DisasterAWARE Platform: EMOPS

PDC Background

- Working to bridge the gap between science/academia & disaster management practitioners through applied information research and evidence-based analysis.
- Currently managed by the University of Hawaii

Science/ Academia ⬌ **Disaster Management**
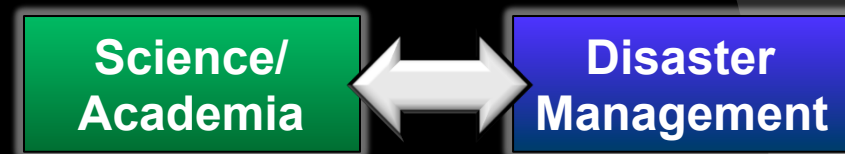
PDC's Integrated Approach

- ◉ Applied Science & Technology
- ◉ Capability Building
- ◉ Evidence-Based Information Products
  - Policy & Decision Makers
  - Disaster Managers
  - Planners
  - Humanitarian Assist. Missions

Integrating Information, Science, & Technology

Observation Systems

Improve Decision-support Capabilities

Advanced Applications, Models, Risk & Vulnerability Assessments

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DisasterAWARE Platform

- DisasterAWARE (**A**ll-hazard **W**arning, **A**nalysis and **R**isk **E**valuation)
  - An integrated platform providing situational awareness, decision support, and information exchange capabilities to disaster management decision makers.
- DisasterAWARE provides an interoperable platform that incorporates international best practice methodologies and technologies for data acquisition, hazard modeling, risk and vulnerability assessment, mapping, visualization, and communications.

DisasterAWARE Platform

EMOPS

- Integrated Multi-hazard Monitoring

- Disaster Early Warning

- Automated / Integrated Modeling

- Exposure (Risk) Maps & Historical Hazard Data

- Intra-Agency Info Sharing
  - User Added Situation Reports
  - Damage Products, …

- Remote Access (Disaster Alert)

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Applications

Disaster Alert
- Mobile applications for iOS and Android devices
- Real-Time Hazard Reporting
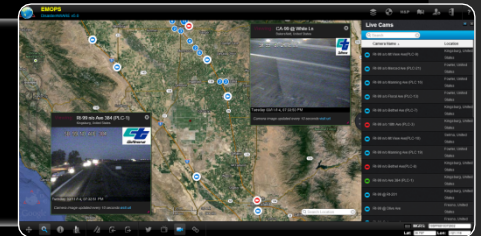- Search: Disaster Alert (iTunes/Google Play)

ATLAS
- Publicly accessible application
- Real-Time Hazard Reporting
- Basedata and Observations
- http://atlas.pdc.org/atlas/

EMOPS
- Used by State / Local / Foreign Disaster Practitioners
- Enhanced content and response operations
- Authorized users can add hazards & products
- http://emops.pdc.org/emops/

Custom
- Fee based custom applications
- Agency or region specific platform
- Customized content and response operations
- Examples: VinAWARE, InAWARE, DMRS, etc…
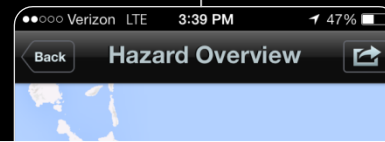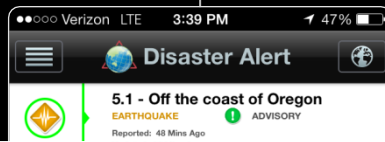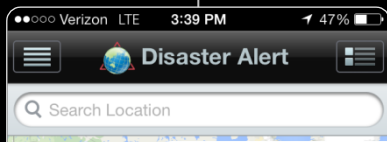
Disaster Alert

ATLAS

EMOPS

Custom

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Applications

EMOPS is made available to civil and military authorities around the world to support endeavors of humanitarian assistance in the realm of disaster management and risk reduction.

http://emops.pdc.org/emops/

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Typhoon Haiyan - Estimated Impacts
Warning 19, 07 November, 2013 2100 UTC

