

Mangrove Change Detection Fiji

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SPC
Secretariat
of the Pacific
Community

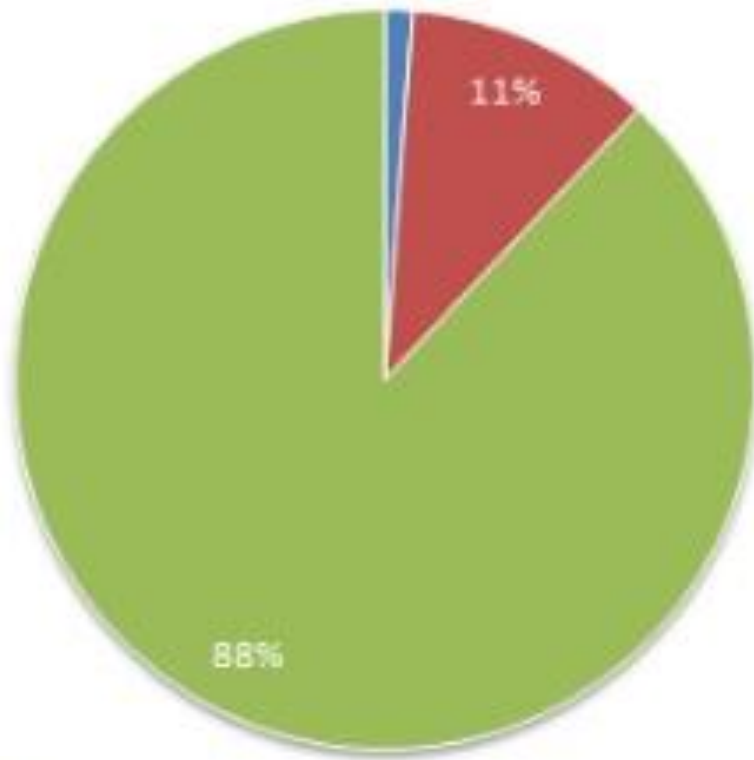
Applied Geoscience and Technology Division (SOPAC)



Mapping Change 1991-2001

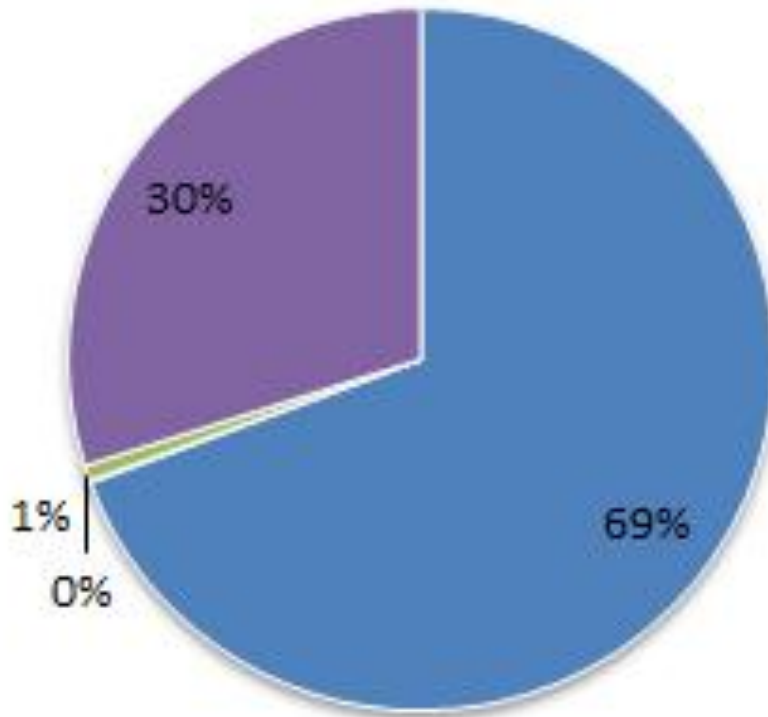
- **715,512 Hectares Mangrove area**
- **30,122 Hectares lost = 4.2 %**
- **35,803 Hectares new mangrove**

30,122 Hectares lost (4.2%)



