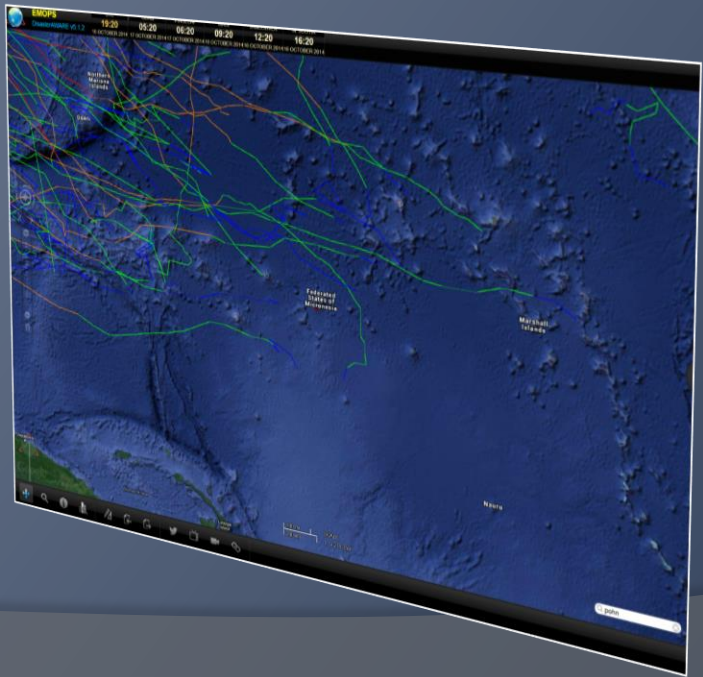




# GEOSPATIAL INFORMATION DEVELOPMENT AND APPLICATION IN THE FEDERATED STATES OF MICRONESIA

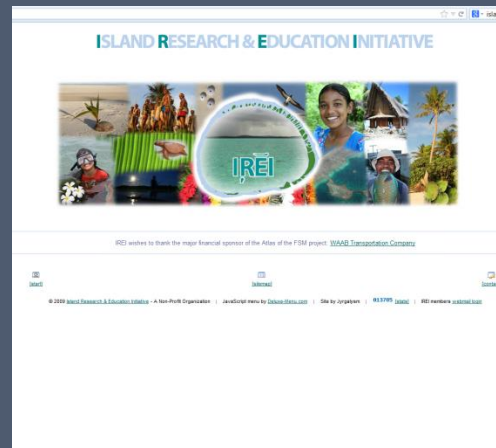
## Project Overview



October 21, 2013  
College of Micronesia, National Campus  
Pohnpei, FSM

# Who Are We?

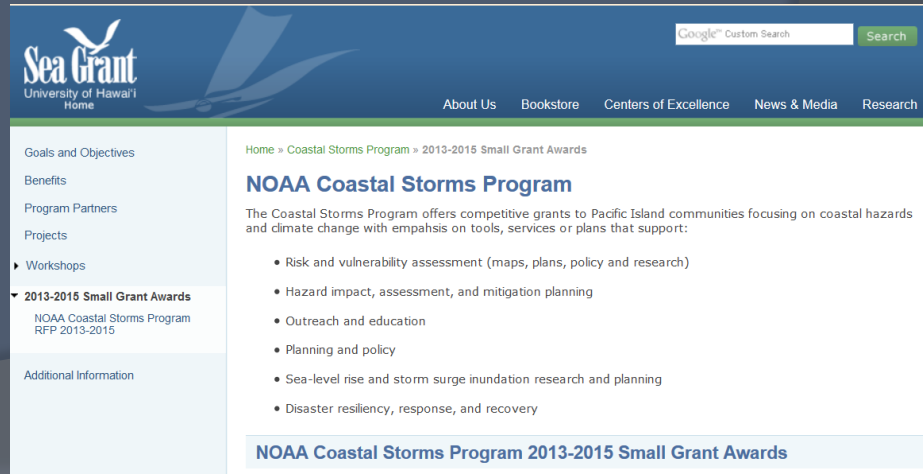
- Pacific Disaster Center
- Island Research & Education Initiative
- College of Micronesia - FSM



