PACIFIC DISASTER CENTER

RECOVERY CONSTRAINTS AND TECHNOLOGY SOLUTIONS FOR SOUTHEAST ASIA

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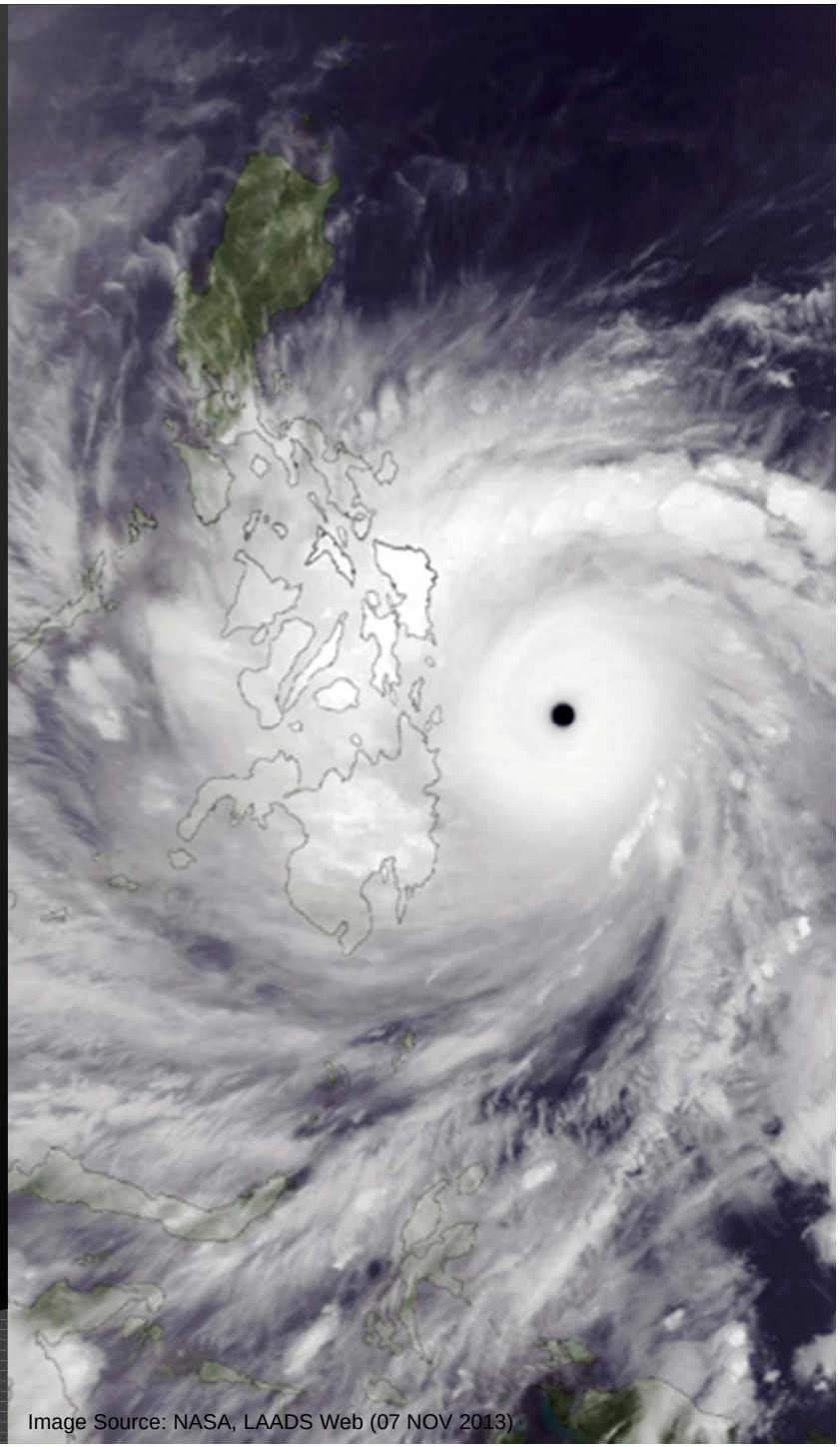


Image Source: NASA, LAADS Web (07 NOV 2013)

