

# **Documentation of Vegetation Change for Low Lying Islands**

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**SPC-GEM, Suva Fiji Islands**



# Example Kiribati



- **Area 1/3 of USA**
- **Land 800 km<sup>2</sup>**
- **110,000 people**
- **1/3 in Tarawa**
- **32 atolls**

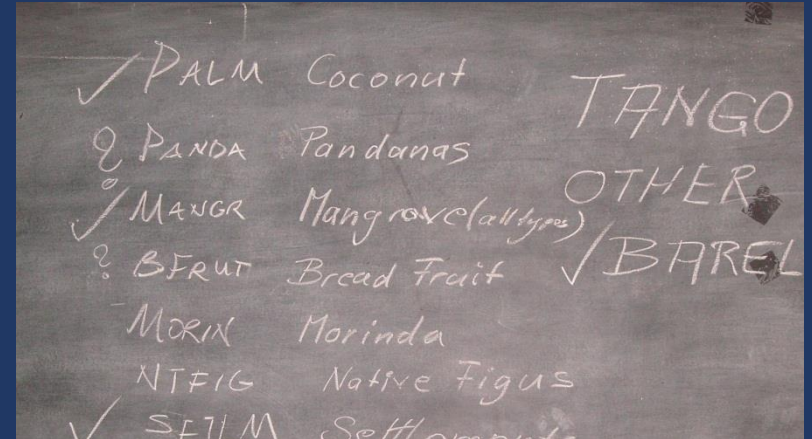
# Coconut Resource

- **Foot security**
