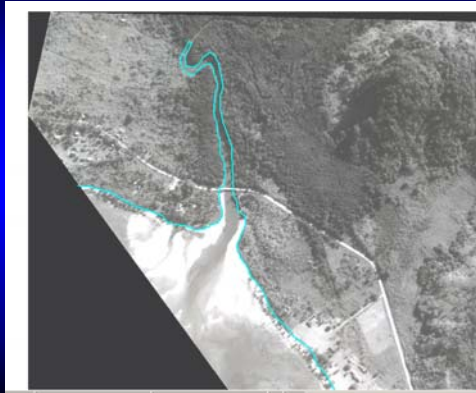
- So Makaluva shows that over time quite significant changes can be made when we make what we think are minor changes to the physical environment
- Also, when we apparently do not fully appreciate the forces of nature and how it can be very different with time we can make quite significant (& costly) changes

.... for example

14

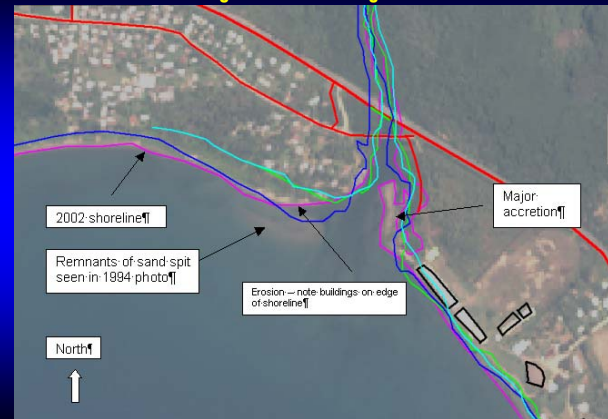
Shoreline erosion
TagaqeThreats to
infrastructure : the
transport system

Rural Population Growth

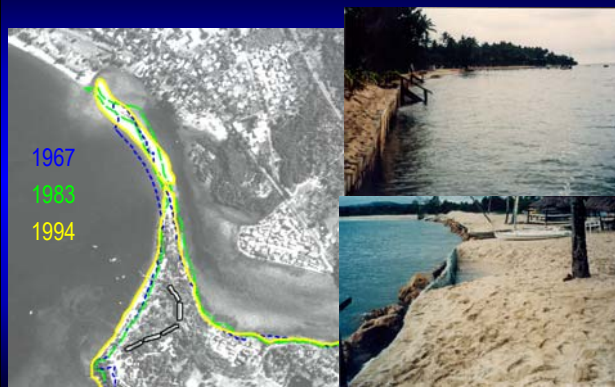


17

A High Resolution Image 2002



Cuvu – Harbour 1967-1983-1994



19

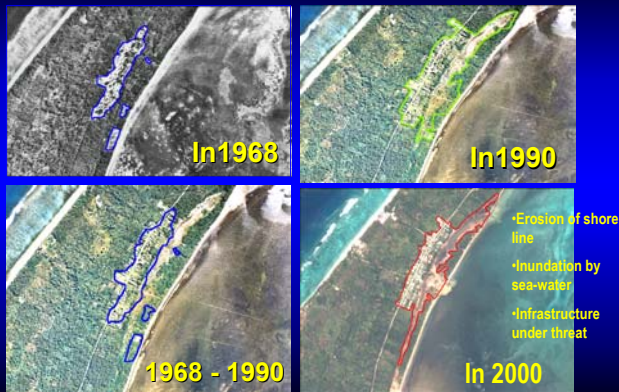
•we understood the impact of changing the dynamics of coastal processes through building rigid immovable objects such as seawalls

and

•we understood the effect of coastal deforestation or removing mangroves, one of nature's most effective methods of coastal protection

20

Deforestation in the coastal zone



21

Sand and gravel – building materials beach and river mining



22

In the previous examples they have one common attribute and that is they are associated with coastlines and therefore have an interaction with the ocean

Therefore we need to understand and map the offshore as well as the land

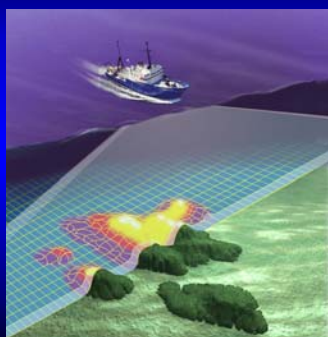
WHY?

