

Samoa Coastal Infrastructure Management Plans and their Application in Tsunami Recovery Planning

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Michele Daly, GNS Science
Graeme Roberts, Beca International



Key Themes 1

- Risk reduction, sustainable development, community resilience and recovery are all linked
- Integrated planning upfront is necessary to achieve good outcomes for the above
- Need both a top down and a bottom-up approach for sustainable outcomes
 - good DRM governance framework; resources
 - community driven solutions
- Meaningful partnerships between communities and government are necessary for sustainable outcomes

Key Themes 2

- **Importance of long-term programmes**
 - Tackling capacity and capability issues
 - Realigning policy and planning frameworks
- **Importance of underpinning science and environmental monitoring**
 - Baseline data
 - Reducing uncertainty

Samoa



- 175,000 population
 - 70-80% of whom live on or near the coast
- 80% of 732km coastline is "sensitive" or "highly sensitive" to erosion, flooding or landslip
 - cyclones, storm surge, tsunami, volcanic eruption, earthquakes
- Significant cyclone damage 1990/91
 - borrowing > 44% GDP – unsustainable
- 2009 Tsunami
 - Damage US\$105M, 20% GDP

Samoa Infrastructure and Asset Management Programme (SIAM 1 & 2)

SIAM 1: 1999-2004

- Coastal Hazard Zone mapping
- Coastal Infrastructure Management Strategy (**CIM Strategy**) – national level policy document
- Coastal Infrastructure Management Plans (**CIM Plans**)
 - 15 districts
- Environmental support services - training courses and manuals

Samoa Infrastructure and Asset Management Programme (SIAM 1 & 2) cont/.

SIAM2 - Investing in Sustainable Growth & Protection 2004 – 2008

- Environmental management
- Natural risk management
- Natural resource management
- Disaster risk management

Opportunity to integrate across the workstreams to deliver a more sustainable outcome



Coastal Infrastructure Management (CIM) Strategy & Plans

- **National level Strategy to drive planning process**
 - theme of “resilience”
- **CIM Plans –**
 - achieving the objectives of the strategy for each of Samoa’s 41 political Districts (~350 villages).
- **Three foundation principles**
 - Highly participatory process
 - Principle of “partnership” with national – district – village integration
 - Respecting “fa’a samoa” & “fa’a matai”
- **Advocacy and education**
- **A framework for future actions**
- **Basis for non-statutory land use planning**

Empowering Local Communities



- **Local solutions**
 - Understanding vulnerability and mitigation
 - Collective ownership of risk
 - Community-government partnership