# Funding Mechanism

## ◎ Pacific Islands Coastal Storms Program

- Part of Larger effort led by NOAA
- Hosted by University of Hawaii Sea Grant College Program
- Program goal is to reduce the impact of coastal hazards to Pacific Island communities, ecosystems and economies



The screenshot shows the NOAA Coastal Storms Program website. The header includes the Sea Grant University of Hawaii logo and a search bar. The main content area is titled "NOAA Coastal Storms Program" and describes the program's focus on coastal hazards and climate change. A list of supported activities is provided, including risk assessment, hazard impact, outreach, and disaster resiliency. The footer contains a link to "NOAA Coastal Storms Program 2013-2015 Small Grant Awards".

Sea Grant  
University of Hawai'i  
Home

Google™ Custom Search Search

About Us Bookstore Centers of Excellence News & Media Research

Home » Coastal Storms Program » 2013-2015 Small Grant Awards

### NOAA Coastal Storms Program

The Coastal Storms Program offers competitive grants to Pacific Island communities focusing on coastal hazards and climate change with emphasis on tools, services or plans that support:

- Risk and vulnerability assessment (maps, plans, policy and research)
- Hazard impact, assessment, and mitigation planning
- Outreach and education
- Planning and policy
- Sea-level rise and storm surge inundation research and planning
- Disaster resiliency, response, and recovery

[NOAA Coastal Storms Program 2013-2015 Small Grant Awards](#)

Goals and Objectives  
Benefits  
Program Partners  
Projects  
Workshops  
2013-2015 Small Grant Awards  
NOAA Coastal Storms Program RFP 2013-2015  
Additional Information

# Project Goal

- Enhance the capacity of those supporting DM and DRR activities in FSM to access and use locally relevant geospatial information



YAP

Task: files checked for consistent projection

name of folder	Shapefile	Type	Projection	Action 1	Result Projection	Metadata Attributes	Comment	Action 2	NEW FILE
airport	airport	poly	WGS84	project	WGS84 UTM S4N	no	well		yap_airport
burned area	burned_area_2001	poly	WGS84	project	WGS84 UTM S4N	YES	off		yap_burned-area-2001
	burned_area_2002	poly	WGS84	project	WGS84 UTM S4N	YES			yap_burned-area-2002
	burned_area_2003	poly	WGS84	project	WGS84 UTM S4N	YES			yap_burned-area-2003
	burned_area_2004	poly	WGS84	project	WGS84 UTM S4N	YES			yap_burned-area-2004
churches	churches	point	WGS84	project	WGS84 UTM S4N	some	may be 720 off		yap_churches
coast guard reservation	coast_guard_reservation	poly	WGS84	project	WGS84 UTM S4N		looks good but		yap_coastguard-reservation
COM campus	college_of_micronesia	poly	WGS84	project	WGS84 UTM S4N		skewed ~ 20m	skirt ~ 20m	yap_college-of-micronesia
conservation area	conservation_area_yap_sen_poly	poly	WGS84	project	WGS84 UTM S4N	YES	Conservancy		yap_conservation-area
dancing grounds	dancing_grounds	point	WGS84	project	WGS84 UTM S4N		Village near can't be		yap_dancing-grounds
dem	dem	GRID	NAD83 UTM S4N						yap_dem
dem	gfyvyp_dem1	GRID	WGS84 UTM S4N						yap_dem1
dem	prwpr_dem	GRID	WGS84 UTM S4N						yap_dem
dem_rectified	dem_rectified	USGSDEM	NAD83 UTM S4N						yap_dem
elevation contours	contour 10m	line	WGS84	project	WGS84 UTM S4N		line (ragged)		yap_contours-10m
	contour 5m	line	WGS84	project	WGS84 UTM S4N				yap_contours-5m
	yap_ahvms	poly	undefined	define projection	WGS84		OFF - about	project to WGS84 UTM S4N	
footraps	footraps	line	WGS84	project	WGS84 UTM S4N		between 60-		yap_footraps
grass retaining wall	grass_retaining_wall	line	WGS84	project	WGS84 UTM S4N		W1		yap_grass-retaining-wall
graves and burial grounds	graves	point	WGS84	project	WGS84 UTM S4N		cannot be		yap_graves
hydrography	burial_ground	poly	WGS84	project	WGS84 UTM S4N		cannot be		yap_burial-grounds
	yap_hydra_points	point	undefined	define projection	WGS84 UTM S4N		CR not good		yap_hydra-points
	yap_hydra_lines	line	undefined	define projection	WGS84 UTM S4N		CR not good		yap_hydra-lines
	yap_2bytehydro_areas	poly	undefined	define projection	WGS84 UTM S4N		CR not good		yap_2byte-area
japanese lighthouse	japanese_lighthouse	poly	WGS84	define projection	WGS84 UTM S4N		confirmed, but		yap_lighthouse
labels - reefs and channels	labels_reef_and_channel	point	undefined	define projection	WGS84		labelled, looks	project to yap_reef-channel-labels	
lakes	lakes	poly	WGS84	define projection	WGS84 UTM S4N		20m-777		yap_lakes
meeting houses	meeting_houses	point	WGS84	define projection	WGS84 UTM S4N		cannot be		yap_meeting-houses
	manu_houses	point	WGS84	define projection	WGS84 UTM S4N		sanction, others		yap_manu-houses
	manu_houses_area	poly	WGS84	define projection	WGS84 UTM S4N		12-27m off		yap_manu-houses_poly
municipalities	municipalities	point	WGS84	define projection	WGS84 UTM S4N		good		yap_municipalities
	yap_municipalities	poly	undefined	define projection	WGS84		identical to	project to yap_municipalities_poly	
reefs	yapreef arcs	line	undefined	define projection	WGS84		> shift known		project to WGS84 UTM S4N
	reef	poly	WGS84	project	WGS84 UTM S4N		skirt		yap_reef-reefs



