



Fourth Meeting of the ICG/PTWS SW Pacific Working Group on Tsunami Warning and Mitigation

22-23 August 2016 Honiara, Solomon Islands

ITIC REPORT

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ITIC Report

- **Staffing – down 2**

- Brian Yanagi – retired June 2015; Nic Arcos – now w/ NCEI Jan 2016

- **Activities**

- **International: Training, Awareness, Info Svcs (Newsletter, Library, Web, Facebook), Historical Tsunami Database**

- SOP Manual (2016)
- Awareness (printed) : Tsunami Glossary (2016), Surviving Tsunamis Chile, Hawaii, Japan (1960, 2010 tsunamis) (2014), Tsunami Great Waves (English 2014, Spanish 2012)
- Pacific Coastal Impact Database Tool – decision support (ITIC-PMEL, 2017)
- Historical – 1992-2013 Post-Tsunami Survey Digital Data Archiving (photos, videos) (Univ Southern California, C. Synolakis)
- TEMPP Course, Tsunami Ready (develop natl programs w/Pilot)
- During Event, available resource (call / email)
- **Domestic: Training (FEMA), US Post-Tsunami Survey Protocols (National Federal, State), Tsunami Awareness (Hawaii Historical Photos)**

ITIC-IOC Trainings

2015

- **PTWC Enhanced Products and SOPs (Aug – Dec)**
 - Trainers: ITIC, PTWC, IOC, NZ, CTWP, JICA, France
 - Tonga, Solomons, Colombia, Cook Islands, Peru, Caribbean
- **Tsunami Evacuation Maps, Plans, & Procedures (TEMPP) – 2015-16**
 - Honduras Pilot – 2 communities – invite Panama, Costa Rica, Nicaragua, El Salvador, Guatemala, Mexico:
 - ComMIT, Evacuation Map, SOPs, Exercises, TR for Honduras

2016

- Country: Apr – Vanuatu (1. Enhanced SOPs, 2. community);
TBD (pending funding) – Fiji, Kiribati, PNG, Tuvalu
- ITP-Hawaii 2016 (PTWC products, TWC/TER SOPs, Evacuation Maps, Pacific Tsunami Ready (P-TR), Coastal Impact DB Tool)
- On request
- Distance learning – IODE Ocean Teacher Academy – 2017

2017 - ??

- **Enhanced products/SOPs, Pilots (TEMPP, P-TR)**
- **Competency (ITP focus – previously Enhance Products, SOPs, End2End)**

ITIC-PMEL Coastal Impact DB Tool (2017)

MOTIVATION:

- Since 2014 PTWC does not provide Warnings. Countries assess own threat, establish own criteria for levels of alerts, decide to issue Warnings.
- PTWC products provide wave forecasts 30-45 minutes after EQ. Based on actual EQ source available 20-25 minutes after EQ.
=> PTWC forecast not likely to be available in time for local tsunamis.
- In Pacific, 99% of deaths from local tsunamis

WHAT TO DO:

To save lives, Countries (esp with local threat) should

- Assess hazard beforehand. Prepare evac maps (TEMPP)
Conduct exercises. Continuous / regular awareness campaigns

Additionally, they can

- Develop pre-computed database (warning thresholds for quick look up)
- Examples of Solomons (BOM), NZ (GNS)
- Implement a local TWC with dense monitoring networks and fast computing algorithms to quickly assess within seconds to minutes (ORSNET ?)



**Tsunami Evacuation Maps,
Plans, and Procedures (TEMPP)**
... communities knowing what to do and where to go

ITIC Essential Community Preparedness
Capacity Building, Honduras, Central America, 2015-16



ITIC-PMEL TsuCAT: Coastal Impact DB Tool (2017)

GOAL: Strengthen country capacity to assess their threat and issue warnings

PRODUCT:

- Planning tool - assess threat beforehand
- Decision-support impact tool – Customizable - country sub-regions (polygons)
Quick assessment through DB lookup