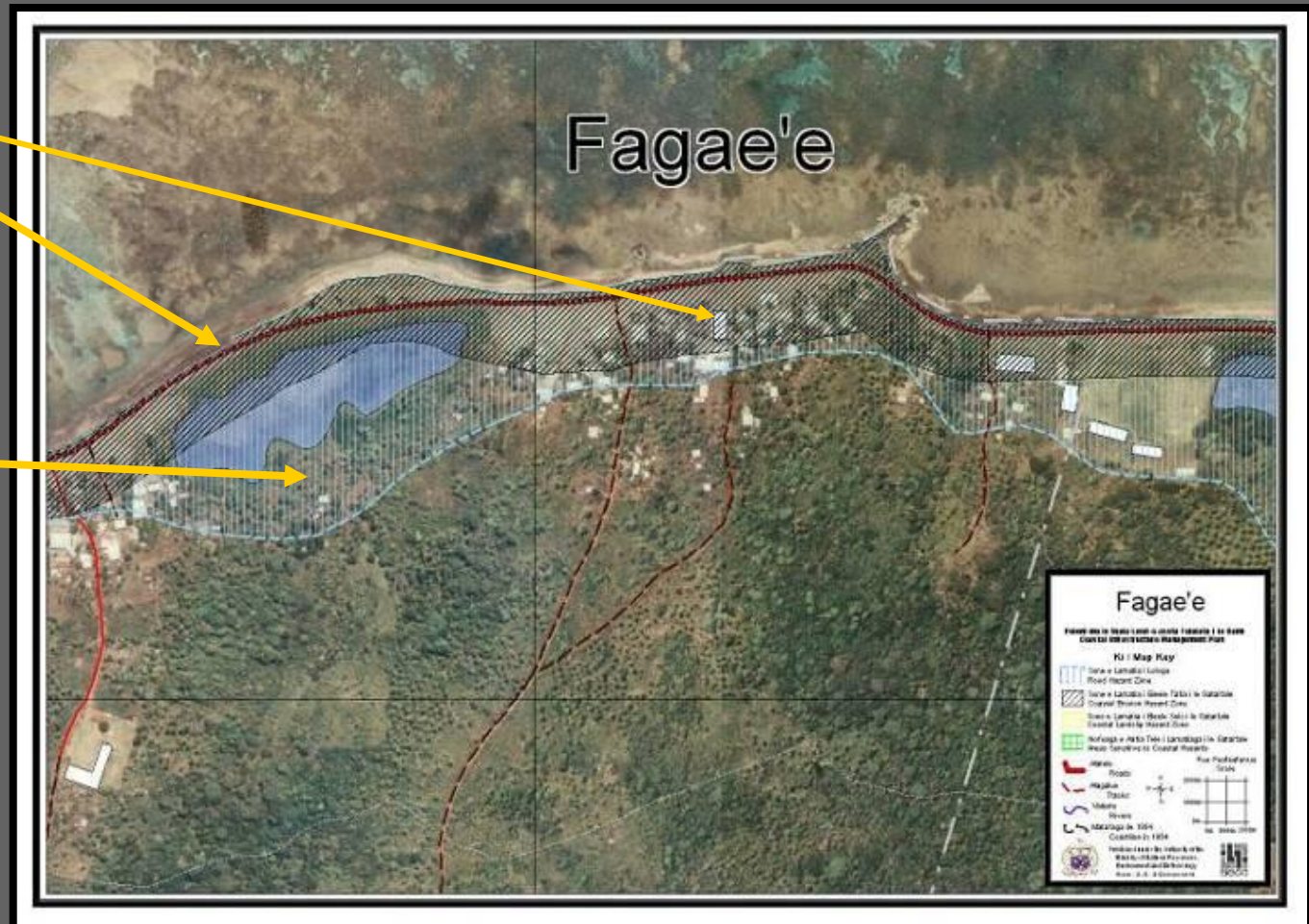
- **Requirements**
 - Institutional framework that links sustainable development and DRR
 - Incentives