# Project Objectives

- ① Develop and distribute a comprehensive, locally relevant, and accurate set of geospatial data to support DM and DRR activities for all of FSM.
- ① Incorporate geospatial resources into a free, web-accessible decision support system.
- ① Enhance local capacity to use data resources and decision support tools through training.
- ① Enhance awareness and promote broad usage of the resources.



# Project Activities

- Inventory, Compilation and Augmentation of Existing Data
- Development and Compilation of New Data
- Data Integration into Data Sharing and DSS Platforms
- Training on Spatial Data for DM Decision Making
- Local Outreach Workshop
- Regional Promotion



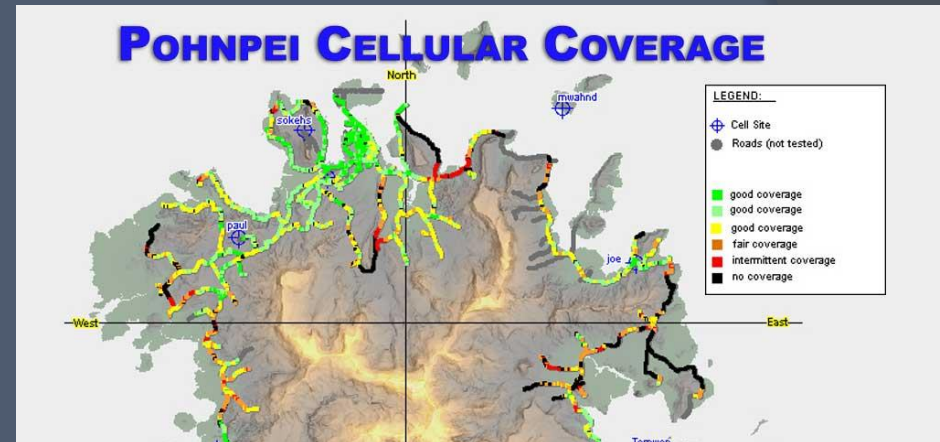
# Kick-off Meeting

- May 2013
- State and National Organizations
- GIS Resource Persons
- Current Uses
- Key Challenges & Gaps
- Preliminary Inventory



# Inventory, Compilation and Augmentation of Existing Data

- Data collection in Pohnpei, Chuuk and Kosrae from July to September 2013
- Some data collection in Yap by partners
- 53 datasets were augmented or added to database