- **Income in outer islands**

**Observation of coconut resource is essential**

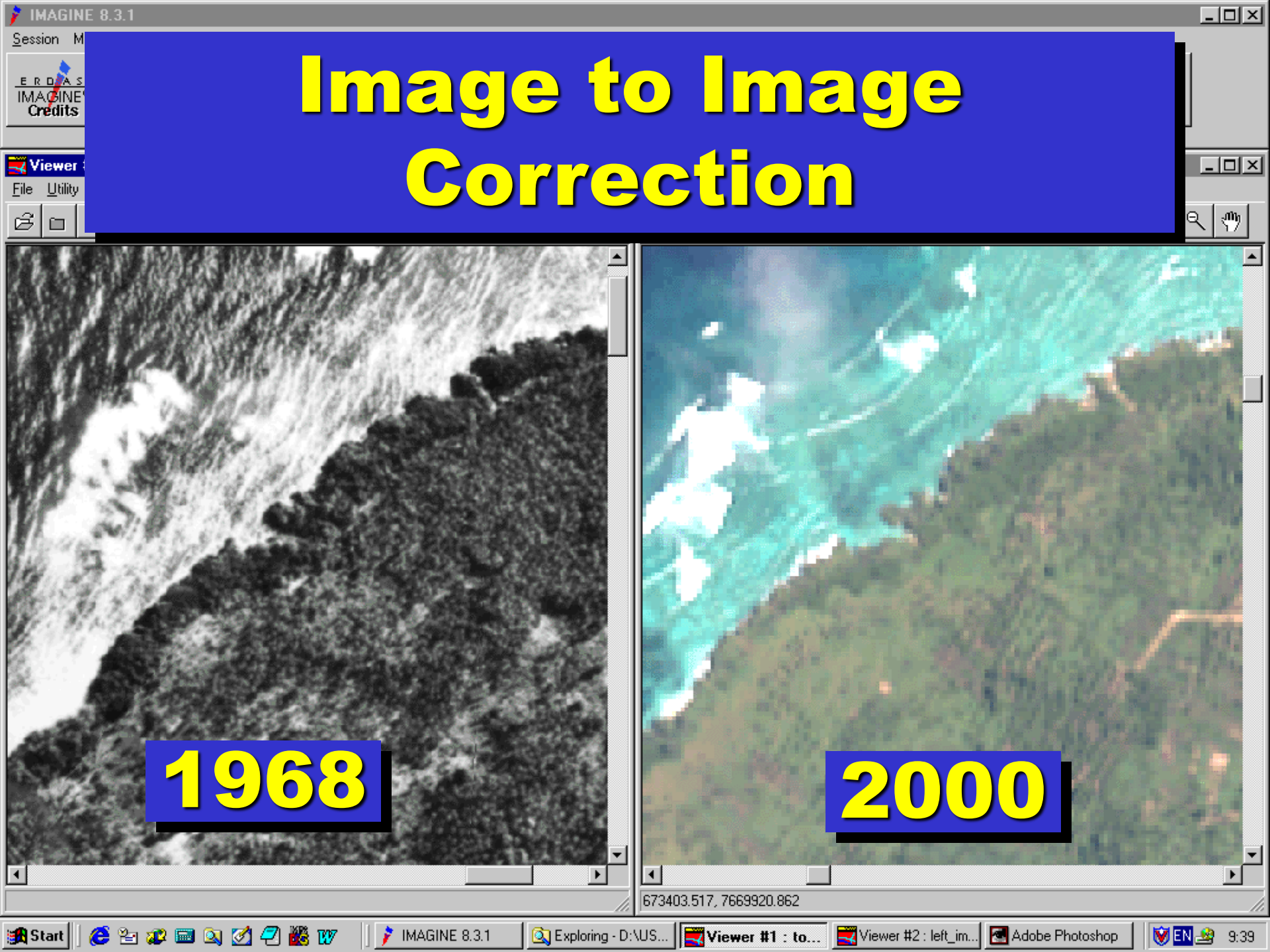


# The GIS Operators in KI



- Agriculture
- Environment
- Lands Department





# Image to Image Correction

**1968**

**2000**

673403.517, 7669920.862



# Old Vegetation Maps & recent Satellite Images



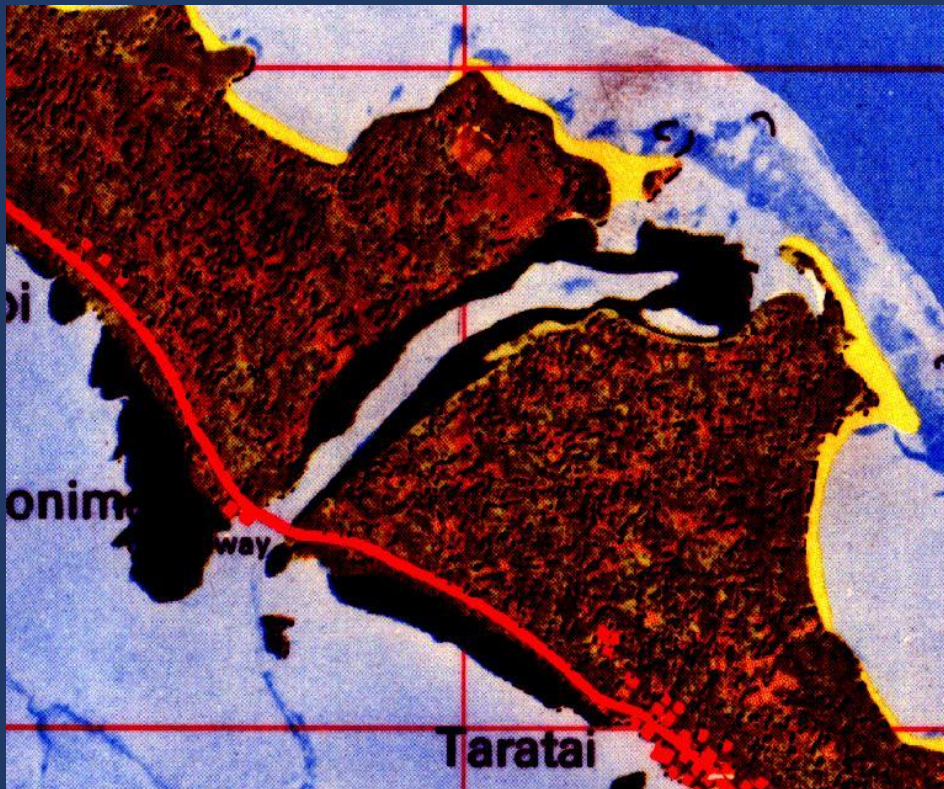