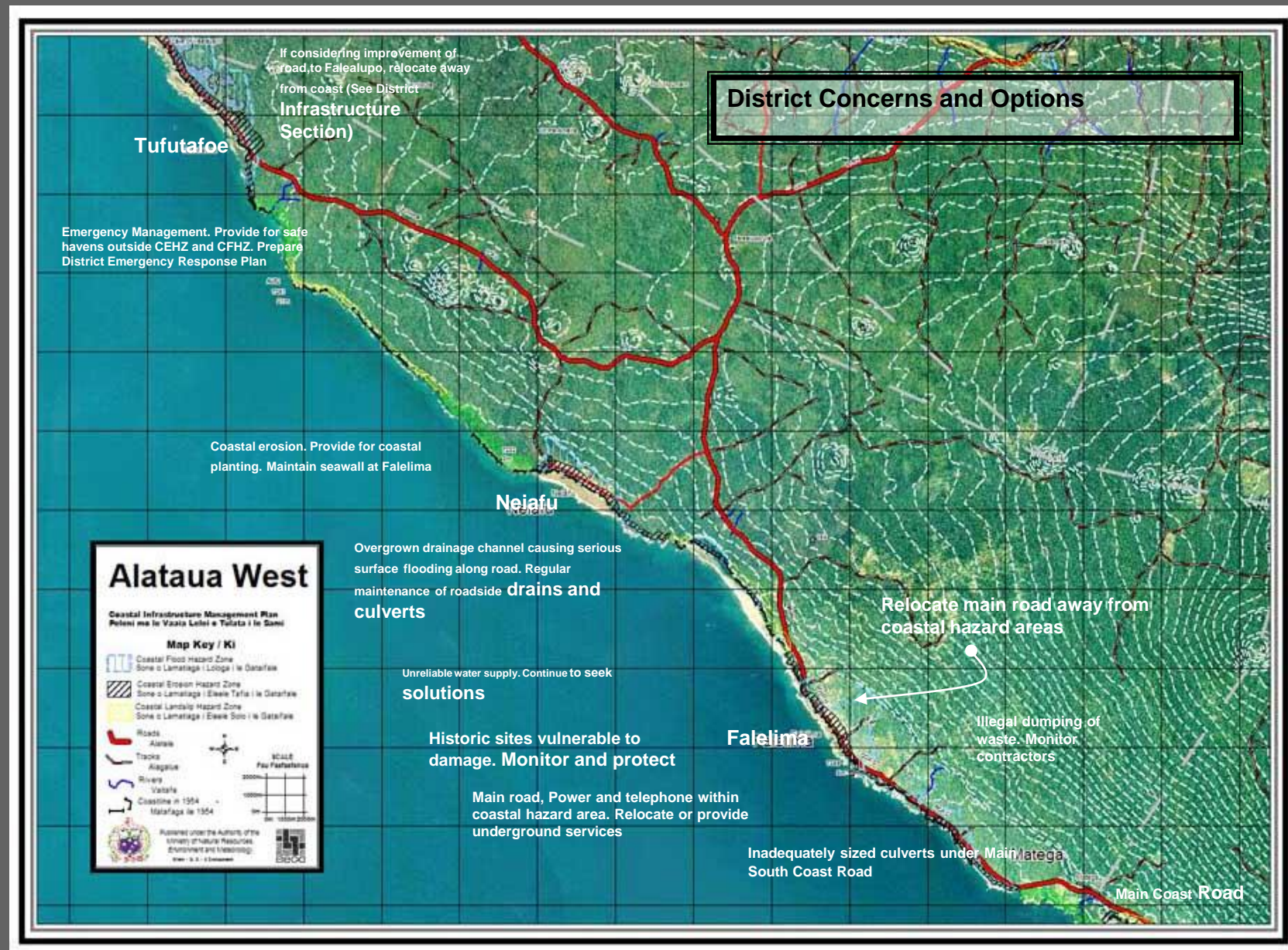


Coastal Infrastructure Management Plan - Maps

key
assets

hazard
zones





cyclone
preparedness



during the event →

post event →



Strengthening DRM capacity

- The local community in a **meaningful partnership** with the government can achieve sustainable DRM outcomes
 - integration of land use planning and environmental management with mitigation and response is feasible at the local community level
 - Shift to collective ownership of risk – DRR is everyone's responsibility
 - Effective partnerships can significantly increase capacity and capability

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La serie i jensi Pikem le Sumala Pantiptih o Pantipti Stelo

[illegible]

Suit & Affirmance

[illegible]

Sa hotaragat le Komiti o le Poloni o le a fa'atua ai sui o Afanaga uma o le Itumalo i le aso 5 Tesema 2007.
O Fa'atuaaga sui le ata fa'atua (a) o le Poloni na maua mai le Komiti i le masina o Ianuari 2007.

Matagalanga ma Faalapotopotonga Taimaiti a le Malo

- *Matagalpa* o *Calunga*, *Polevanga* ma *Aitmar* Eweke
- *Matagalpa* o *Tina* ma *Tamaila*, *Aitmar* o *Nuu* ma *Aitnga* ma *Aga* Eweke
- *Matagalpa* o *Tape*
- *Matagalpa* o *Pirawa* *Faidzura* ma *le* *Siwomaga*
- *Pilega* o *le* *Suwai* a *Sanna*
- *Faidzopotoga* o *le* *Mabai* *Faiditir*
- *Faidzopotoga* o *Peswanga* a *Sanna*
- *Eweke* *Tawai* / *Faidzopotoga* o *Elode* a *Sanna*

O le Matagalunga o Paimori Paakotatara ma le Siosiomaga, ua avea ma Matagalunga, aua o le Mafo o lelei Peleli o fa'i ma ma o fa'i Matagalunga ma Paalagaotepaaga. Tamaoiti ma o le Mafo, o fa'amamaga le ma o le Mafo o Samoa, le fa'apenaia o lelei Peleli ma le Vaata Lelisi o Aua o Nibaga Talaia o le Siumi ma kua avea aua ma se tasi o Peleli Paalagaaga ma le fa'amamaga o le Talaia ma le Vaata Lelisi o Aua o Nibaga Talaia o le Siumi.

Salmon & Inc.

Pule Bill, Matagaborgs o Pinana Taalo-Natura ma In Siosimaga

Abstract

Un area abitata e le Male Samma le Poleremo le Vaaia Letoi o Aotia Tuleia e le Sami sui le Huanilo Faaipugae o Palauli e Siofo ma Poloni Faaipugae sui le Faaipugae o le Tuleia sui le Vaaia Letoi o Aotia Tuleia e le Sami.

