



HYDROLOGY FOR THE ENVIRONMENT, LIFE & POLICY

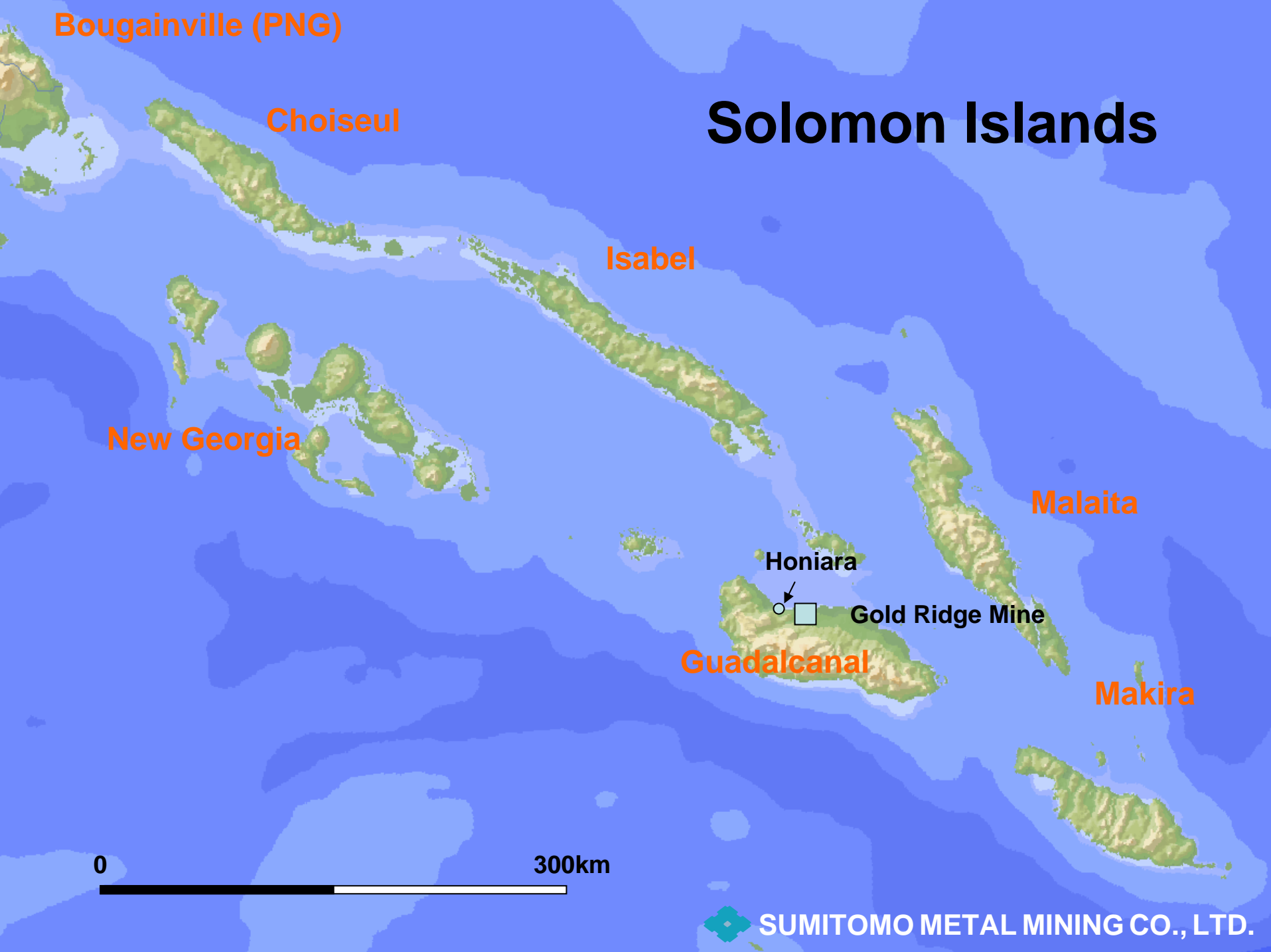
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Pacific Presentations: ICM Approaches in the Solomon Islands

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Bougainville (PNG)

Choiseul

Solomon Islands

Isabel

New Georgia

Malaita

Honiara

Gold Ridge Mine

Guadalcanal

Makira

0

300km



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1.0 Introduction

Solomon Islands consists of six main islands and a lot of very small islands. Water resources is abundant on the large islands but scarce on small atolls; most depend on rain and groundwater. Population: 460,000 (1990 Census); 80% live in rural areas; Economy base: Primary Industries (fish, logs, copra, cocoa, marine products)

The issues facing Solomon Islands now is restoring law & order hence confidence from investors, better development & management of resources (water, land, minerals, fisheries) at local and national levels.

