

# Status & Challenges of Cook Islands GEO-DRM

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## Cook Islands GEO-S/GIS History

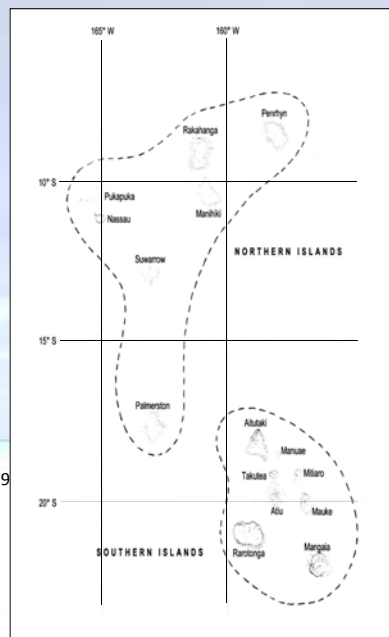
- **1990** – NZODA/MFAT trained by Landcare Research of Manaaki Whenua, 8 Govt IT staff.
  - Ministry of Agriculture Research & PDU division.
  - Environment Services Land Development division.
  - Ministry of Works Survey & Waterworks division.
- **1995** – Government Ministry reform and transition of core services.
- **1996 – 1998**, Government responsibilities adhoc and privatisation of GIS capability and core services.
- **2006** – Government National Plan formulated (NSDP) was launched.
- **2007** – CRRP Proposal for high-resolution satellite imagery from IKONOs to Quickbird (DEMs and orthorectification).
- **2008** – EDF9, SOPAC installation of the Cook Islands Mapserver hosted by MOW (MOIP)



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### Salient features of the Cook Islands

- **Population:** 13,349 (2011 census)
- **Capital:** Rarotonga – pop 8,424
- **Cyclone Season:** November – March
- **Industry:** Tourism, Fisheries, Agriculture, Deep Sea Mining, Financial Services
- **Tourism No:** 110,000 per year
- **EEZ:** 2.4 million km<sup>2</sup>  
gained 400,000 km<sup>2</sup>
- **Island Groups:** Northern Group – 6i, 1u, Southern Group – 6i, 2u, Total – **15 Islands**
- **GDP:** \$US15,813
- **Constraints:** De-population - migration, Island isolation- Irregular Inter Island shipping transport,
- **Disasters:** **Cyclones** – 1986, 1<sup>st</sup> Nov 1997 – 9 deaths, 10 missing. 2005 – 5 successive cyclones in 1 month. 2010 - Cyclone Pat – Aitutaki. **(Flash floods, Erosions 1990s – 2000, Draughts.**



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### Many organisations provides GIS capability

Agency	GIS Utilisation	Case Study Area
MOA	Forecasting Risk Reduction & planning	Crop Production. Land Zoning.
	Spatial Risk Mapping Risk monitoring & early warning	Disease outbreak. Surveillance monitoring.
Met Services	Risk Monitoring & early warning	Coastal and Land flooding forecasting.
MOIP	Risk Reduction & planning	Infrastructure mitigation. Land Survey & remote sensing. Building standards & codes.
EMCI	Spatial Risk Mapping Modelling & simulation	Disaster Management Program. Tsunami Inundation. Tsunami evacuation mapping.
NES	Risk Reduction & Planning	Land development compliance standards.
Red Cross	Risk Reduction & planning	Disaster Management Program



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## Status, Experiences & Lessons Learnt

### Status:

- Baseline
  - MOIP, Lands information custodians to Government data, digital elevations models, and are the authority to all analysis to remote sensing data.
- DRM
  - Inundation models, coastal and land flooding risk management and warning models.

### Experiences

- GIS maps used as tools for Aitutaki recovery, inundation models, Risk assessment VCAs.
- GIS Database on cyclone shelters for national maintenance program.
- GIS Maps for flash flood inundation on Rarotonga.

### Lessons learnt

- There are few remaining GIS expertise needs more training.
- No web portal experiences as a platform for disaster management.
- Lack of coherence and coordination among actors and data providers.