23

- Coastal erosion, storm surge, tsunami – these are the type of risks faced by those in the coastal
- Aquaculture – development able to generate employment and income in rural communities;
- Port and harbour – increase in number of vessels competing for the same wharf space the problems of siltation are better characterized;
- Locating seabed wrecks which are an environmental threat but could also be turned into a divers' attraction;
- Coastal reclamation – the demand for land requires the identification of lagoon and offshore aggregates for fill
- The delineation of fishing grounds, marine reserves and other marine habitats.

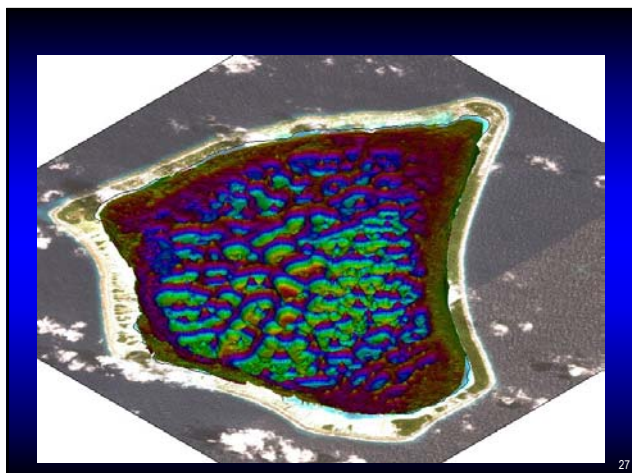
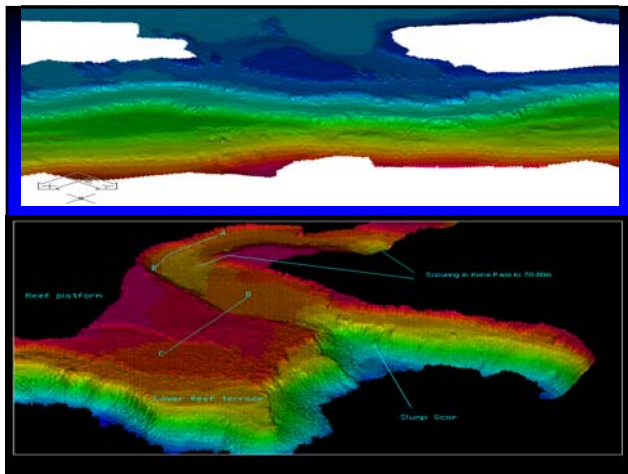
24

Seafloor mapping - Multibeam Reson SeaBat 8101/8160 Multibeam Echosounder



- 0 – 300/3000 m range
- Bathymetry and imagery
- 240/50 kHz frequency
- 150° coverage
- 1.5°x1.5° resolution
- Surface vessel mount

25

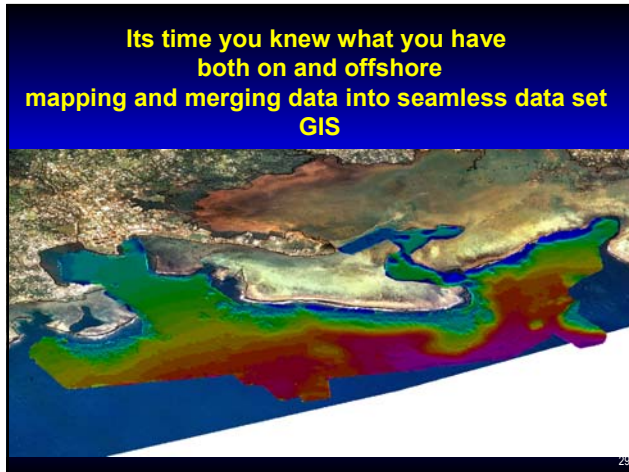


27

Knowing the resource



28



Finally

- Achieving sustainable development is not only about surviving changing politics, economics, competition, perceptions, tastes and aspirations
- It is also about the “hard facts” of sustaining a product in an environment of real physical change – both slow and catastrophic
- Island Systems Management brings its expertise and knowledge of such an environment and how it changes as it's contribution to the relationship

