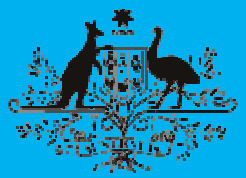
GEF International Waters IWC5
Pre - Conference Workshop Presentation
Cairns, Queensland

25 October 2009

Tools & Methods for Assessing Water Management Risks: Relevance to a Changing Climate in Vanuatu

- Suzanne Hoverman

with Ingrid De Lacy, Helen Ross, Terry Chan and Gina Tari (AWRF Vanuatu research team)



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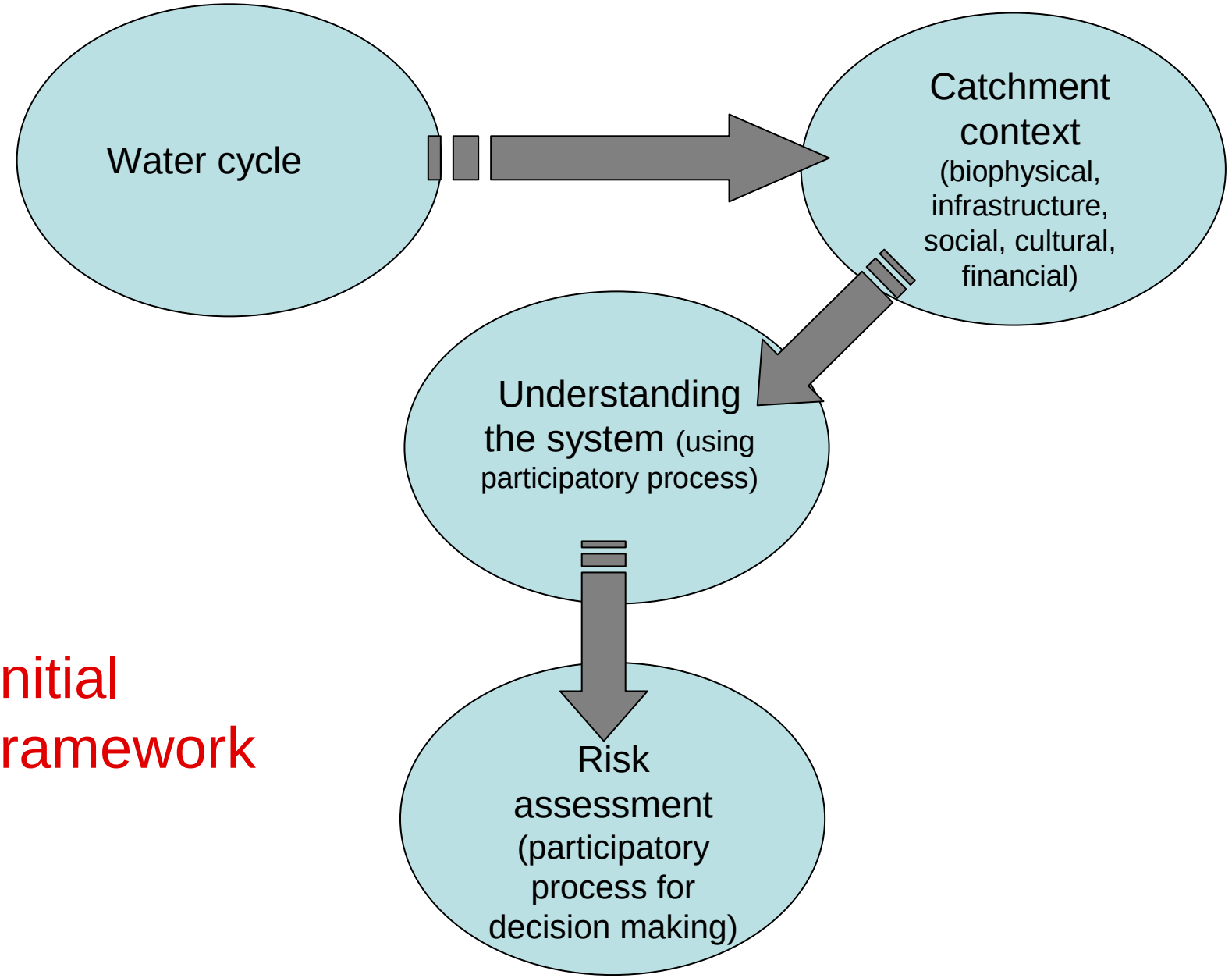
Summary of Research Intent - Recap