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(JTWC) 072100Z POSITION NEAR 10.8N 126.0E. SUPER TYPHOON 31W (HAIYAN), LOCATED APPROXIMATELY 425 NM SOUTHEAST OF MANILA, PHILIPPINES, HAS TRACKED WESTWARD AT 21 KNOTS OVER THE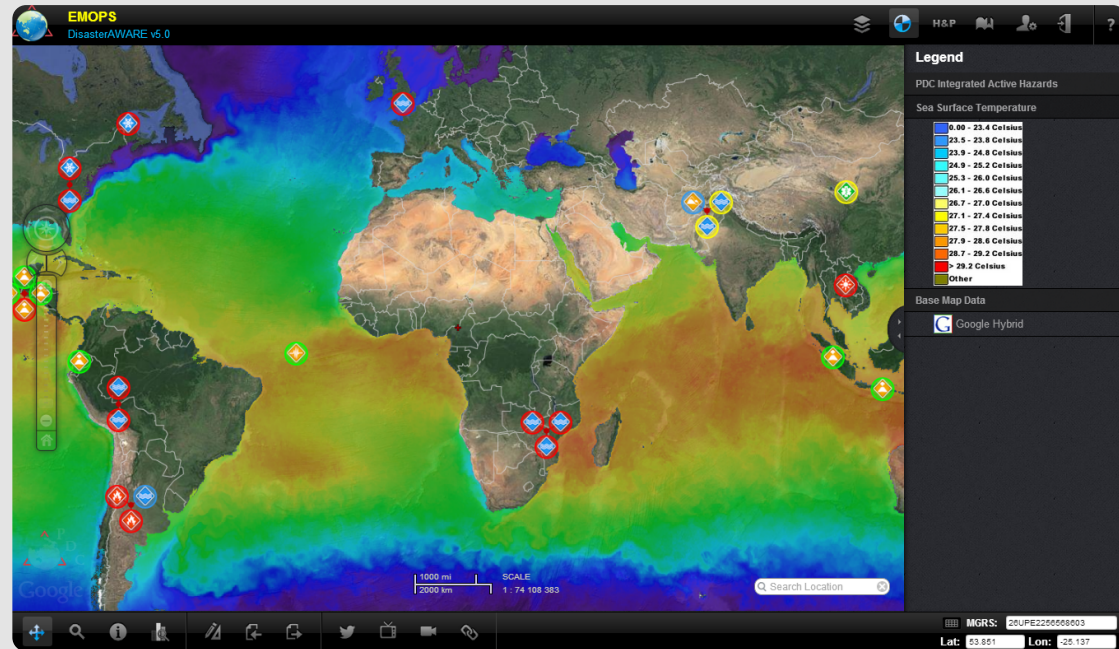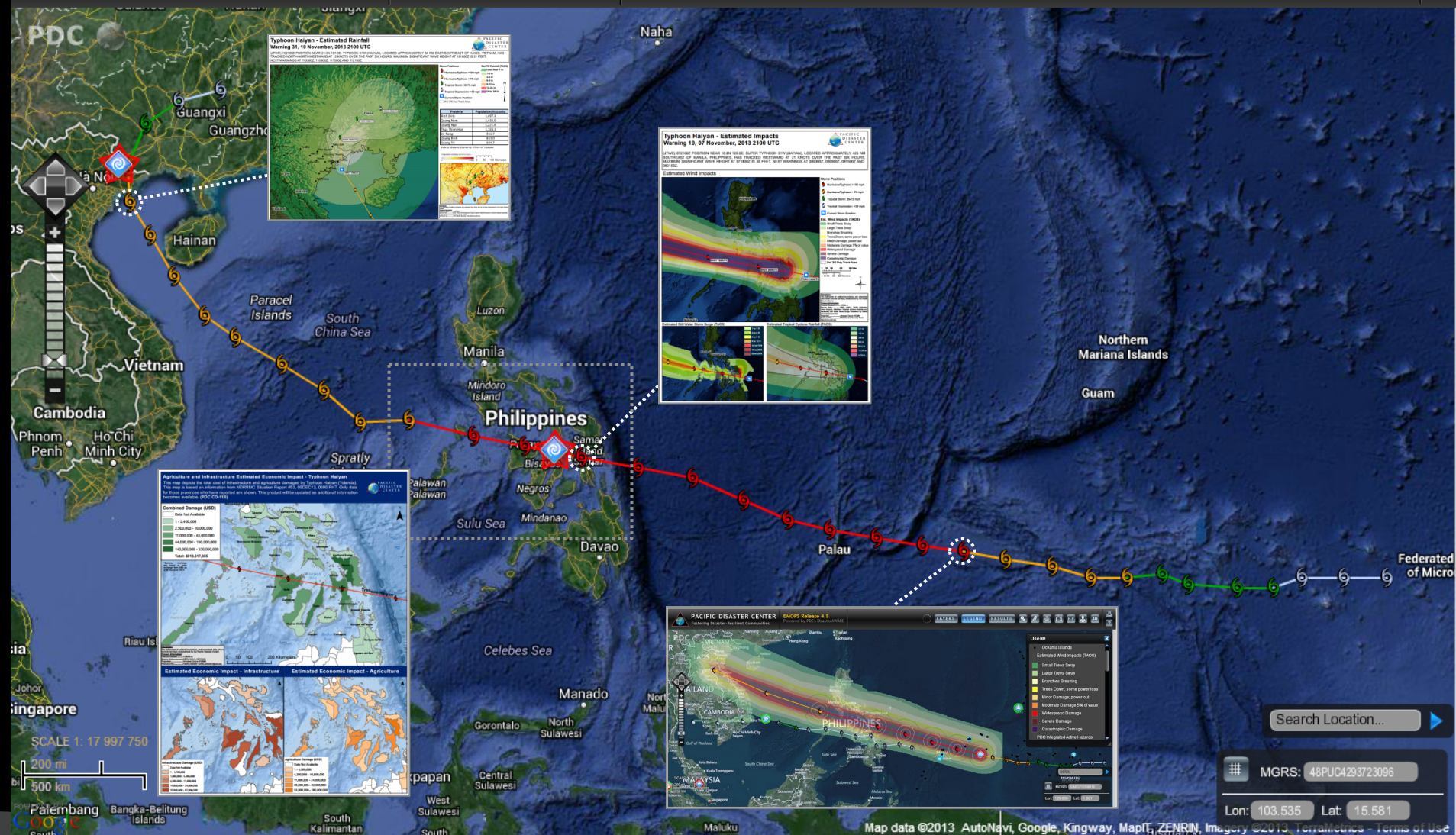