Presentation outline

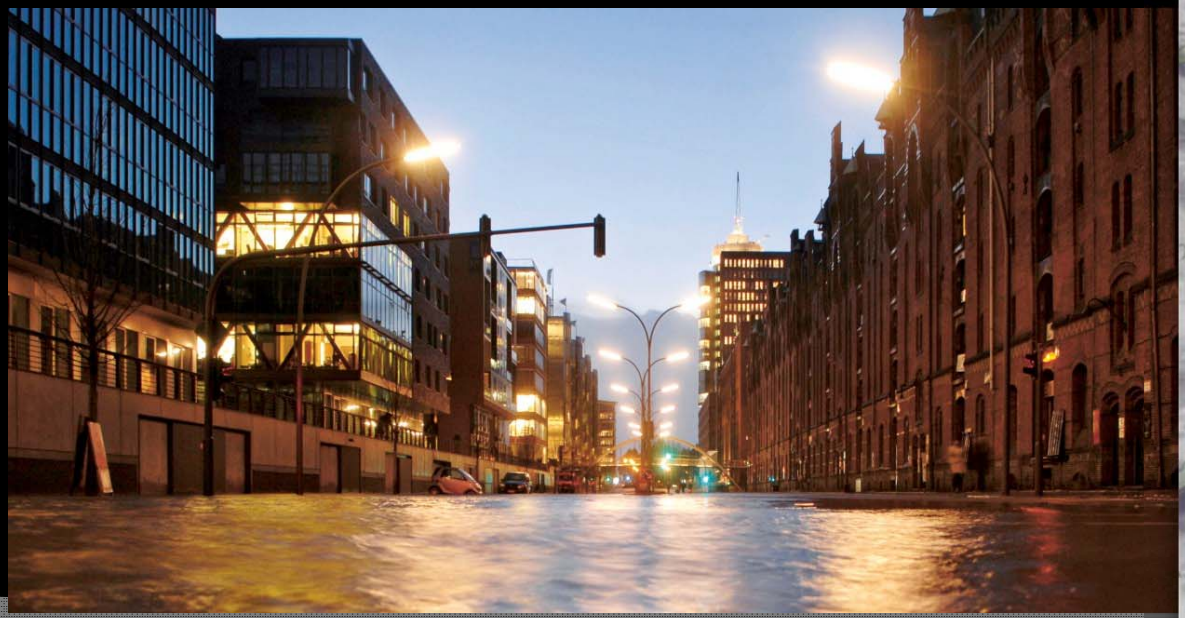
- The “recovery” misnomer
- Traditional post-disaster recovery mechanisms
- What makes the SE Asian region unique?
- Finding technology solutions that fit
  - Data to support decision-making
  - Overcome resource limitations
  - Proper incentives
  - Limit regret