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Attachment D – Presentation: ISM Introduction

Island Systems Management

Reg Sanday (SOPAC)

Discussion Paper March 2003

I Introduction

SOPAC 's new project "Reducing Vulnerability of Small Island States has several outcomes one of which is the formulation of an integrated planning and management framework to enhance the sustainable development and management of Pacific Island states. A mutli-disciplinary planning framework developed by SOPAC is known as Island Systems Management (ISM). Over the initial phases of the project SOPAC intends to publish several information sheets on the ISM concept, its various tools and Pacific Island case studies of ISM.

This first brochure seeks to provide general information relating to the past origins and general principles of ISM. A second brochure will discuss components of an ISM framework at the national level; a third brochure will discuss an ISM community framework and a fourth brochure will summarise ISM case studies in the Pacific Islands region.

II What is Island Systems Management?

Island Systems Management and SOPAC

ISM is SOPAC's response to the calls being made an international and regional levels for a systems-oriented integrated management model for resource management for islands. The ISM philosophy has been accepted by SOPAC's Governing Council as appropriate for the region and SOPAC will continue to be its leading proponent within and outside the region in years to come.

III The key Principles of Island Systems Management

The following principles undergird the ISM approach to resource management as advocated by SOPAC:

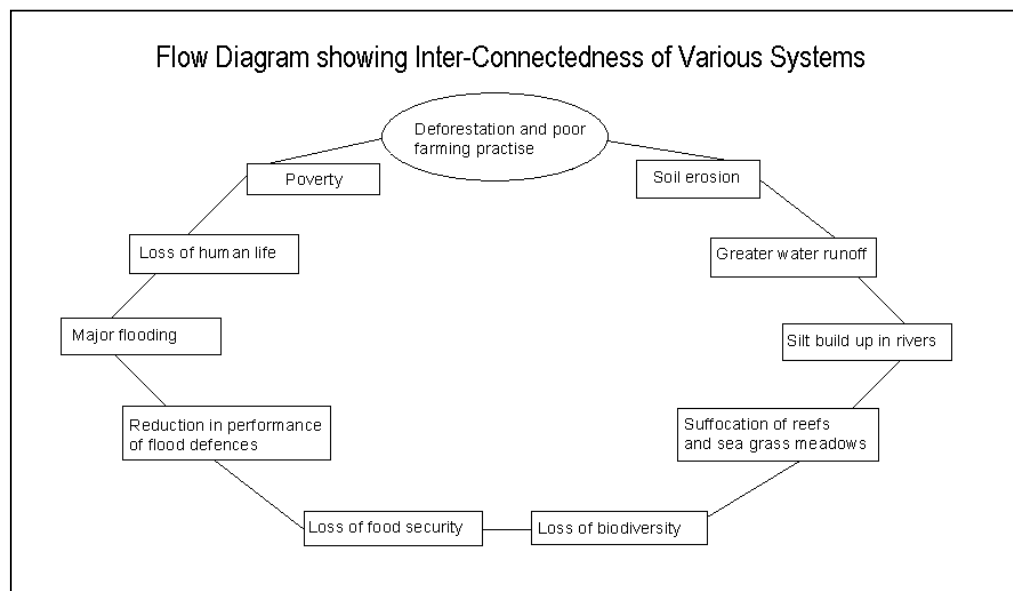
- 1. Islands as Geographic Focus** – the geographic focus of ISM are islands, defined as relatively small areas of land isolated by water as against larger land masses such as continents. In the Pacific Islands, although the size of islands and their populations vary considerably across the region from tiny Niue with its population of 1,200 to the vastness of Papua New Guinea with its population of more than four million, a sense of "islandness" is deeply entrenched in people's psyche as evidenced by popular songs and traditions. Therefore, ISM is equally valid in the island region irrespective of the size of islands and is also valid at the sub-national level.

