

Pacific User Needs

Wolf Forstreuter

SPC GEM

“Space: a Tool for Accessibility, Diplomacy and Cooperation”



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du Pacifique



SPC

- 600 specialists and support staff
- Headquarter in New Caledonia
- SPC covers 22 Pacific Island States

**Implementation of technology,
know how transfer**

Image Data Centre (Past)

- Advice which data is available
- Advice which data is suitable
- Assistance the data purchase
- Data pre-processing
- Data transfer to countries
- Backup

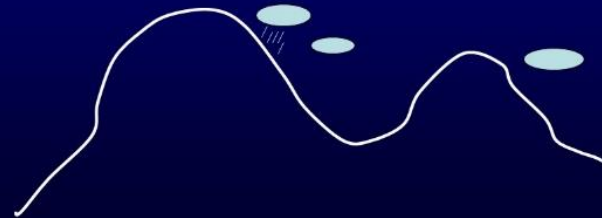


Image Pre-Processing

- Image stitching
- Haze removal
- Atmospheric correction
- Object specific contrast enhancement
- Image pan-sharpening

Small Islands, Large Ocean

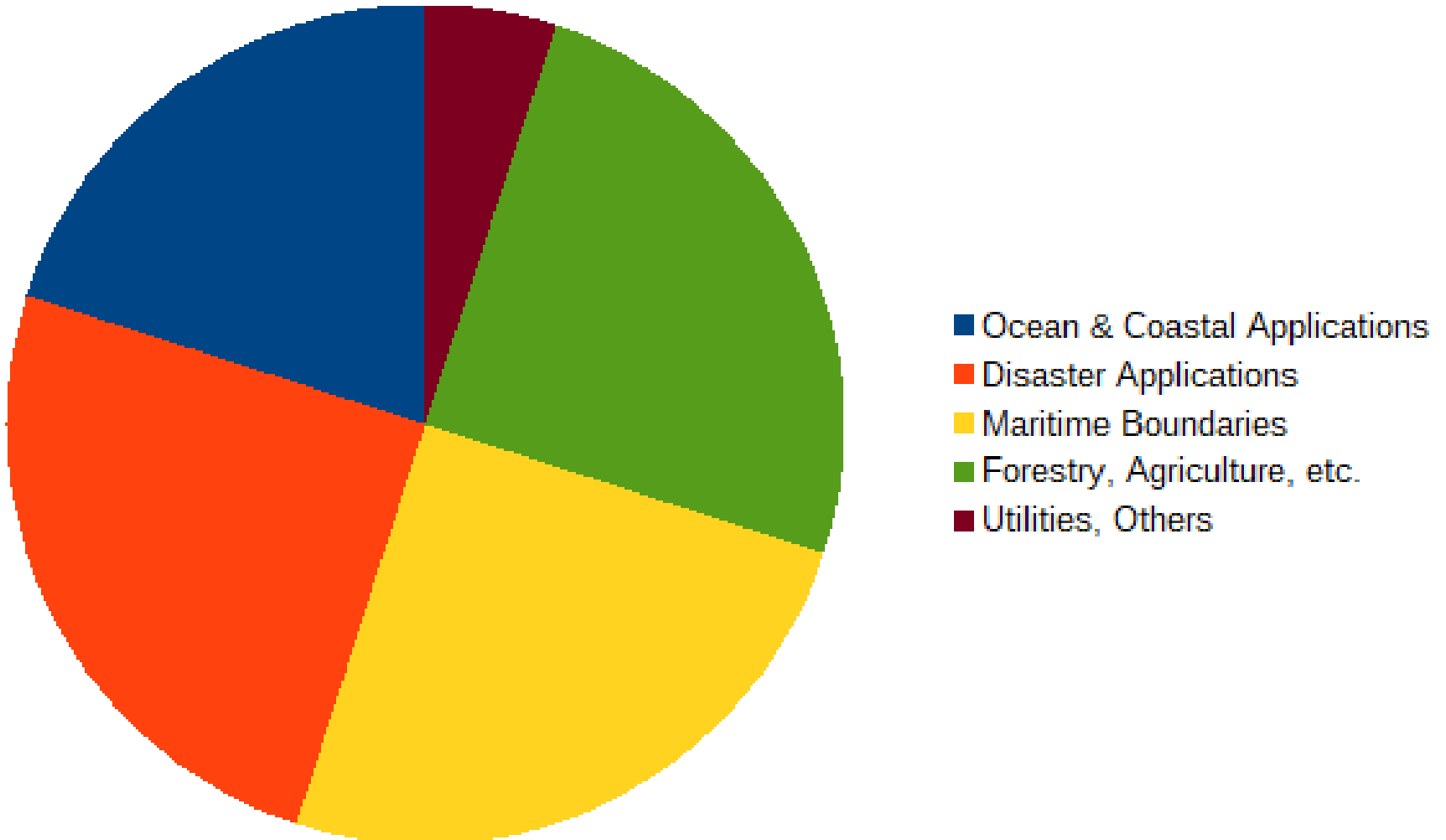
West ← **East**



Islands Atoll - Volcanic

- Volcanic: Fiji, Vanuatu, New Caledonia, Samoa, Solomon Islands, PNG
- Atoll Islands: Kiribati, Marshall Islands, Federated States of Micronesia, Palau, Tonga, Tuvalu, Palau, Guam, Wallis & Futuna, Niue, Nauru