- Improve aid interventions
- Integrative conceptual framework
  - Facilitate interdisciplinary understanding
  - **Human-environment** system
    - Ecological, Social, Economic
- Participative Integrated Catchment Risk Assessment
- Identify **risks**, promote **learning**, improve **management**

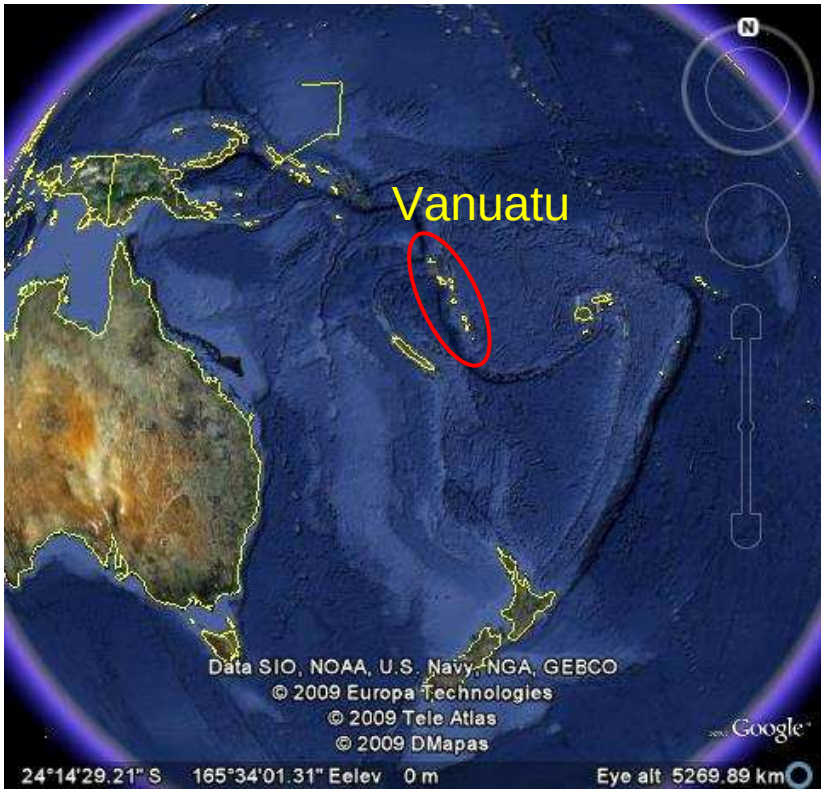
- **2nd** Case Study -- location and partner focus