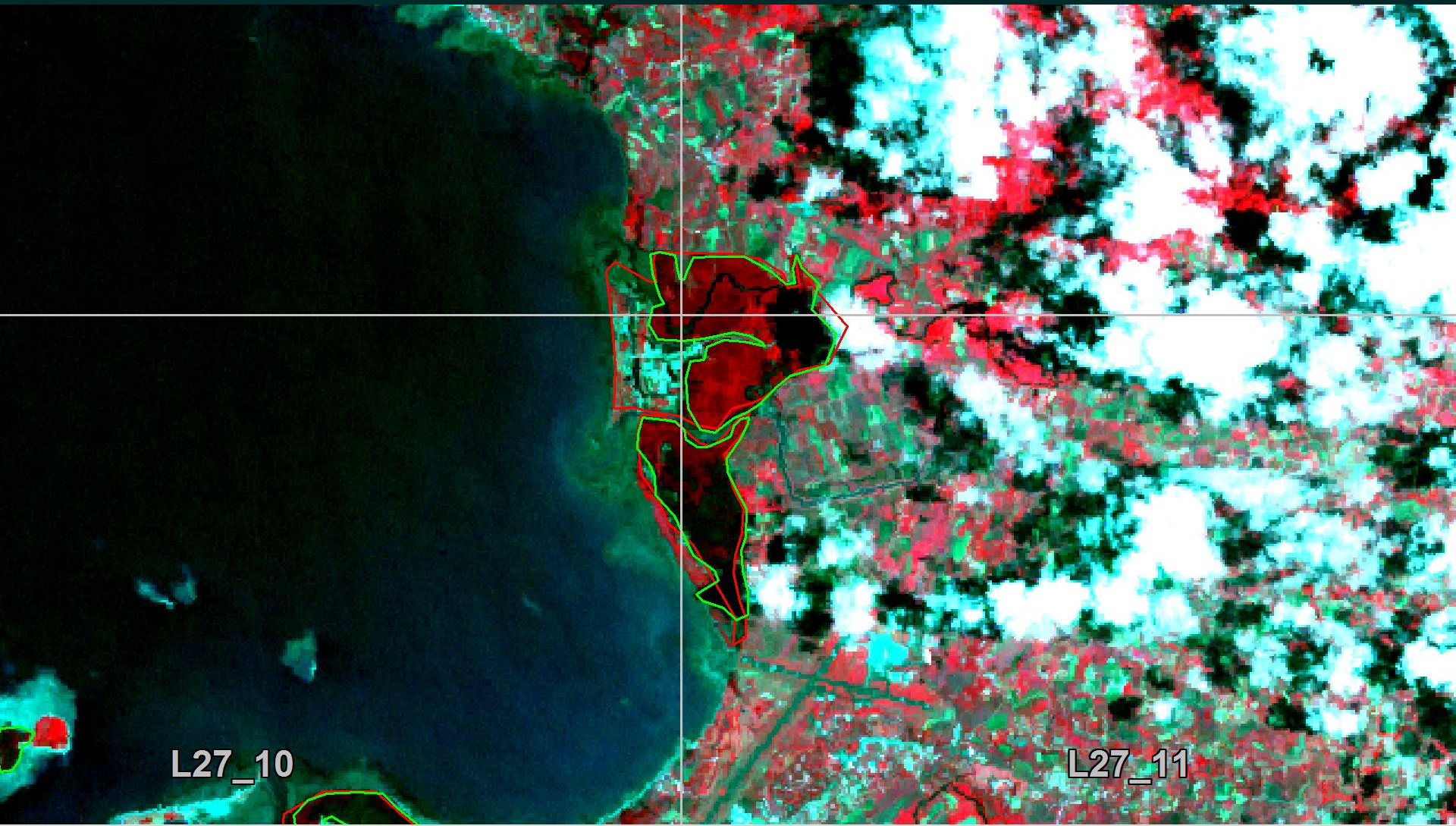
 1	= Mangrove 1991, Forest 2001	355 ha, 1.2 %
 2	= Mangrove 1991, Pine 2001	3,249 ha, 10.8 %
 3	= Mangrove 1991, Non-Forest 2001	26,518 ha, 88.0 %

35,803 Hectares new Mangrove (5.0 % of total Mangrove)



■ 1	= Forest 1991, Mangrove 2001	29 ha,	0.1 %
■ 2	= Hardwood 1991, Mangrove 2001	240 ha,	0.7 %
■ 3	= Non-Forest 1991, Mangrove 2001	10,702 ha,	29.9 %
■ 4	= Forest 1991, Mangrove 2001	24,832 ha,	69.4 %

Deforestation



L27_10

L27_11

Realistic Deforestation

715,512 Hectares Mangrove 2001

3,249 Change Mangrove to Pine

718,761 Total

**Mangrove loss 1991 to 2001 without
counting mangrove converted to pine:**

26,837 Hectares from 718,761 = 3.7 %

→ 4 %

Location of Mangrove Loss:

Map Sheet 029 (Suva):

- **Loss 12,056 Hectares,**
- **Left 42,145 Hectares,**
- **1991 28.6 % more mangroves !**

Map Sheet L27 (Nadi Lautoka)

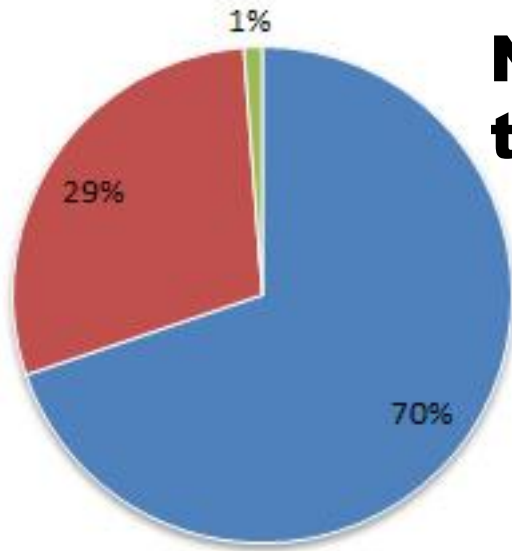
- **Loss 6,392 Hectares**
- **Left 29,659 Hectares**
- **1991 21.6 % more mangroves !**

Mangrove 2001 - 2007

- **694,347 Hectares total 2007**
- **22,544 Hectares loss since 2001**
(based on 715,512 hectare figure)
- **1,379 Hectares new mangroves**
(0.2 % of mangrove area)
- **3 % loss of mangrove (3.2 %)**

3 % Loss of Mangrove ?

Loss of Mangrove



Not Counting Conversion Mangrove to Forest:

710,082 Total Mangrove
6,805 Deforestation = 1.0 %

- 1 = Mangrove 2001 and Forest 2007**
- 2 = Mangrove 2001 and Non-Forest 2007**
- 3 = Mangrove 2001 and Water 2007**

Major Loss Mangrove to Non-Forest

- **L27 1,109 Hectares**
- **O28 1,128 Hectares**
- **O29 1,049 Hectares**

Solution to Fix Interpretation

- A. (i) Highlight all changes mangrove to forest and vice versa, (ii) new interpretation for these 3 % of total area;**

- B. (i) Interpretation with VHR satellite image data, (ii) adjustment of areas backwards.**



Thanks