Layer Name	Data Owner	Yap Last Update	Yap Outer Isles last Update	Chuuk Last Update	Chuuk Outer Isles Last Update	Pohnpei Last Update	Pohnpei Outer Isles Last Update	Kosrae Last Update	Notes	Source Metadata	File Format	Releasable?	Constraints
EXAMPLE-airport	PDC	2009		2009		2009		2009		y	shapefile	y	
DSL Coverage	FSM Telecom								all Islands with coverage				
TV Coverage	FSM Telecom								all islands with coverage				
Cell Coverage	FSM Telecom								all islands with coverage				
# of people	SBOC								all of FSM, but no individual level can be shared, must be aggregated / made anonymous for any possibility of sharing, same for all SBOC data		WGS 84 / .shp for all SBOC		





EMOPS

DisasterAWARE v5.1.2

UTC  
18:22

GUAM  
04:22

PINGELAP  
05:22

MAUI  
08:22

VANCOUVER  
11:22

N. SCOTIA  
15:22

16 OCTOBER 2014 17 OCTOBER 2014 17 OCTOBER 2014 16 OCTOBER 2014 16 OCTOBER 2014 16 OCTOBER 2014



### Legend

**Landslide Hazard**

- Steep Slope
- Very High
- High
- Moderate
- Low

**Base Map Data**

- bing Bing Hybrid



2000 ft SCALE  
600 m 1:36341

chuuk





Palikir

**Outer Island Emergency Data**

Name: Pakin Atoll - Nikahlap  
Est. Pop: 104

Attribute	Value
NUM BOATS	4 (2 w/ engines, 2 w/o engines)
PRIM TRANS	Flat Bottom Boats (18ft) 40hp outboard
ANCH DIST	2.5 Miles
ACCESS R	An 18' boat goes to Kolonia 1 or 2 times per week to get food, fuel, ice as well as medical care or treatment if needed.
PUB EVAC	3 Public structures, 2 used for evac
PUB EVAC R	All buildings 60'-75' away from shore. School is concrete at ground level. Cath Church is cement w/ tin roof. Apostolic Church is cement