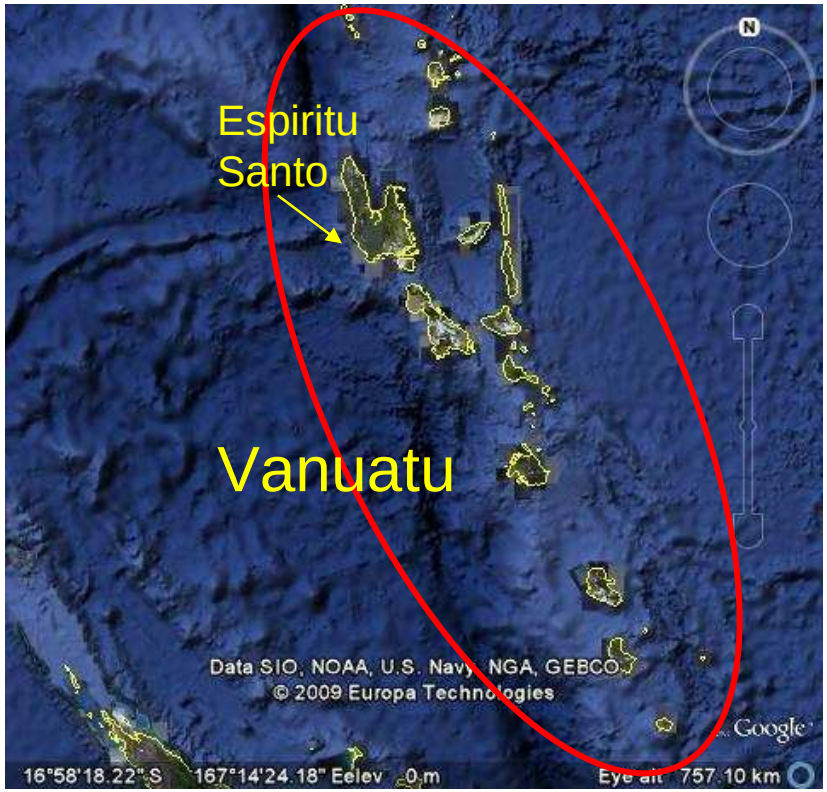


Initial framework

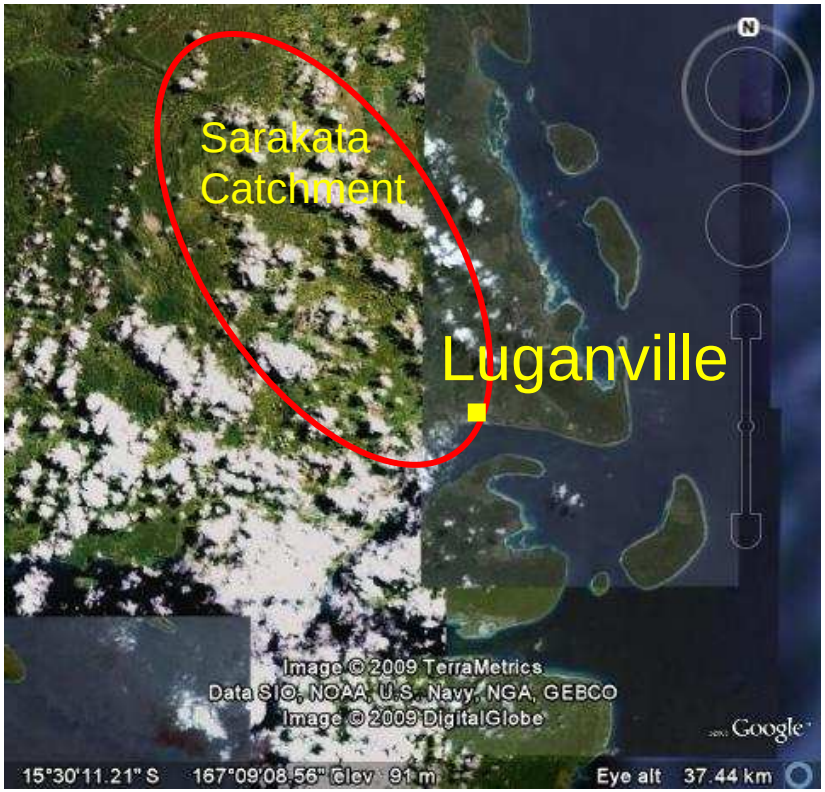
Espiritu Santo Island, Vanuatu

- 2nd case study – Sarakata Catchment, Vanuatu





Sarakata Catchment, Espiritu Santo



Vanuatu Case Study – Overview July08 –Feb 09

- Build on **partnerships**
  - Live & Learn Environmental Education (Australian-based, Pacific-focused NGO)
  - Sarakata Catchment Group (catchment community)
- Catchment and issues
  - Is chosen catchment for UN **GEF-PAS IWRM demonstration project** – whole-of-catchment management plan and group – (Pilot: lower catchment management group)
  - Implementing new Vanuatu **national water policy**, and EU **IWRM planning** and legislation
  - Issues: water supply and sanitation, **community impacts**, **industrial impacts**, **planning**, **coordination**.

Visit 1: Scoping study July 2008

Design project with Live and Learn -- based on previous work with Sarakata Catchment Group

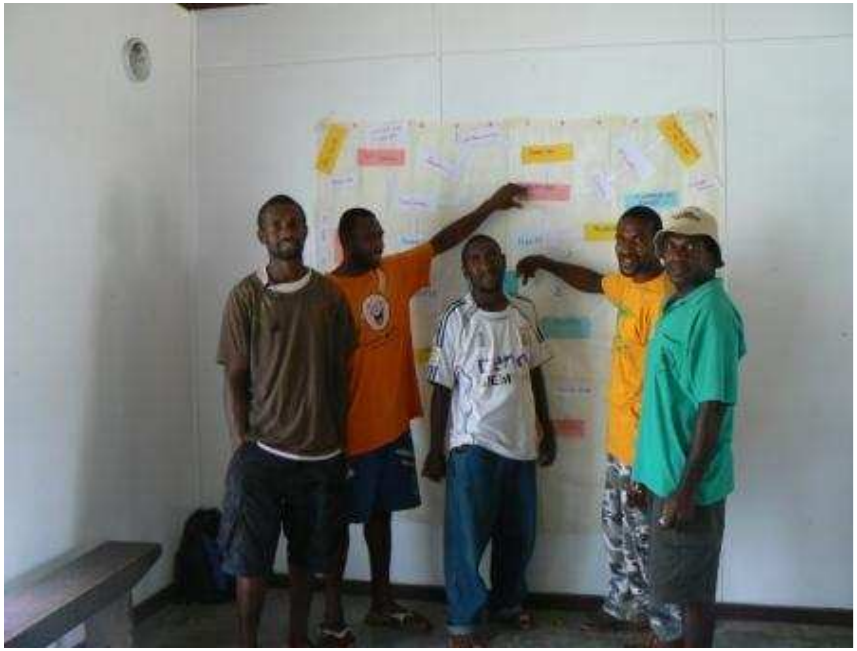
- Meet Sarakata Catchment Group, discuss priorities
- Meet other parties to IWRM
  - **Key organisations**: e.g. SWAC, Provincial govt, National govt, AusAID post
  - Developers of new national IWRM Strategy (Oxfam via NZAid)
- Catchment familiarisation
- Collected background information