- Exercises – develop scenarios

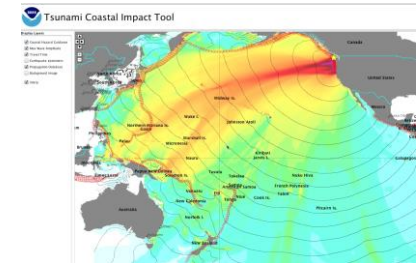
TOOL FEATURES :

Pacific baseline tsunami hazard database

- Includes Pacific earthquake scenarios from M7.0 – M9.4
- Include best result from among a suite of validated models, including MOST and RIFT, and where inundation models exist
- Input GUI is user-friendly

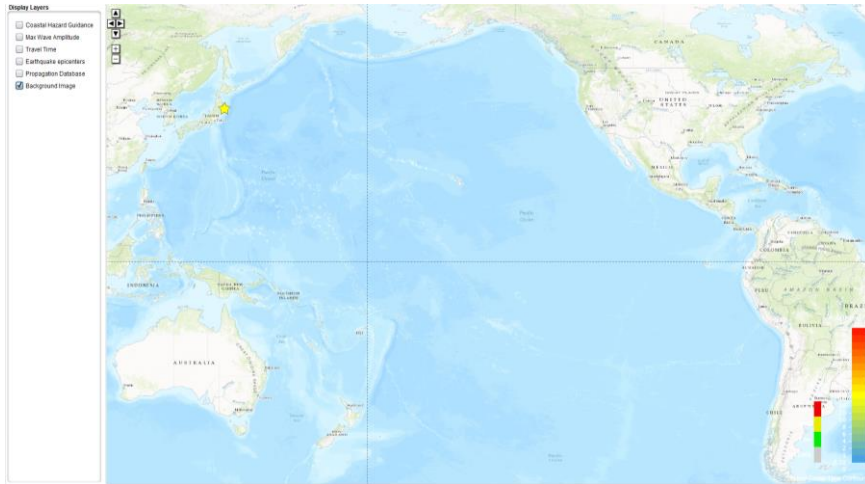
Output includes

- Deep-ocean (offshore) and coastal wave amplitude (Green's Law)
- Threat according to user pre-determined forecast polygons
- Include propagation grid files – countries can use as input for local inundation modeling, (e.g., ComMIT or other modeling codes)
- Include PTWC Enhanced Products (messages) / RIFT results for exercises