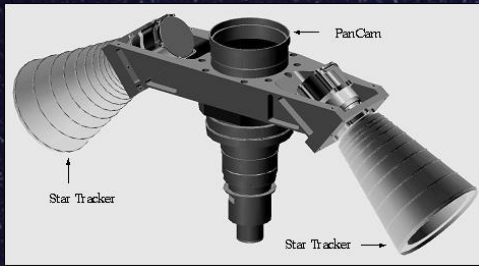
Data Demand VHR IMG



Satellite Position



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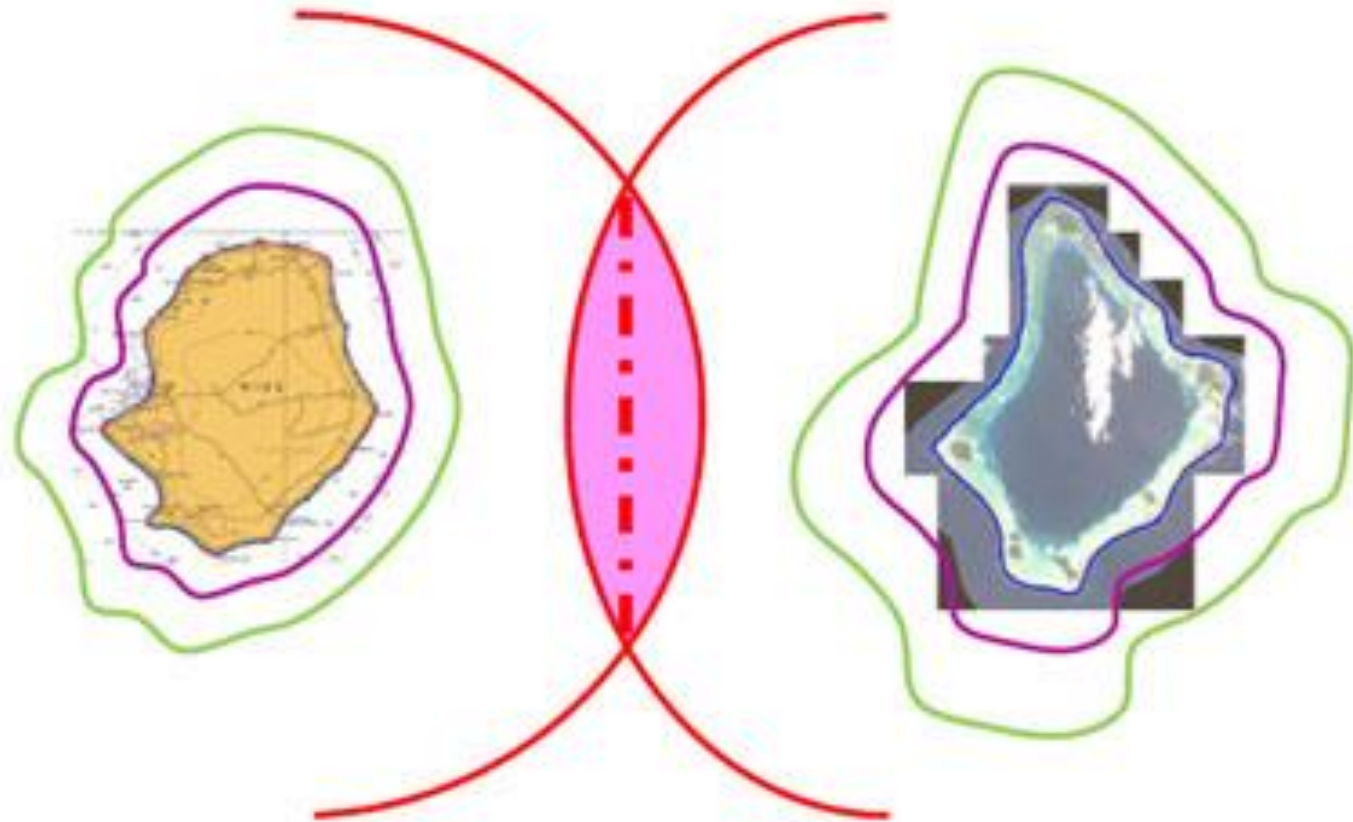
**X, Y and Z Position
extremely accurate**