The challenge: How can our local communities participate with national government and contribute to rebuilding the country through developments & be sustainable?

2.0 Objectives of presentation

1. To discuss the relevancy of ICM in Solomon Islands within existing frameworks,
2. To discuss the existing institutions that could be involved in ICM research,
3. Discuss the constraints in ICM implementation,
4. An example for ICM research (proposed),
5. Conclusions

ICM Definition from Fenemor

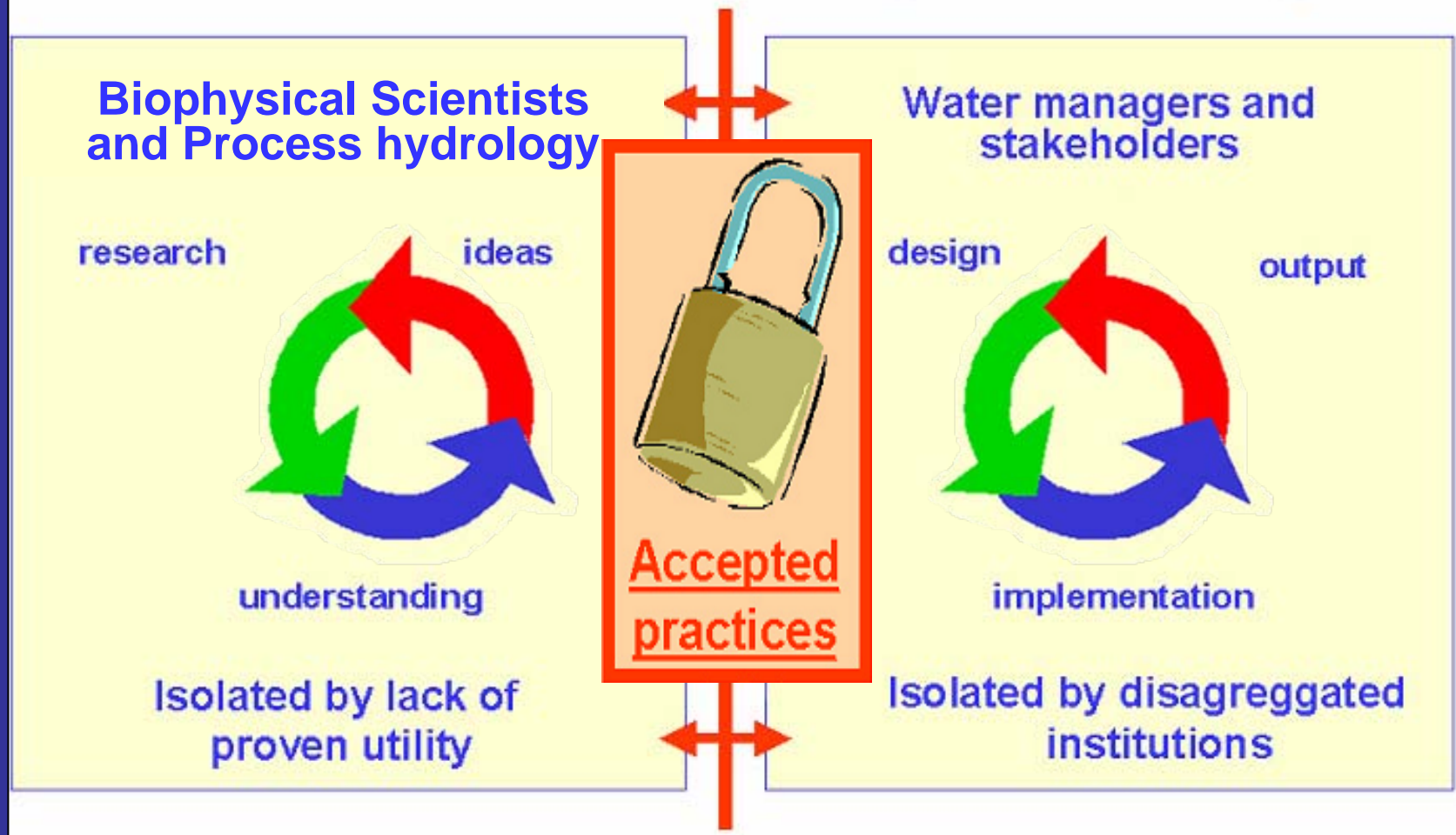
- An approach which recognises the catchment or river basin as the appropriate organisation unit for research on ecosystem processes for the purpose of managing natural resources in a context that includes social, economic & political considerations,
- A process through which people can develop a vision, agree shared values & behaviours, make informed decisions and act together to manage the natural resources of their catchment