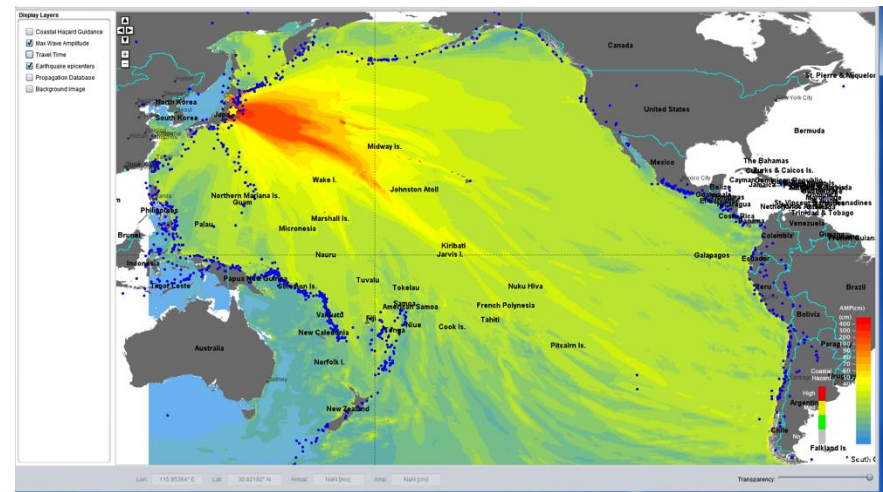


TsuCAT: Coastal Impact DB Tool - example

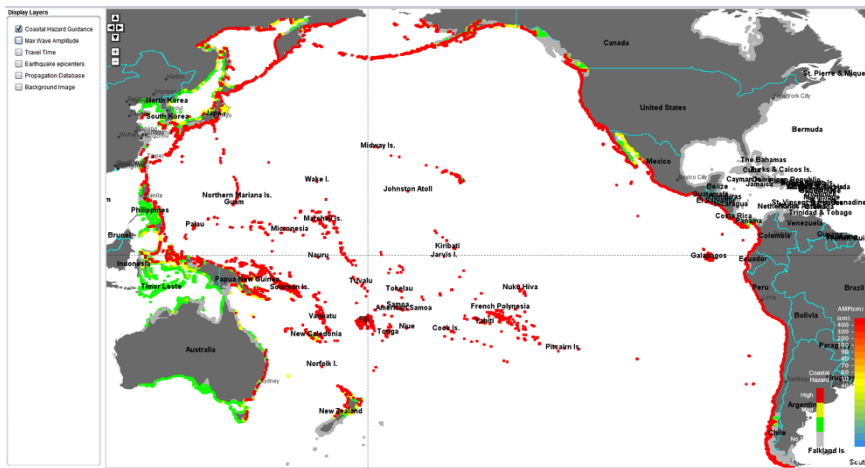
Base map



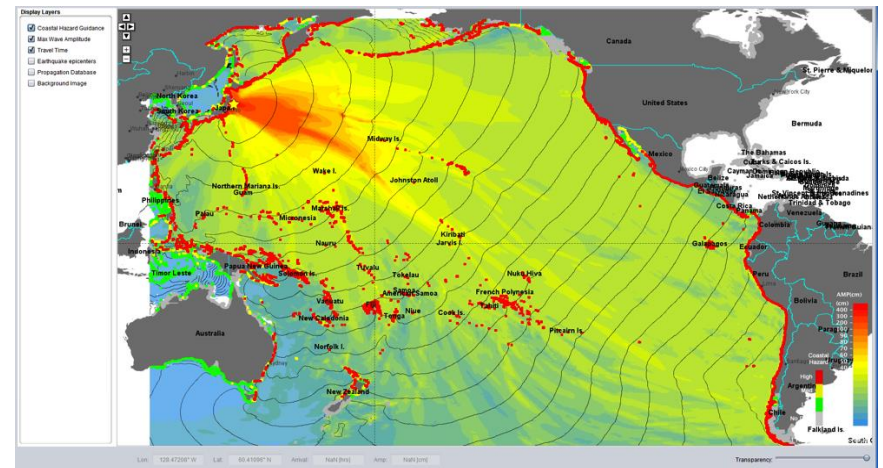
Deep-Ocean Ampl – Historical Seismicity



Coastal Ampl

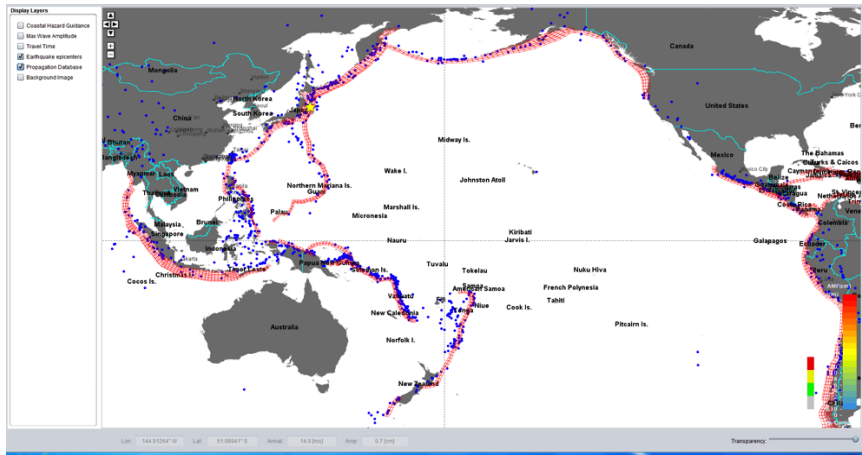


Deep-Coastal-TTT

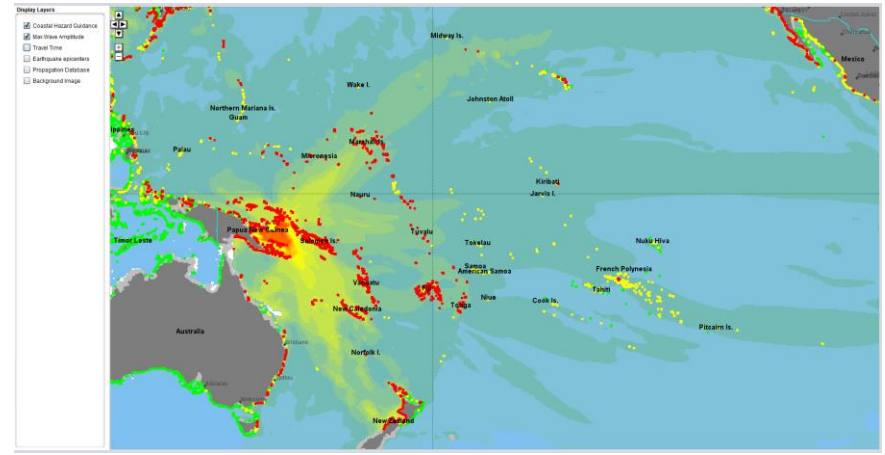


TsuCAT: Coastal Impact DB Tool - example

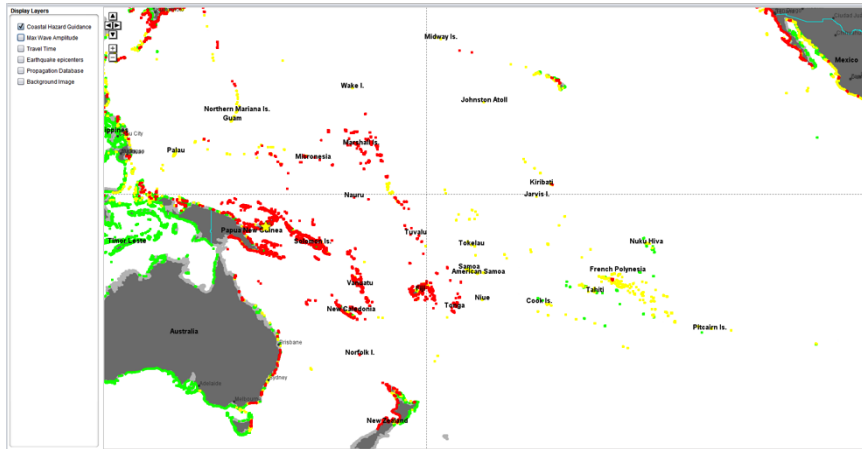
Hist Seismicity – Propagation DB blocks