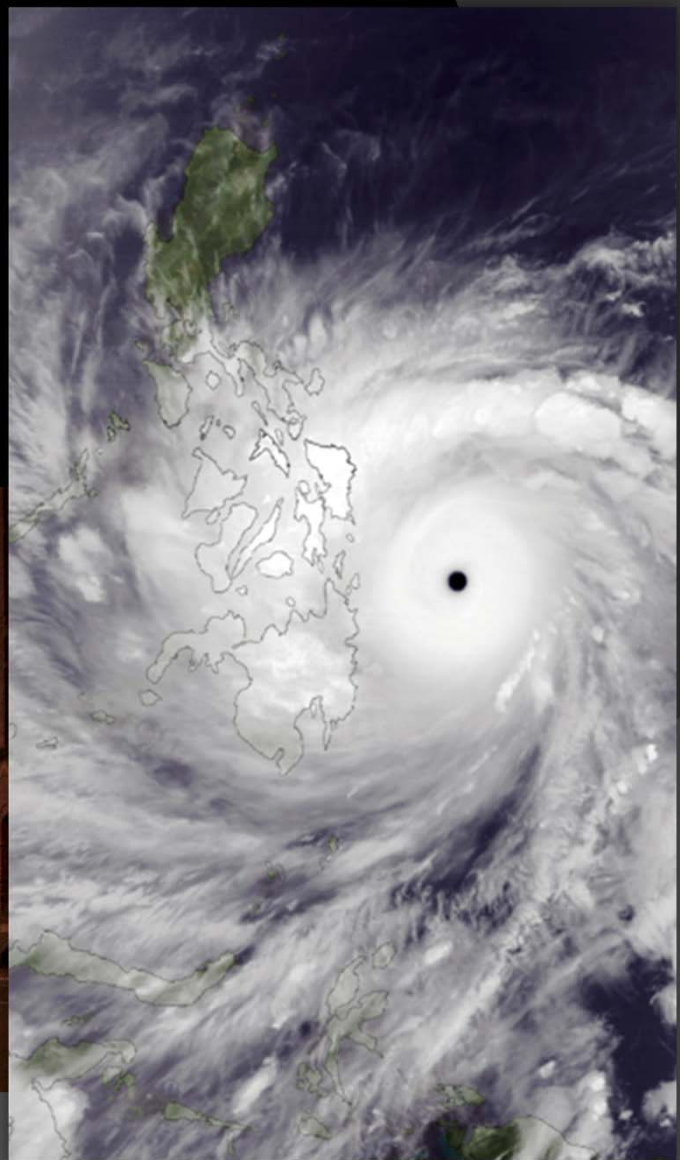
The “recovery” question

- Recovery ***from*** hazard

  vs.

- Recovery ***to*** lower risk



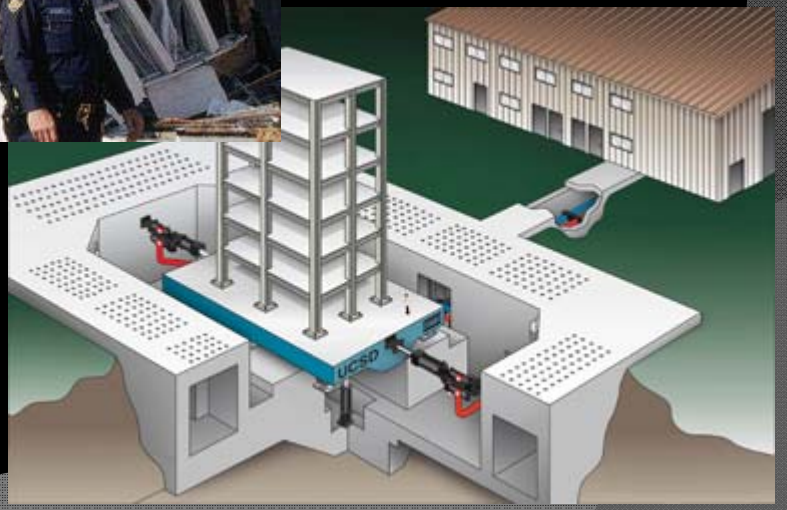


Acute vs. long-term recovery

- Acute recovery
  - Procedural for short time periods
  - SPHERE handbook, UN Cluster Coordination
- Long-term recovery
  - Less prescriptive in nature
  - Risk-based approaches
  - Post-disaster decision-making and tradeoffs
  - Systems and data to support post-disaster policy