Issues affecting Sarakata catchment

Visit 2: Engagement & collaboration Nov08

Elicit Catchment understandings - worked closely with Catchment Group and L&L :

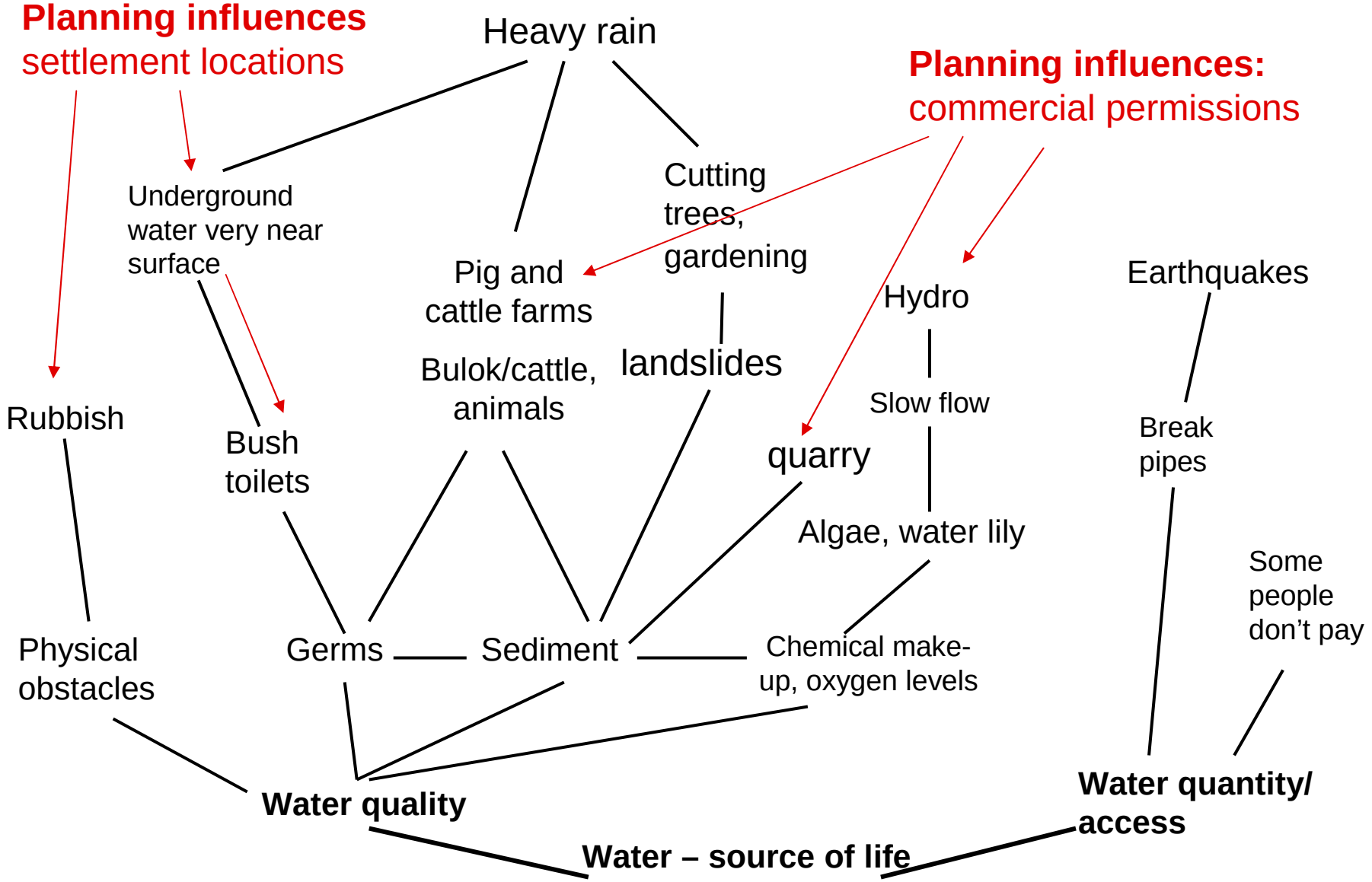
Physical catchment elevation model



Conceptual diagram of causation

Sarakata Catchment – influences on water

by Sarakata Catchment Group, 9 February 2009



Engagement & collaboration Nov08 contd

In communities, used **risk ranking exercises** for data collection

In the process **trained group members** to use participatory methods for data collection

Motive and method *to work with communities - 8*

Visit 3 Bringing stakeholders together Feb 09:

1. **Analysed** findings from data collection (QA & gaps)
2. **Demonstrated** data collection (national, provin., NGOs)

- Extrapolate village rankings to lower catchment, Risk matrix

Findings – Threats to catchment

1. Underground water

- **Community drinking water:** high water tables, heavy rain, poor past planning decisions allowing housing in hazard prone areas, poverty and lack of WS&S, wells and toilets in close proximity, contamination
- **Urban drinking water:** risks to contamination of old and new bore supplies due to settlement encroachments (weak planning effectiveness)

2. Surface water

Community-caused threats:

- Direct pollution from rubbish etc.
- Sedimentation due to bank collapse - gardens, logging

Findings – threats to catchment contd

Commercially-caused threats:

- Sedimentation -- quarrying, animal grazing (bullocks), bank clearing, logging, timber mill chemical run-off
- Flow disturbance leading to aquatic vegetation imbalance -- hydro electric scheme
- Faecal pollutants -- intensive and extensive livestock industries (and some wild animal grazing), human wastes
- Industry contaminants : heavy vehicle washing, kava washing, intensive plant industry (oil palm nursery)

Skills building with SCG - 6 days

Visioning –

- Potential future roles, building on past strengths
  - monitoring, information, community mobilisation
- Role of SCG in IWRM roll-out
- Stakeholder analysis (now & 2011)
- Partnerships (NGOs, agencies, technical assist, funding)

Future planning --

- Delegation of roles, planning specific activities

Skills building with national & provincial government

Capacity building at all levels

Key insights and outcomes

Preparation for IWRM

At start, IWRM policy approved but not understood, parties unconnected and unprepared.