Figure 1: an Island System showing Land, Inner and Outer reef and Ocean



(Insert of Table of Islands in Pacific, pop, land area, etc Indicating 8 ACP)

2. Adopts a Systems Approach –emphasizes the inter-linkage of issues that combine to form a coherent system. A systems approach requires understanding that decisions taken in one area can have far reaching impacts in other areas. You cannot treat just one symptom without addressing its cause as well as its other symptoms As the example in Figure 1 shows an island system requires acceptance that islands are small land masses surrounded by shallow and deep reefs and ocean and that there are critical interactions between all components – land, lagoon, inshore and offshore reefs, oceans and climatic conditions that affect islands and how people live there.



3. Participatory –requires multi-sectoral, multi-disciplinary and multi-stakeholder participation (public and private, NGOs, resource owners and resource users). Requires also willingness to share power and information to those not previously empowered and not previously informed.

Figure 3: Multiple Stakeholder and Multi-disciplinary Participation



Natural resource management issues **can not** be treated sectorally by one department, Ministry or Municipality acting alone. It needs the involvement of other players, other departments, Ministries, Non Governmental Organisations, the private sector, local government and members of the community for any meaningful and lasting action to occur. Agencies and individuals with regulatory powers need to ensure a process of multi-stakeholder consultation and participation in decision-making.

e Multi-stakeholder and Multi-disciplinary Participation ensures

- o a **sense of shared responsibility or partnership** by all groups in society for managing the scarce and valued natural resources of a given area
- o **direct and indirect impacts** can be **identified** and addressed by different ideas and sciences acting and reacting together on a problem
- o **awareness raised amongst stakeholders** and new perspectives provided for important development issues such as the long-term impacts of destructive practises
- o **changes in attitude** and reduction of the need to enforce regulations and harsh control measures especially on the resource users and abusers
- o **consensus building** by seeking to attain common goals and build partnerships amongst all stakeholders to address problems and challenges and come up with workable solutions

4. **Use of existing or new Institutional and legal frameworks:** – ISM ideally requires a supporting policy, institutional and legal framework where governments at the national or sub-national level commit themselves to the ISM principles of integrated planning and management and consensus building in trying to make sustainable development work. It is important that policies and procedures are created and promoted and coordinating mechanisms which could entail in some cases a new Department all together are established for key sectors (eg water resources and sanitation, sand mining, urban development),

Even without an institutional and legal framework the ISM approach will still be relevant if stakeholders are committed and able to work on a voluntary basis and where relations are good with government and among all stakeholders. Such mechanisms as advisory committees or boards, ad hoc think tanks or study groups can be useful in promoting consensus and more effective outcomes. Government officials need to

be brave enough at times to do out of the ordinary things like establishing ad hoc discussion groups or advisory committees. On the other hand, NGOs need to involve government players in their decision-making processes.

6. Ecosystem approach – An ecosystem approach requires an analytical process where system is broken down into its constituent parts and linkages between and among them are identified and analysed. The three major segments of an ecosystem are: **the environment, the economy and society**. These are often referred to as the “three pillars of sustainable development.” These three pillars should not be treated in isolation but given equal weight in any planning and decision-making system.

Ecosystem management also requires that efforts are made to understand the range of ecological functions provided by an ecosystem and its various sub-system components.

Examples:

- the flushing role of tides in estuaries that could be affected by bridges and causeways
- the coral and rock chomping parrot fish who can produce up to 3-tons of white sand in one day from a one-mile stretch of reef. in one day and policies and plans are set in place to ensure that these services are sustained and promoted
- the filtering and cleaning role played by sea grass beds and mangroves and water weeds and algae in streams and rivers

7. Precautionary principle – requires adoption of the precautionary principle promoted by the 1992 Earth Summit in Rio and its creation, Agenda 21, and which is increasingly used as a basis for policy and environmental legislation by governments around the world.