High Geo-Accuracy

Torrs Strait & Dog Leg Region



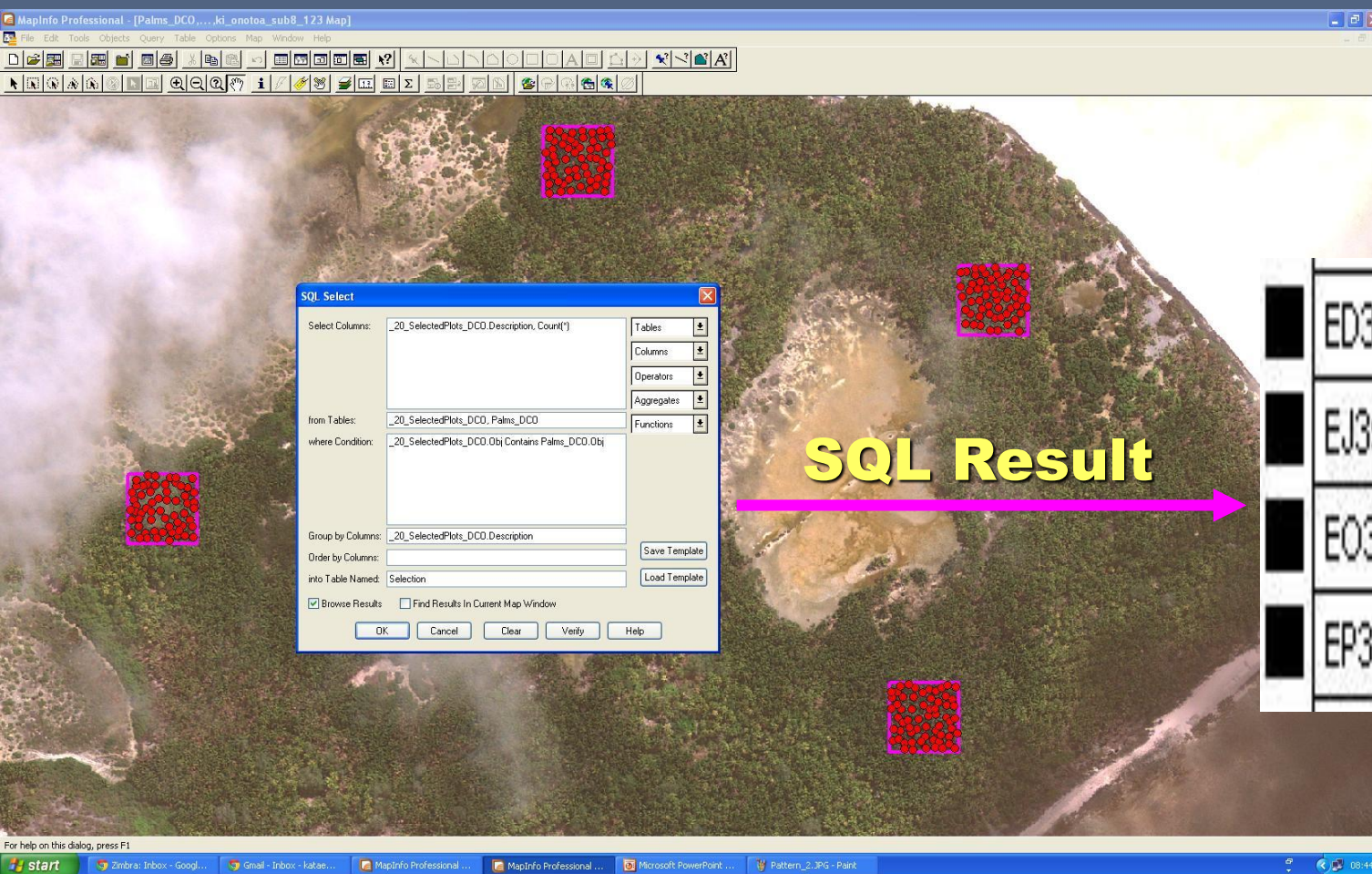
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Vegetation Monitoring

- **Deforestation rate**
- **Forest degradation**
- **Land use mapping**
- **Food security**
- **Work income**

Counting in GIS Environment



MapInfo Professional - [Palms_DCO....ki_onotoa_sub8_123 Map]

File Edit Tools Objects Query Table Options Map Window Help

Select Columns: _20_SelectedPlots_DCO.Description, Count(*)

From Tables: _20_SelectedPlots_DCO.Palms_DCO

Where Condition: _20_SelectedPlots_DCO.Obj Contains Palms_DCO.Obj

Group by Columns: _20_SelectedPlots_DCO.Description

Order by Columns:

into Table Named: Selection

☒ Browse Results ☐ Find Results In Current Map Window

OK Cancel Clear Verify Help

Tables Columns Operators Aggregates Functions

Save Template Load Template

SQL Result

ED363	60
EJ358	59
EO366	63
EP360	59

GIS automatically counts the number of palms within the plots

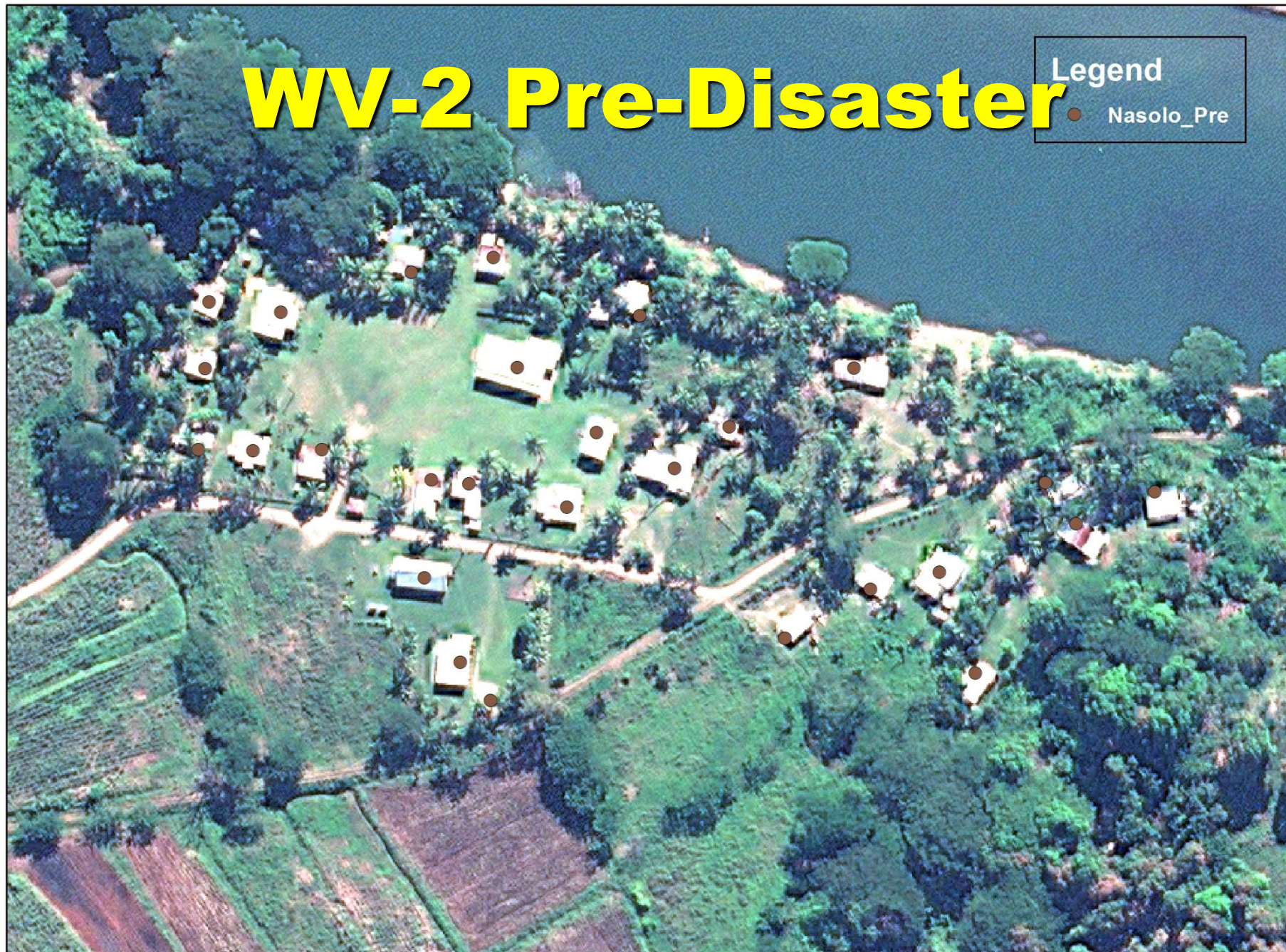
Data Requirements

- **Rate of deforestation and partly land use mapping in volcanic islands Landsat and Sentinel**
- **All other applications at 1:10,000 scale need very high resolution image data**

WV-2 Pre-Disaster

Legend

● Nasolo_Pre



Also: Oblique Photographs



Village Maps

Legend

- DAM (29)
- DES (5)
- INT (34)



TC WINSTON BUILDING DAMAGE ASSESSMENT **Nawaido Village, Bua**

Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

0 0.0275 0.055 0.11 Kilometers



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MLMR



Need for fast Disaster Assessment:

- **Very high resolution**
- **Recorded one day after cyclone**
- **Fast delivery**
- **Very high resolution for pre-disaster assessment**
- **Radar for flood mapping**



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Thanks



<http://www.picgisrs.org/>

<https://www.facebook.com/PacGISConf/>