3.0 Relevancy of ICM in SI

- **Issues of land use are present – effects on surface & ground water**
- **Issues of freshwater – water quality due to logging, mining, waste disposal, subsistence farming, livestock, etc**
- **Issues on coastal marine – effects on coral reefs, fisheries**
- **Issues on land ownership – landowners vs investors & government**

“Paradigm Lock”

.....based on outdated knowledge and technology



4.0 Existing Institutions for ICM

- National government (each respective areas)
- Provincial government (as above)
- Non Governmental Organisations (SIDT, Tribal Committees)
- Women Organizations (NCW)
- Educational Institutions (Tertiary & High Schools)
- Communities (Village Committees)
- Investors & Stakeholders

5.0 Legislations & Regulations relevant for ICM

- The Environment Act 1998
- The River Waters Act 1969 & Regulations
- The Public Health Ordinance & Regulations 1970
- The Fisheries Act & Regulations
- The Mines & Minerals Act 1990, Regulations 1996
- The Provincial Ordinances (various)

5.1 National Environment Management Strategy (1990)

A comprehensive strategy that covers:

- Integration between environment & economic considerations
- Improving environmental awareness/education
- Strengthening resources database
- Protection of areas of high ecological, wilderness & cultural value
- Improving wastewater management & pollution control
- Land resources management (excluding forestry)
- Sustainable use of forest resources
- Sustainable use of marine resources
- Coastal environment management
- Environmentally safe exploitation of non-living resources
- Implementing the above plans & strategies through various Ministries and Departments
- Review of the NEMS
- NEMS was drawn up after wide consultations with National, Provincial, NGOs organisations