10 mi | SCALE  
20 km | 1 : 1 162 931

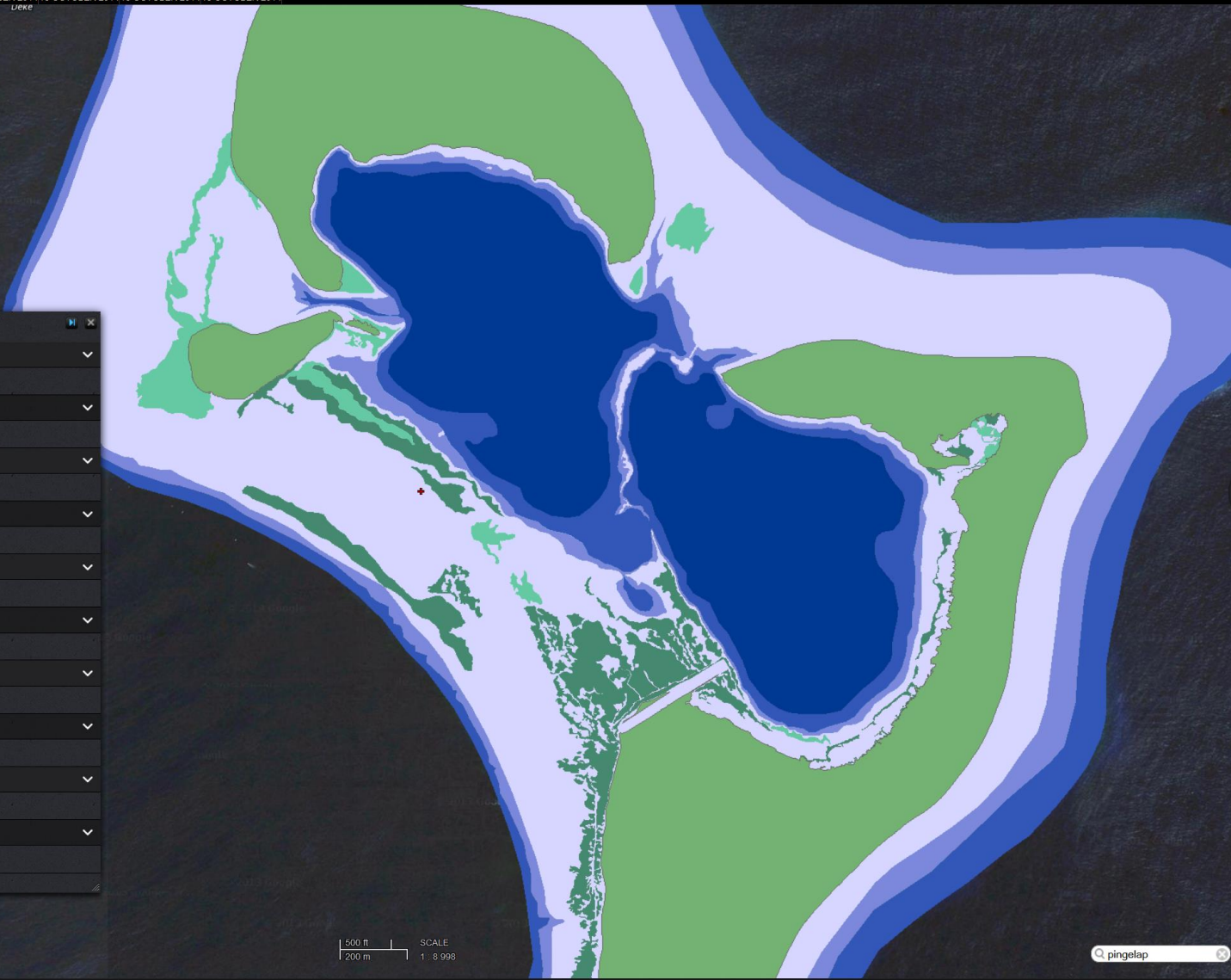
Q pohpnei




# Development and Compilation of New Data

- Ongoing
- Focus on the Outer Islands
- Digitization of Features from Georeferenced Imagery (*Thank you NRCS!*)
- Attribution, Verification and Enhancement
- Place Name Collection





**Legend**

- Reef, Deep
  - Reef, Deep
- Reef, Mid-deep
  - Reef, Mid-Deep
- Reef, Middle
  - Reef, Middle
- Reef, Shallow - unspecified