Statistical Analysis

Aflatoxins in Maize, Mungbean, and Pigeon Pea in the Simlone Region

Participating villages in district

CEO Ministry of Natural Resources & Environment

Minister

Five years on.....

- **CIM Plans have become a cornerstone Climate Change Adaptation Strategy for Samoa**
- **They are the basis for land use planning in most of Samoa**
 - **Non-statutory land use options work well given the land tenure issues**
 - **A Structure Plan is being developed for Vaitele as a trial (statutory instruments)**
 - **Any development must not be inconsistent with CIM Plans**
- **Programme underway to:**
 - **Update hazard zones (tsunami, IPCC)**
 - **Prioritise mitigation measures identified**
 - **Start implementation**
 - **Village risk management plans**

After the 2009 tsunami

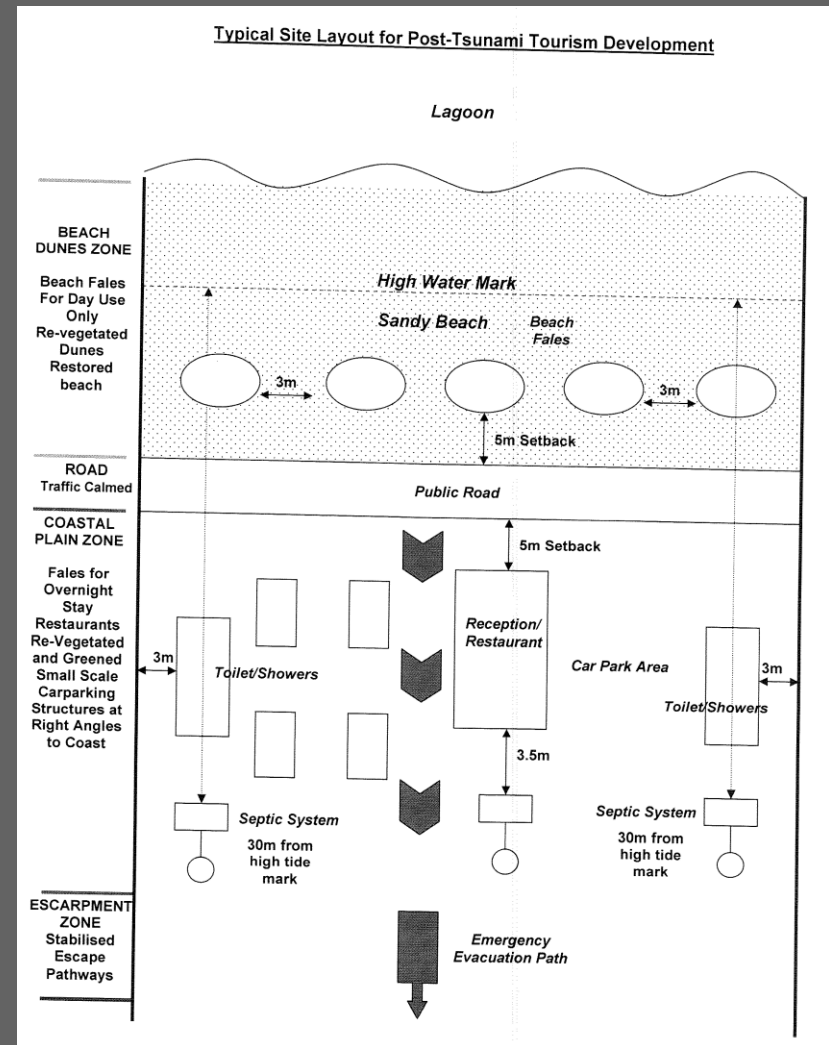
- Recovery Plan Developed
 - Involved Govt, donors, NGOs
- CIM Plan maps used as part of the recovery planning process
- Rebuilding / relocation decisions similar to recommendations in the CIM Plans



Lalomanu – before and after (Beca)

Further Work

- More detailed analysis of the influence of the CIM Strategy and Plan on land use planning and development in Samoa
 - Changing local attitudes to risk reduction
 - Implementation
 - Use in recovery
 - Replication in other island nations
- Programme Evaluation
- National DRM Plan Review





Thank you



Fa'afetai lava