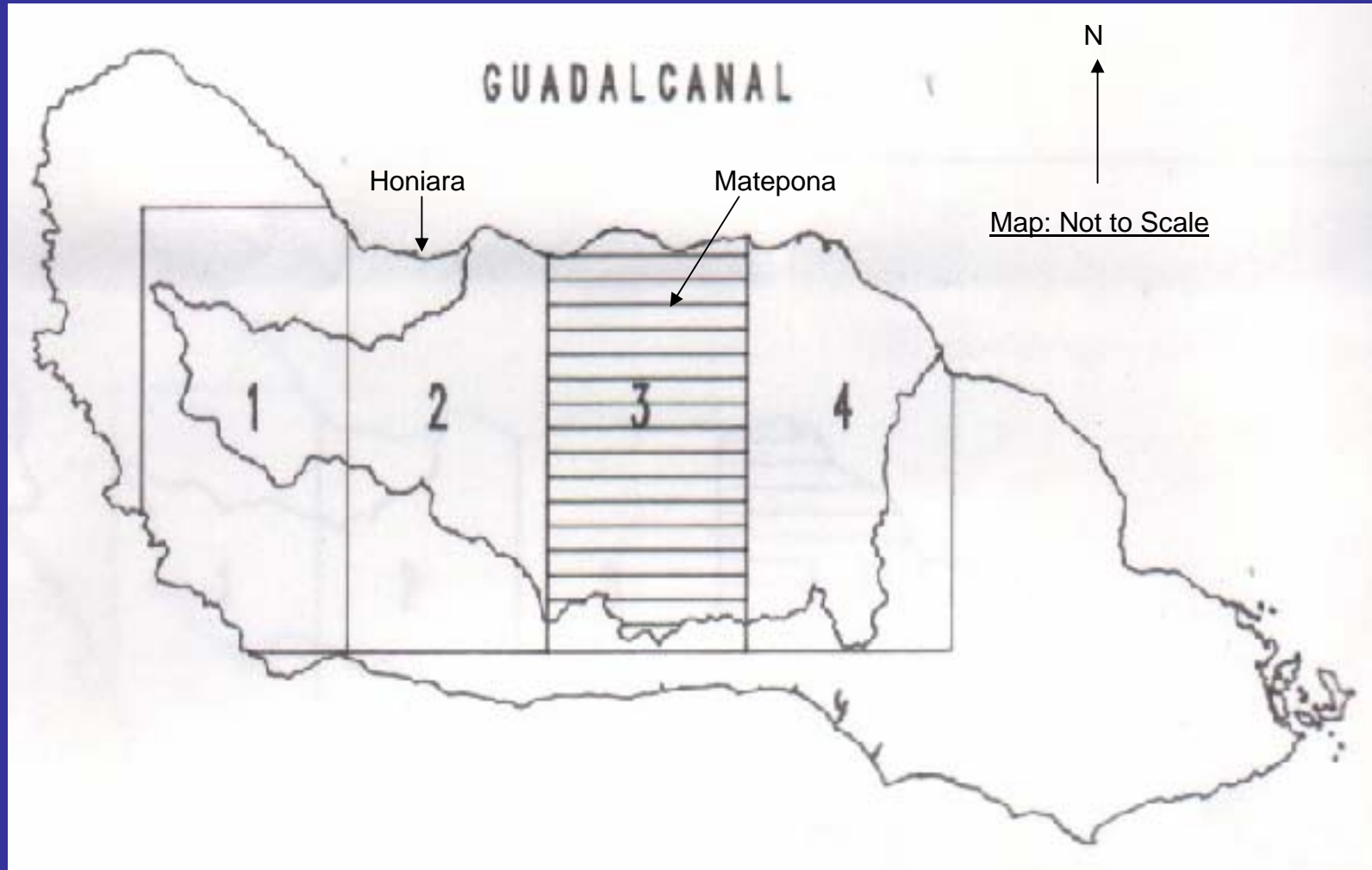
6.0 Constraints in ICM research

- Collaboration/co-operation between Ministries, provincial and stakeholders organisations still the main barrier; information sharing is problem
- No clear policy on ICM in the country
- Lack of resources within govt., provincial organisations still exists
- The “Paradigm Lock” is still to be broken!