  - Reef, Shallow - Unspecified
- Reef, Shallow - discolored
  - Reef, Shallow - Discolored
- Reef, Shallow - lightly discolored
  - Reef, Shallow - Lightly Discolored
- Reef, Shallow - sand
  - Reef, Shallow - Sand
- Reef, Very shallow - intertidal
  - Reef, Very Shallow - Intertidal
- Land
  - Land
- Base Map Data
  -  Google Hybrid

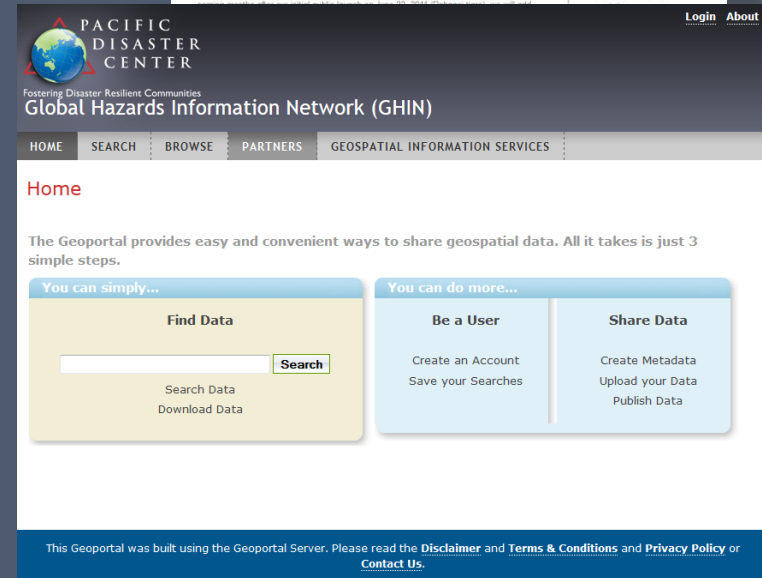
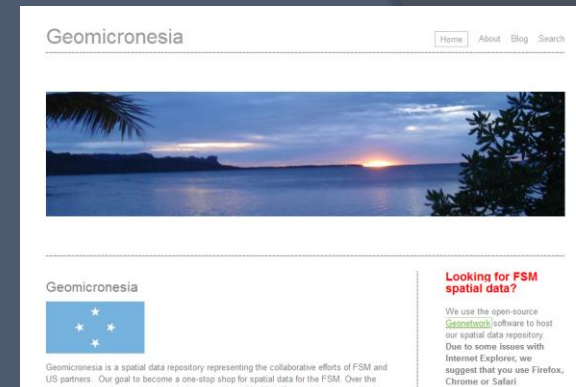
500 ft      SCALE  
 200 m      1 : 8,998