Traditional policies to facilitate long-term recovery

Building codes and regulations



Increasing insurance users

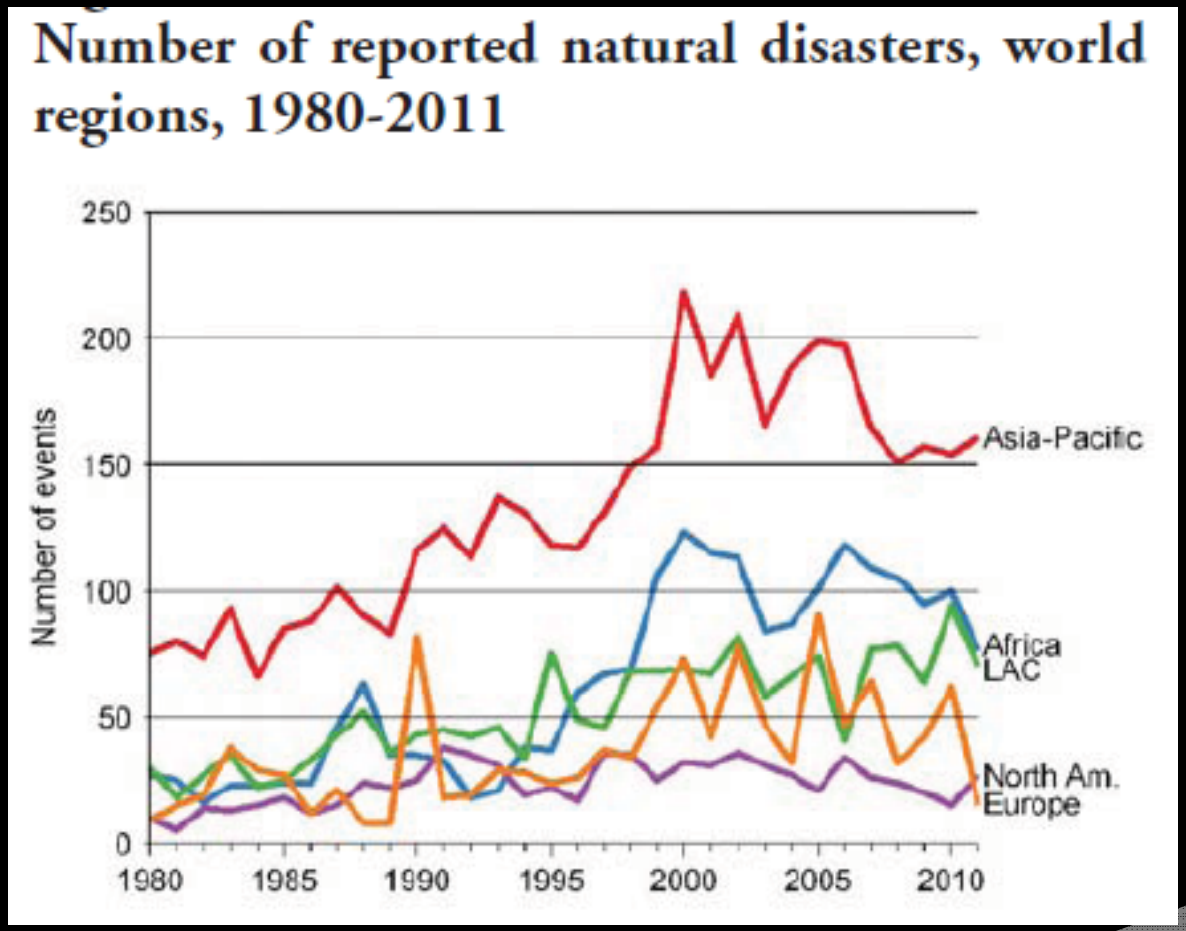
Incentivizing disaster reduction

Low regret policies

Constraints on traditional policies

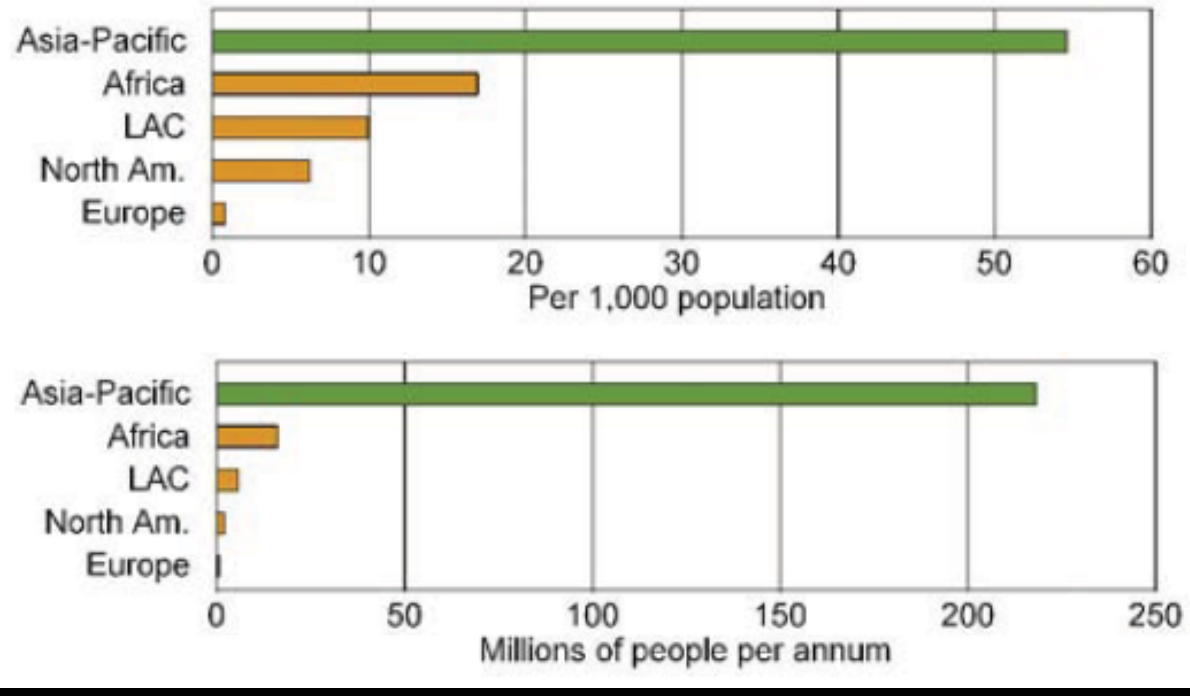
- Size of events
- Frequency of events
- Variation in wealth and population between countries
- These constraints of the region can lead to unique ways in which both NGO's and national governments can support disaster recovery