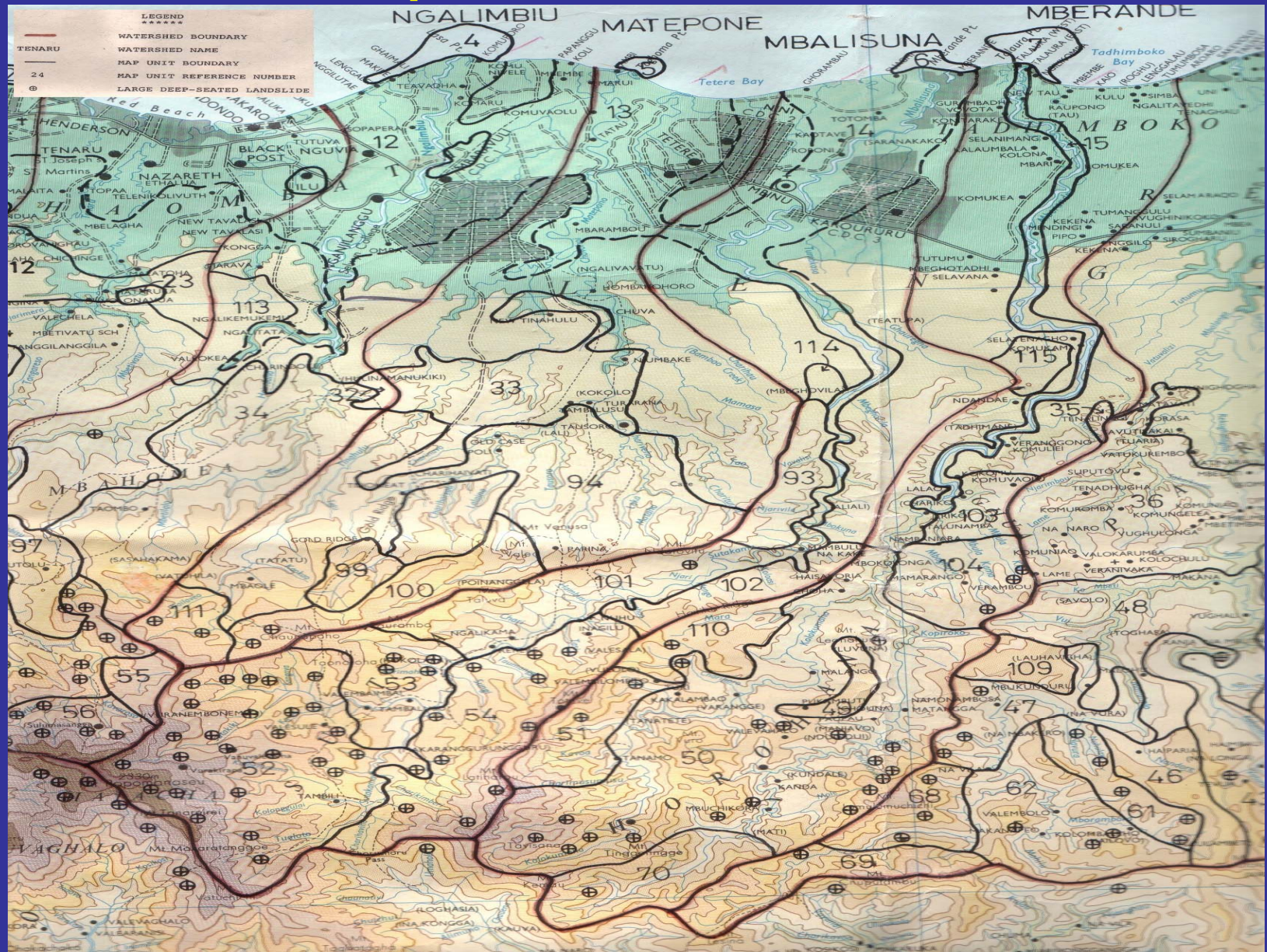
6.1 An example: Matepona Catchment

- Catchment area: 186 km², 15 km river length
- Location: NE Guadalcanal
- Drains north towards Iron Bottom Sound
- Basin is part of larger Guadalcanal Plains
- Matepona catchment has potential for 2 mini-hydro power plants, a Gold Mine, Oil palm plantation, water supplies for agriculture, gold processing, domestic water, and coastal fisheries & stream biota

Guadalcanal: Matepona Catchment



Matepona Catchment



Gold Ridge Mine Brief History

- August 1998 Commencement of production by Ross Mining
- June 2000 Civil Unrest in the Solomon Islands
premature closure of the project
- May 2000 Delta Gold takes over Ross Mining
- 2001 Goldfields and Delta Gold merge forming Aurion Gold
- 2003 Placer takes over Aurion Gold
- 2004 Placer receive Political Risk Insurance (PRI) payment with AIG and ownership of the Project transfer to AIG.
- July 2004 AIG sales Gold Ridge to any interest party
- Nov.2004 ASG successfully win the tender for Gold Ridge Mine
- 2005 ASG established negotiation to re-open Gold Ridge gold mine on Guadalcanal