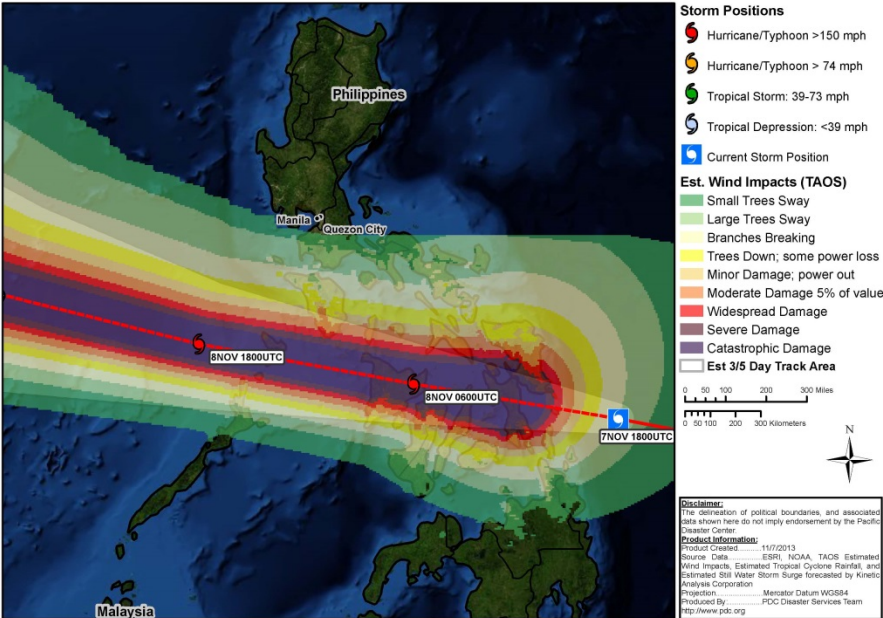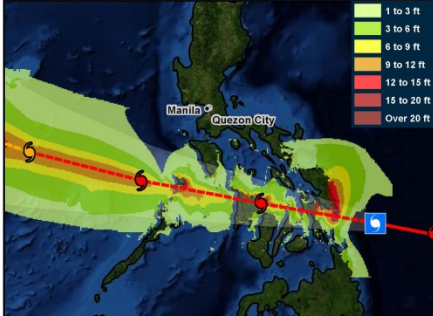 PAST SIX HOURS. MAXIMUM SIGNIFICANT WAVE HEIGHT AT 071800Z IS 50 FEET. NEXT WARNINGS AT 080300Z, 080900Z, 081500Z AND 082100Z.
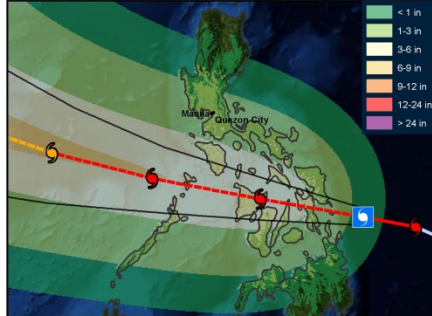
Estimated Wind Impacts