# Mangrove Increase Marakei





# Tarawa 40 Years Difference

**Mangroves are growing not shrinking !**





# **Investigated Islands**

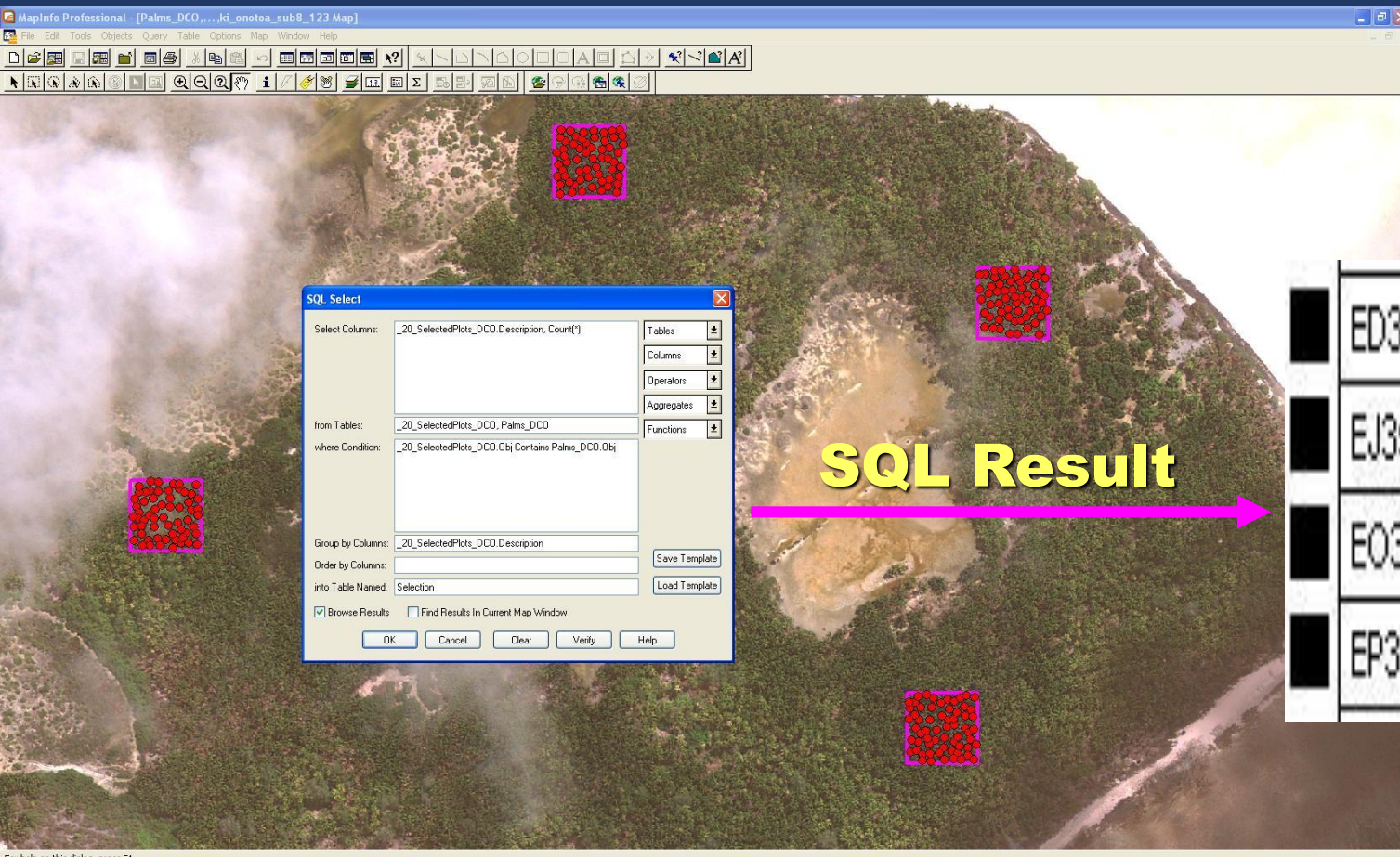
- **1 Makin, 2 Butaraitari, 3 Marakei, 4 Tarawa, 5 Maiana, 6 Aranuka, 7 Onotoa, 8 Tamana and 9 Arorae**
- **Only in Makin slight decrease of vegetation**