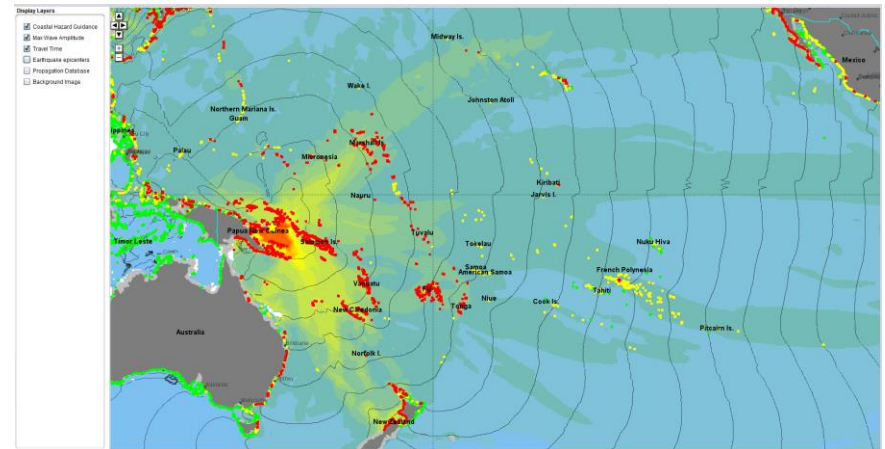
Deep-Ocean Ampl



Coastal Ampl



Deep-Coastal-TTT



ITIC Report - FEEDBACK

- Training Requests (what topics?)
- Awareness materials available – request to ITIC
- TsuCAT: Pacific Coastal Impact Database Tool (offline, standalone planning tool) – Feedback for 2017



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THANK YOU

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