Philippines

Manila Quezon City

8NOV 1800UTC
8NOV 0600UTC
7NOV 1800UTC

Malaysia

Storm Positions
- Hurricane/Typhoon >150 mph
- Hurricane/Typhoon > 74 mph
- Tropical Storm: 39-73 mph
- Tropical Depression: <39 mph
- Current Storm Position

Est. Wind Impacts (TAOS)
- Small Trees Sway
- Large Trees Sway
- Branches Breaking
- Trees Down; some power loss
- Minor Damage; power out
- Moderate Damage 5% of value
- Widespread Damage
- Severe Damage
- Catastrophic Damage
- Est 3/5 Day Track Area

0 50 100 200 300 Miles
0 50 100 200 300 Kilometers

Disclaimer:
The delineation of political boundaries, and associated data shown here do not imply endorsement by the Pacific Disaster Center.
Product Information:
Product Created..........11/7/2013
Source Data.............ESRI, NOAA, TAOS Estimated Wind Impacts, Estimated Tropical Cyclone Rainfall, and Estimated Still Water Storm Surge forecasted by Kinetic Analysis Corporation
Projection................Mercator Datum WGS84
Produced By.............PDC Disaster Services Team
http://www.pdc.org

Estimated Still Water Storm Surge (TAOS)

Manila Quezon City

- 1 to 3 ft
- 3 to 6 ft
- 6 to 9 ft
- 9 to 12 ft
- 12 to 15 ft
- 15 to 20 ft
- Over 20 ft

Estimated Tropical Cyclone Rainfall (TAOS)
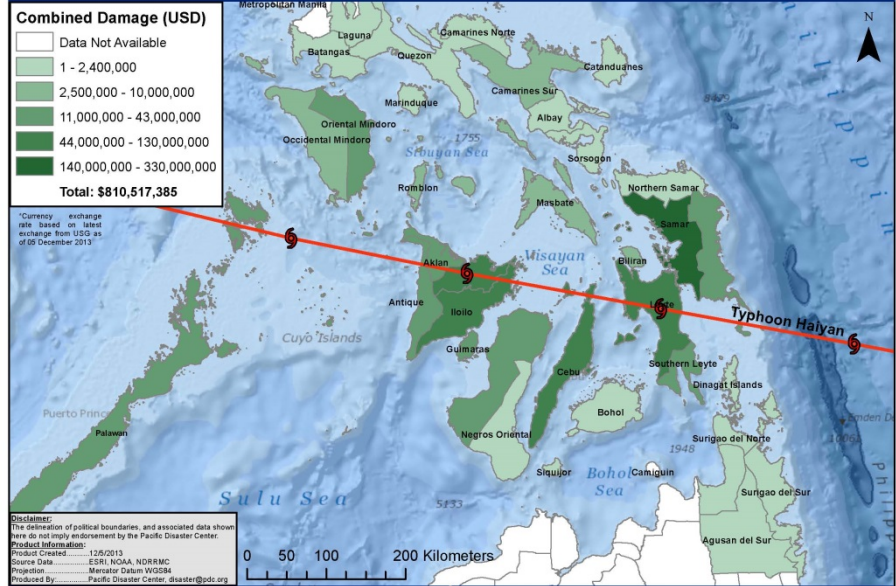
Manila Quezon City