The Precautionary Principle requires governments and decision-makers to take anticipatory and preventative action about activities or technologies that are deemed to have a harmful impact on the natural and human environment. The basic features of the Precautionary Principle recognises the following:

- the existence of uncertainty and ignorance
- that uncertainty and ignorance should not be used as an excuse for doing nothing
- the onus of proof is shifted away from opponents to proponents
- the need to take anticipatory and preventative action

There is great scope for the precautionary principle to be applied in existing systems within governments and municipalities in the Pacific Islands region

Various statements of the precautionary principle

The Australian Intergovernmental Agreement on the Environment defines the precautionary principle as:

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

- careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and
- an assessment of the risk-weighted consequences

Britain's environmental white paper takes the following stance:

Where the state of our planet is at stake, the risks can be so high and the costs of corrective action so great that prevention is better and cheaper than cure . . . Where there are significant risks of damage to the environment, the Government will be prepared to take precautionary action to limit the use of potentially dangerous materials or the spread of potentially dangerous pollutants, even where scientific knowledge is not conclusive, if the balance of likely costs and benefits justifies it

Another stronger version of the principle is that in considering new policies and economic projects, the onus of proof should be shifted from the opponents to the proponents, who must demonstrate that, to a very high degree of probability, the project will not cause significant harm to the environment

Source: Desendorf & Hamilton 1997

8. Incorporates Principles of Good Governance – consistent with the Pacific Regional Submission to the WSSD Rio+ 10 Summit, ISM should also promote good domestic governance through appropriate levels of **transparency** and **accountability**, encouraging **multi-stakeholder participation** and strengthening of **proactive and responsive** policies. Every effort should be made to link good resources management to the responsibilities of good governance

IV ISM -- Not a New Management Philosophy?

Pacific Islanders have for centuries practised their own systems of resource governance that are based on the same or very similar principles to ISM.

Example: **Solomon Islands** Morovo Lagoon, the Western Province -- resource management is very similar to modern corporate governance where the people (Corporation) own land in an area and its sea resources. The Directors are "primary rights holders" who collectively have the authority to allocate use rights through the Chairman (Big Man or Chief who acts as spokesman for the line). Ordinary members of the Corporation (people) hold "secondary rights." Such rights may be inherited, or gained through marriage to a "primary rights holder" through approved residence in a village located on the Corporation's land, or for other reasons. Good governance of the Corporation is achieved when benefits are equitably shared among stakeholders (UNDP 2002:23-24). When certain resources are stressed that threaten the long-term welfare of the group the primary rights holders in consultation with all stakeholders would through their Chief (the Chairman of the Corporation) place sanctions or bans (*taboos*) over usage over a certain resource to last until the resource regains its productivity and the bans lifted. Variations of this model are practised throughout the Pacific Islands from the most remote atoll to the highlands of Papua New Guinea. All the models show evidence of good governance principles (transparency, accountability, integrity, equity, efficiency), use of the precautionary principle, multiple-stakeholder participation, reflecting deep understanding of the ecosystem and use of an appropriate institutional and legal machinery to invoke rules governing resource access and utilisation.

V Conclusion

Island Systems Management is the response of SOPAC to the challenges of dealing with development challenges in a multi-disciplinary, multi-sectoral, multi-faceted way. ISM offers a mechanism for carrying out integrated multi-sectoral planning and management of the broader island environment and also as a means for ensuring that the key economic, environmental and social challenges are dealt with in a responsive, effective way.

It provides the necessary policy orientation to manage the impacts of human intervention on the physical, social and economic environment and it provides a framework for coordinating the initiatives of all public, private and community stakeholders while ensuring through continuous emphasis on a unified approach that common goals are attained and sustainable development is realised.

ISM will be SOPAC's main tool for implementing its new project "Reducing Vulnerability of Pacific Island states."

The next brochure will discuss in detail the ISM framework at the national level (see Attachment) including how ISM might be mainstreamed in project planning

(ends)

Integrated Planning & Management Macro ISM Framework