Gold Ridge Mine-abandon workshop



Gold Ridge Mine-Plant site

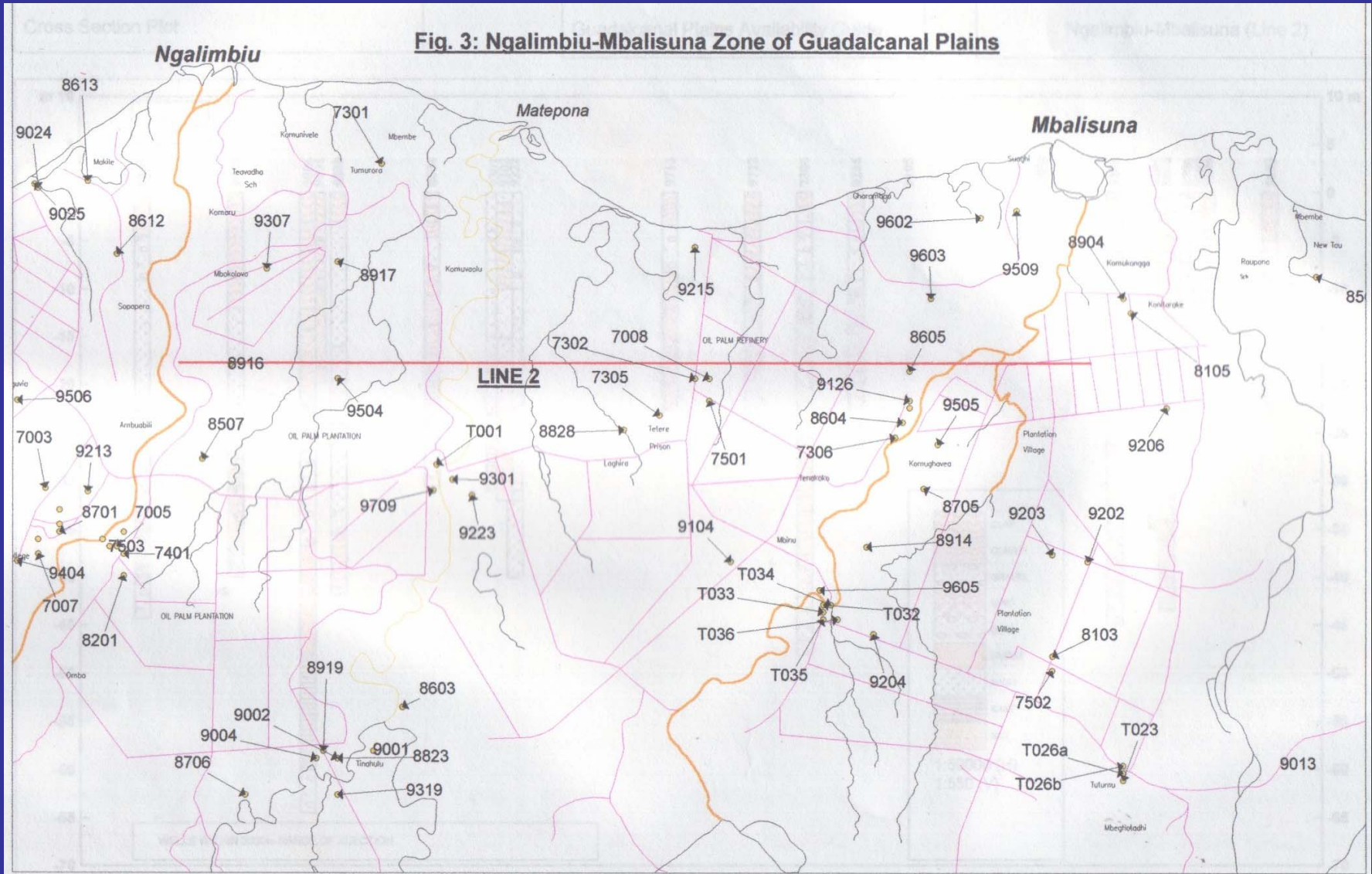


Gold Ridge Mine-Tailings Dam



Location of Boreholes at Matepona

Fig. 3: Ngalimbiu-Mbalisuna Zone of Guadalcanal Plains



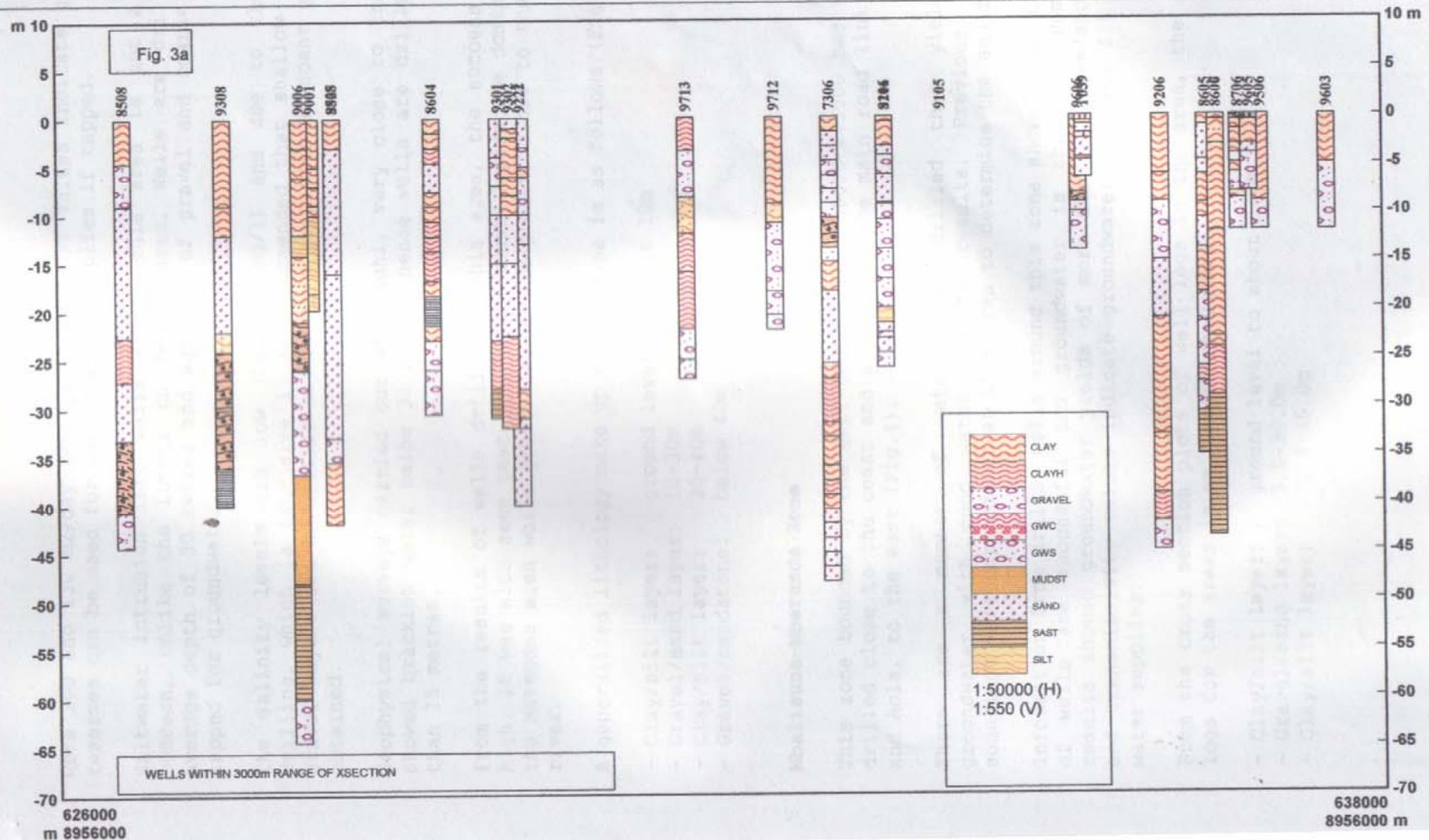
Borehole Depths at Matepona

GUADALCANAL PLAINS LITHOLOGY GUIDE

Cross Section Plot

Guadalcanal Plains Availability Guide

Ngalimbiu-Mbalisuna (Line 2)



Residents: Flood Hazards



Groundwater: Contamination risks



River Water Quality-biota issues



Water Quality: Increase Sediment Loads



7.0 Conclusions

- With issues similar to those present in the case studies (Motueka), ICM could be implemented in Solomon Islands
- *Policies regarding ICM should be drawn*
- Institutions who are involved in ICM issues must be strengthened through collaboration & policy
- *Future ICM implementation should ensure community participation instead of being consulted as is the case in past & existing projects*
- For long term ICM implementation, community building, participation and awareness is of paramount importance.
- National & Provincial Government must provide the community (village people) the support they require to empower them to participate effectively.

Thank you