- < 1 in
- 1-3 in
- 3-6 in
- 6-9 in
- 9-12 in
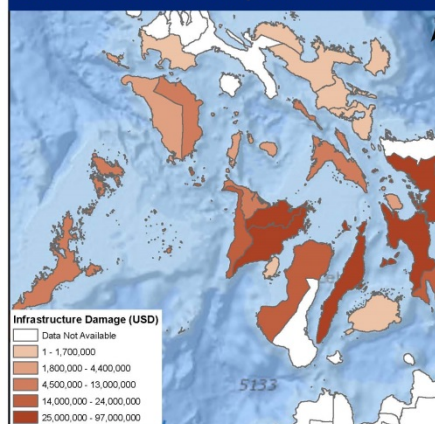- 12-24 in
- > 24 in

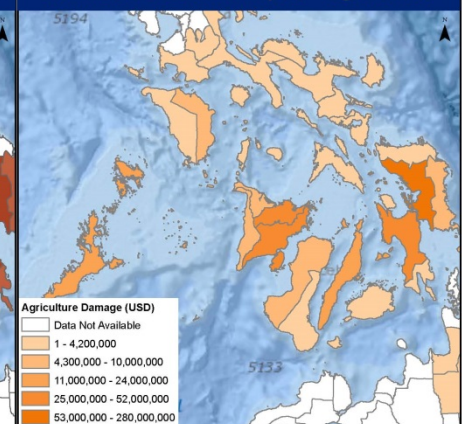### Agriculture and Infrastructure Estimated Economic Impact - Typhoon Haiyan

This map depicts the total cost of infrastructure and agriculture damaged by Typhoon Haiyan (Yolanda). This map is based on information from NDRRMC Situation Report #53, 05DEC13, 0600 PHT. Only data for those provinces who have reported are shown. This product will be updated as additional information becomes available. (PDC CD-11B)

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Combined Damage (USD)
- Data Not Available
- 1 - 2,400,000
- 2,500,000 - 10,000,000
- 11,000,000 - 43,000,000
- 44,000,000 - 130,000,000
- 140,000,000 - 330,000,000

Total: $810,517,385

*Currency exchange rate based on latest exchange from USG as of 05 December 2013

Metropolitan Manila
Laguna Camarines Norte
Batangas Quezon Camarines Sur
Marinduque Catanduanes
Oriental Mindoro Albay
Occidental Mindoro Sorsogon
Romblon Masbate Northern Samar
Aklan Samar
Antique Biliran
Iloilo Misayan Sea
Guimaras Cebu
Cuyo Islands Southern Leyte
Bohol Dinagat Islands
Negros Oriental Surigao del Norte
Palawan Siquijor Camiguin
Puerto Prince Bohol Sea
Sulu Sea Surigao del Sur
Agusan del Sur

Typhoon Haiyan

Disclaimer:
The delineation of political boundaries, and associated data shown here do not imply endorsement by the Pacific Disaster Center.
Product Information:
Product Created..........12/5/2013
Source Data.............ESRI, NOAA, NDRRMC
Projection................Mercator Datum WGS84
Produced By.............Pacific Disaster Center, disaster@pdc.org

0 50 100 200 Kilometers

Estimated Economic Impact - Infrastructure

Infrastructure Damage (USD)
- Data Not Available
- 1 - 1,700,000
- 1,800,000 - 4,400,000
- 4,500,000 - 13,000,000
- 14,000,000 - 24,000,000
- 25,000,000 - 97,000,000

Estimated Economic Impact - Agriculture

Agriculture Damage (USD)
- Data Not Available
- 1 - 4,200,000
- 4,300,000 - 10,000,000
- 11,000,000 - 24,000,000
- 25,000,000 - 52,000,000
- 53,000,000 - 280,000,000

"Fostering Disaster-Resilient Communities"

http://www.pdc.org