By completion of visit 3

- National Water Division taking very strong leadership and about to start formal implementation, sees immediate use for SCG
- All parties but one (Municipal government) ready to participate and far better connected
- SCG group consolidated, keen and informed, engaging its constituent communities, providing sound data of community priorities re risks to inform planning

Outcomes

- Strengthened partner relationships –
- Expanded partner/participant awareness –

  --whole of catchment

  --technical / planning skills, liaison, communication
- Readiness to participate effectively in Pacific IWRM initiatives
- Validated community and NGO roles, collaboration
- Systems analyses
- Risk assessments
- Information-bases
- Collaboration for future management - social capital

Relevance to GEF

International Waters M&E Framework (2002)

1 Process Indicators
- Form high level steering committees
- Science advisory panel in joint institutional framework
- *Document stakeholder involvement in plan preparation*

2 Stress reduction Indicators
- Point source pollution reduction investment completed
- *Non-point source pollution programs implemented (best management practices)*

3 Environmental Status Indicators
- Improved measurable ecological or biological indices
- Improved hydrological balance with increased tree cover
- *Increased stakeholder awareness and documented involvement*

Relevance to Climate Change

- Adaptation, not Mitigation – sound science & policy, increase u/standing impacts, enhance capacity
- Pacific Island country vulnerability
  - Coastal zone management, water security, food security (then health impacts, tourism, biodiversity)
- Early vulnerability assessments (NAPAs):
  - Insufficient recognition of **diverse** social and ecological characteristics
  - Discounted **local knowledge**
  - Did not consider **barriers** and **limits** of effectiveness of adaptation implementation options

Relevance to Climate Change (contd)

- 2nd Generation Vulnerability & Adaptation assessments for Pacific
  - Prioritise social systems,
  - Highlight social & economic forces that create vulnerability
  - Focus on current vulnerability, extrapolate to future
  - Focus at scales where adaptation decisions are made
  - Integrate wider data range, include stakeholders in assessments (and planning)
- Human-Environment System -- resilience

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