# Backup of Information





# Counting in MapInfo



ED363	60
EJ358	59
EO366	63
EP360	59

**MapInfo automatically counts the number of palms within the plots using SQL select**



# Coconut Inventories





# **Change of Pacific Country Assistance**

- **No more funds for general GIS&RS assistance, like the example Kiribati**
- **Projects have to be cost recovery**
- **Trend to handle remote sensing and larger GIS applications outside Pacific Island Countries**
- **No chance for small projects**

# Pacific GIS&RS Vehicles with Long Tradition

- Pacific Islands GIS&RS User Conference (22 years, ~ 300 participants)
- E-Mail distribution list GIS-PAC
- Pacific Islands GIS&RS Newsletter
- Conference Website



*The Newsletter of the  
GIS&Remote Sensing  
Users in the Pacific  
Issue 1/2008  
February, 2008*

## **Pacific Islands GIS&RS User Conference: Marked a great Success**



The Pacific Islands GIS and RS User Conference was held in Suva from the 4th to the 7th of December, last year at the lower campus of the University of the South Pacific. An independent conference committee made up of personnel from SOPAC, USP, FLIS, FEA, NLTB and Forestry Department organised the conference.

Over 220 people registered on the conference website with about 200 turning up to the conference from more than 20 different countries. During the four days about 60 power point presentations and verbal speeches were given.

The conference attracted presenters from as far as the Americas and Europe. This includes presenters from Australia, Canada, Cook Islands, Fiji, France, Germany, Hawaii, Ireland, Kiribati, New Caledonia, New Zealand, Papua New Guinea, Samoa, Solomon Islands, Tonga and Tuvalu.

On the final day of the Conference approximately 100 Pacific Islanders discussed about 17 different subjects relating to GIS and RS applications and the methods to be developed or adapted for Pacific

Island Countries.

During the evenings, a number of meetings took place for the conference committee or the special interest group GIS&RS of PICISOC.

Every evening a social program provided the avenue to network between Pacific Island GIS officers and between software, hardware and image data provider and users.

An exhibition room was set aside to give space for the display information about hardware, software, image data and applications. This room was also doubled as a meeting during the coffee breaks.

Prior to the conference a workshop was conducted for GIS officers of utilities and another workshop as introduction to ESRI GIS products. This effort was greatly welcomed by the participants and their organisations as a way to move forward.

This and following issues of the GIS&RS Newsletter will publish articles provided by the presenters of the Conference.

Elizabeth

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# **The Pacific GIS and Remote Sensing Council**

- **Registered with all formalities**
- **Budget independent from regional organisations**
- **Maintains all information distributing vehicles**

# Objectives

- 1. To promote the Pacific development of GIS&RS;**
- 2. To enable collaboration and share lessons learnt;**
- 3. To discuss and establish methods in building adaptation;**
- 4. To manage the distribution, publication and awareness of conference outcomes;**
- 5. To establish robust links.**

# **Structure of PGRSC**

- **Board, 7 members, SPC, Lands, USP, UNITAR, MRD, independent consultant**
- **Three trustees (ex SPC Director, ex PS Lands and decorated education advisor)**
- **Conference Committee and other committees**
- **Country Focal Points**
- **Members**



# History... GIS&RS User Group



*Forestry Department, Fiji, 1993*

# Country Focal Points



# Important Links



Pacific GIS and Remote Sensing Council



Pacific Community  
Communauté  
du Pacifique





# **Pacific Vegetation Change has to be Monitored**

- **Blue Carbon the new initiative**
- **Advanced technique is available in terms of image data in the cloud and cloud based semi automatic analysis**
- **How far Pacific Island Countries will buy a “black box” ?**

An aerial photograph of a tropical coastline, likely in the Pacific Islands, showing a narrow strip of land with a mix of green vegetation and sandy areas, bordered by turquoise water and white sand beaches. The sky is a deep blue with scattered white clouds. A large, bold, yellow word with a black drop shadow is centered over the image.

**Thanks**