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## Access to Satellite data

### Modalities:

- Regional Arrangements through SOPAC, SPC.
- Commercial Procurements.
- New Zealand Maritime Navy.

### Authorised Sources:

- US National Oceanographic Atmospheric Administration (NOAA)
- PTWC

### Commercial Sources:

- IKONOS, QUICK Bird,



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## Key Policy & Institutional Issues

### National Policy Issues:

- National legal controls on data sharing.
- National Policy for easy access of Geospatial data between government agencies.
- Lack budgetary policy to support ongoing Geospatial development to enhance development.

### Institutional Issues:

- Institutions working on GEO DRM independently and in silo.
- Gateway agency (MOIP) lack support to coordinate data standards, access, utilisation to assist GEO DRM work.
- Absent of Geo-DRM gateway to increase public awareness



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## Capacity Development Needs

- **Support** – to build accurate and reliable data of appropriate scale & resolution
- **Training** – at professional level of specialists working in geo-data and database management.
- **Investment** – to invest in enhancing MOIP national spatial data infrastructure development.
- **Access** – to real time data satellite regional networks.
- **Technical support** – for establishing data sharing agreements, central data warehousing and Geo-Portal hosting.
- **Policy Advocacy** – Promote buy in GIS DRM systems in alliance with all stakeholders



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**COOK ISLANDS - FERN**  
FrontLINE Emergency Response NETWORK

REFERENCE AND POPULAR LINKS WEBSITES  
EXECUTE FrontLINE Emergency Response NETWORK  
MANAGE FERN DATABASES  
DATA REPORTS  
AITUTAKI ASSESSMENT REPORTS  
Exit Application

To display database Window Press F11  
Version: 0.1

SOPAC  
Pacific Islands Applied Geoscience Commission

Australian Government  
AusAID

Government of the Cook Islands

**REFERENCES & WEB LINKS**  
References to Historic data, reports, situation reports relevant to frontline manages

**EMERGENCY RESPONSE ACTIONS**

- Tsunami
- Cyclone
- Flood
- Chemical hazard
- Aerodrome

**FERN MAINTENANCE PORTAL FOR:**

- Updating contact lists,
- Monitoring SOP registration lists
- Volunteers registration teams
- Damage Assessment Collation
- Vulnerability Capacity Assessment tool

**DATA REPORTS:**

- Situation Reports
- SOP registration listing reports
- Agency Strategic Response Inventory
- Damage Assessment Reports

**AITUTAKI ASSESSMENT REPORTS**

- Cyclone Pat Assessment results

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**COOK ISLANDS - FERN**  
FrontLINE Emergency Response NETWORK

**TSUNAMI EMERGENCY RESPONSE ACTIONS**

Task No.	Task Name	Start date	Start time	Target	Progress	Task status
1	CMH to CONTACT the National Commander and the Director of EMG on the 1st of January	01/01	00:00	60%	100%	Completed
2	NC, EMG & CMH to activate the National Emergency Response for all Regional Offices. This means that all Regional Offices will be alerted	01/01	00:00	100%	100%	Completed
3	NC to activate and coordinate the NEG in accordance to Operational Control	01/01	00:00	100%	100%	Completed
4	NC to coordinate the NEG in accordance to Operational Control	01/01	00:00	100%	100%	Completed
5	Open map of a target area in the NEG, CMH and EMG and request the Force	01/01	00:00	100%	100%	Completed
6	NC to request page 10	01/01	00:00	100%	100%	Completed
7	NC to request page 11	01/01	00:00	100%	100%	Completed
8	NC to request page 12	01/01	00:00	100%	100%	Completed
9	NC to request page 13	01/01	00:00	100%	100%	Completed
10	NC to request page 14	01/01	00:00	100%	100%	Completed
11	NC to request page 15	01/01	00:00	100%	100%	Completed

**MAPS OF THE COOK ISLANDS**

**ISLAND MAPS OF THE COOK ISLANDS**

Geographic grid: 1000000 1000000 1000000 1000000

Island Geographic Details: Island Population: Island Government Officials: Contact Details:

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_6810](https://www.yunbaogao.cn/report/index/report?reportId=5_6810)