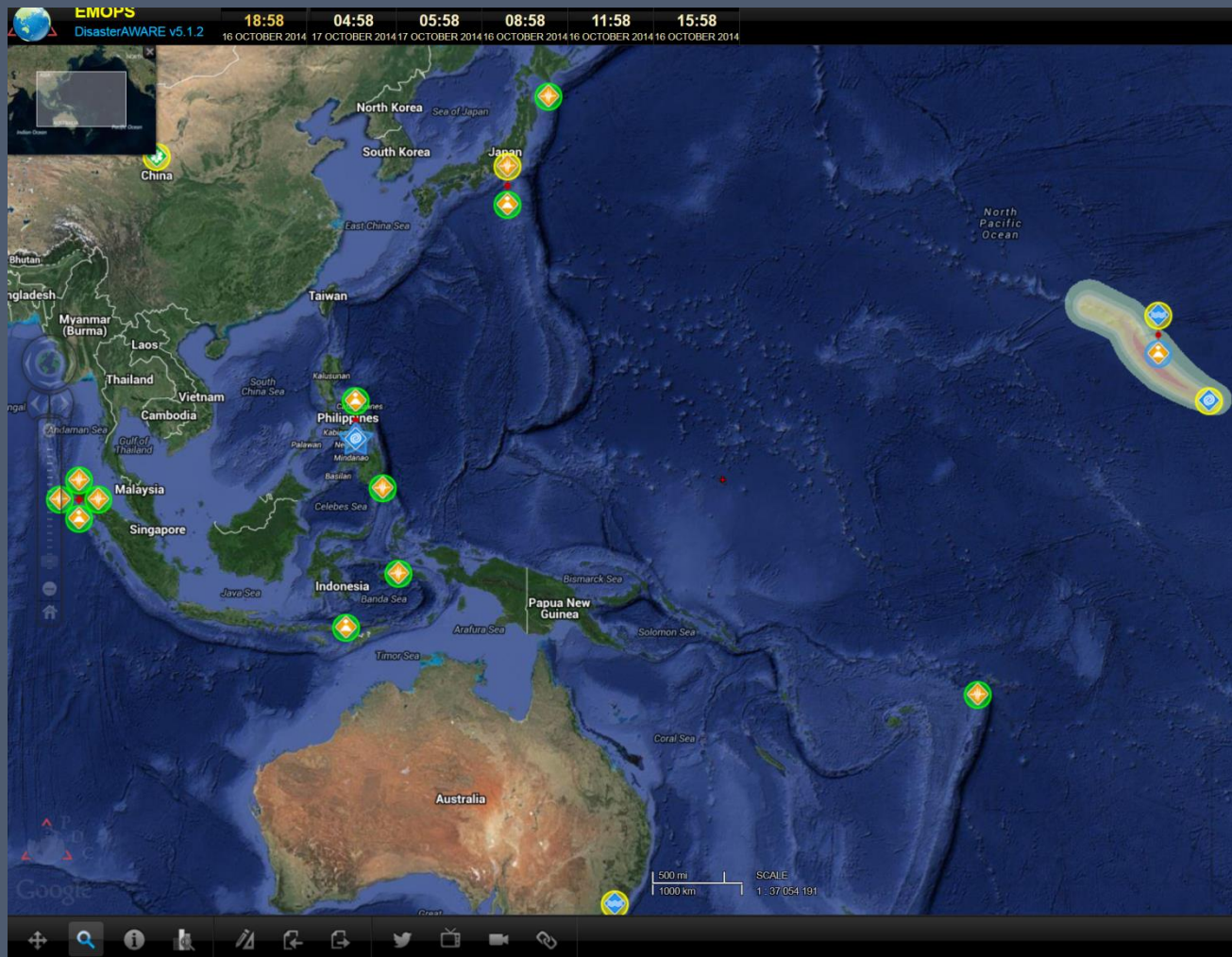
pingelap



# Integration into Data Sharing and Decision Support Platforms

- Data Processing
- Metadata
- Data Sharing Mechanisms
  - Global Hazards Information Network
  - geomiconesia.fm
- Decision Support Platform
  - DisasterAWARE
- Back-up Copies
- Ongoing Updates





### Layers

- Search Layers
- NEPAL
  - PACIFIC ISLANDS
    - Oceania Islands Labels
    - JOA Island
    - JTFHD JOA Boundary
    - Oceania Political Boundary
  - GUAM
  - KINGDOM OF TONGA
  - MARSHALL ISLANDS
  - MICRONESIA
    - IREI OUTER ISLAND DATA
    - BOUNDARIES
    - ECONOMY
    - EMERGENCY SERVICES
    - HAZARDS
    - OPERATIONS
    - SOCIETY
    - STRUCTURE
    - TRANSPORTATION
    - UTILITIES
    - GEOLOGY
    - WATER
    - ELEVATION
    - BASEMAP
  - NORTHERN MARIANA
  - AMERICAN SAMOA
  - PALAU
  - PHILIPPINES

**KML & External Layers** [ + ] [ > ]

**Regional Layers** [ > ]

**Background Map Layers** [ > ]

# Data Releases

- 3 map service updates to DisasterAWARE in 2013
- Interim release for download in March 2014
- 4 map service updates to DisasterAWARE in 2014
- Data distribution at workshop and training
- Final map service update in January 2015
- Distribution of complete data package



# “Spatial Data for Disaster Management Decision Making” Training

- Welcome!
- Bring together local GIS practitioners and those with DM or DRR responsibilities to focus on application
- Opportunity to interact directly with the data
- Activities to familiarize participants with use of the data for DM activities
- Training on the use of project tools for awareness, info sharing, and decision making





# Local Outreach Workshop

- Held Last Week
- Less Technical
- Familiarize with Basics of GIS
- Familiarize with Project and Project Resources
- Brainstorm on Applications
- Discuss Needs and Gaps



# Regional Outreach

- Web Stories and Press Releases
- Newsletters
- Publicize and Share Information through Regular Activities and Interactions
- Formal Opportunities to Share



The screenshot shows the header of the PRIM website. The header includes the PRIM logo (Pacific Risk Management 'OHANA) and a navigation menu with links for PRIMO, About, Huis, Resilience, Resources, and Blog. Below the header, the main content area features the title "The Rising Pacific: Currents of Change and Solutions for Resilience" and the event dates "March 24 to 26, 2015" in "Honolulu, Hawai'i". The background image shows a tropical scene with palm trees and people.



# Anticipated Outcomes

- First Systematically Collected, Locally Verified Data Sets of their kind for the Outer Islands
- Increased Access to Relevant Geospatial Resources
- Greater Familiarity with the Application of Spatial Data for DM and DRR Decision Making
- Greater Awareness of GIS
- Enhanced Effectiveness of Range of Activities
- One Step on a Longer Road...



# Questions?



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# Scenario Development

- ① What are the two most common hazards/threats you deal with? What are some common impacts?
- ① Which hazard/threat concerns you the most? Why?
- ① Describe 3 actions you might take to mitigate, prepare for, or respond to the impacts of that hazard/threat.