Extreme event frequency

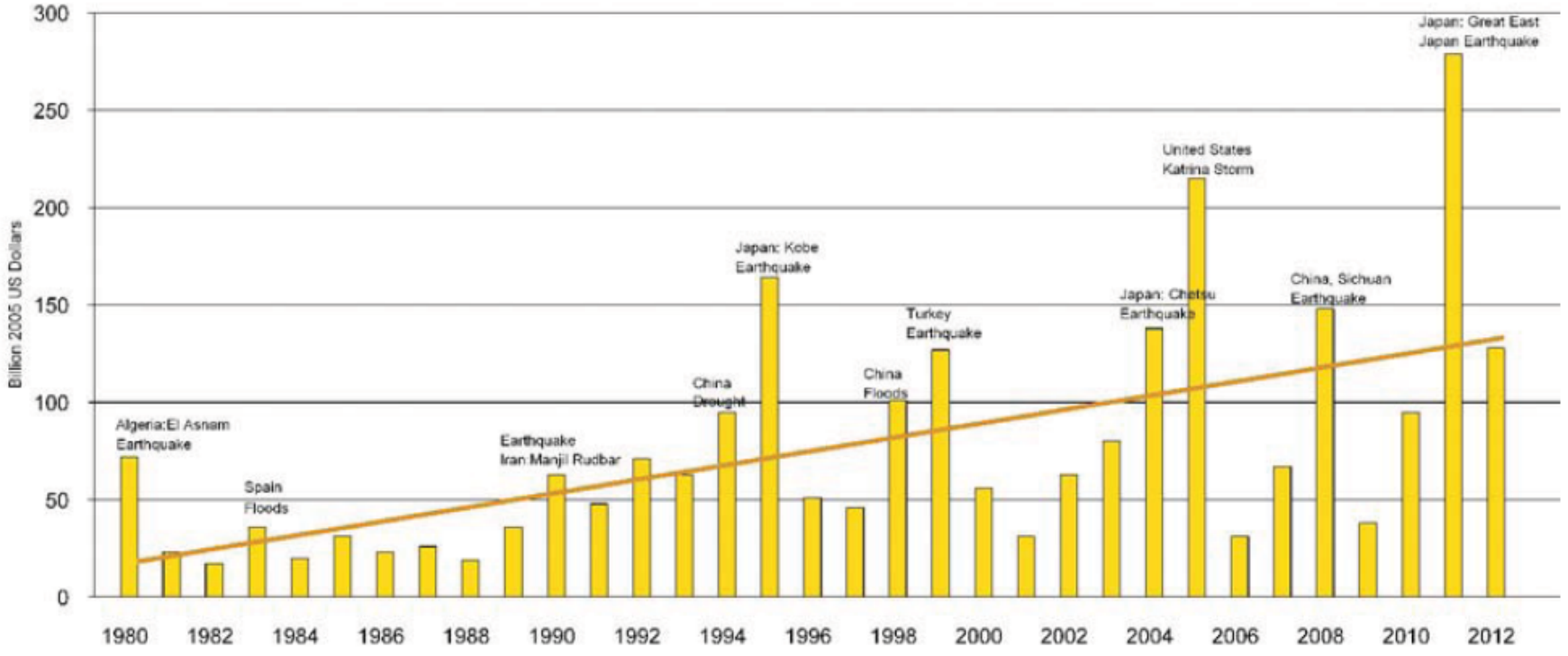


Statistical Yearbook for Asia and the Pacific 2013

People affected by natural disasters, world regions, 2002-2011



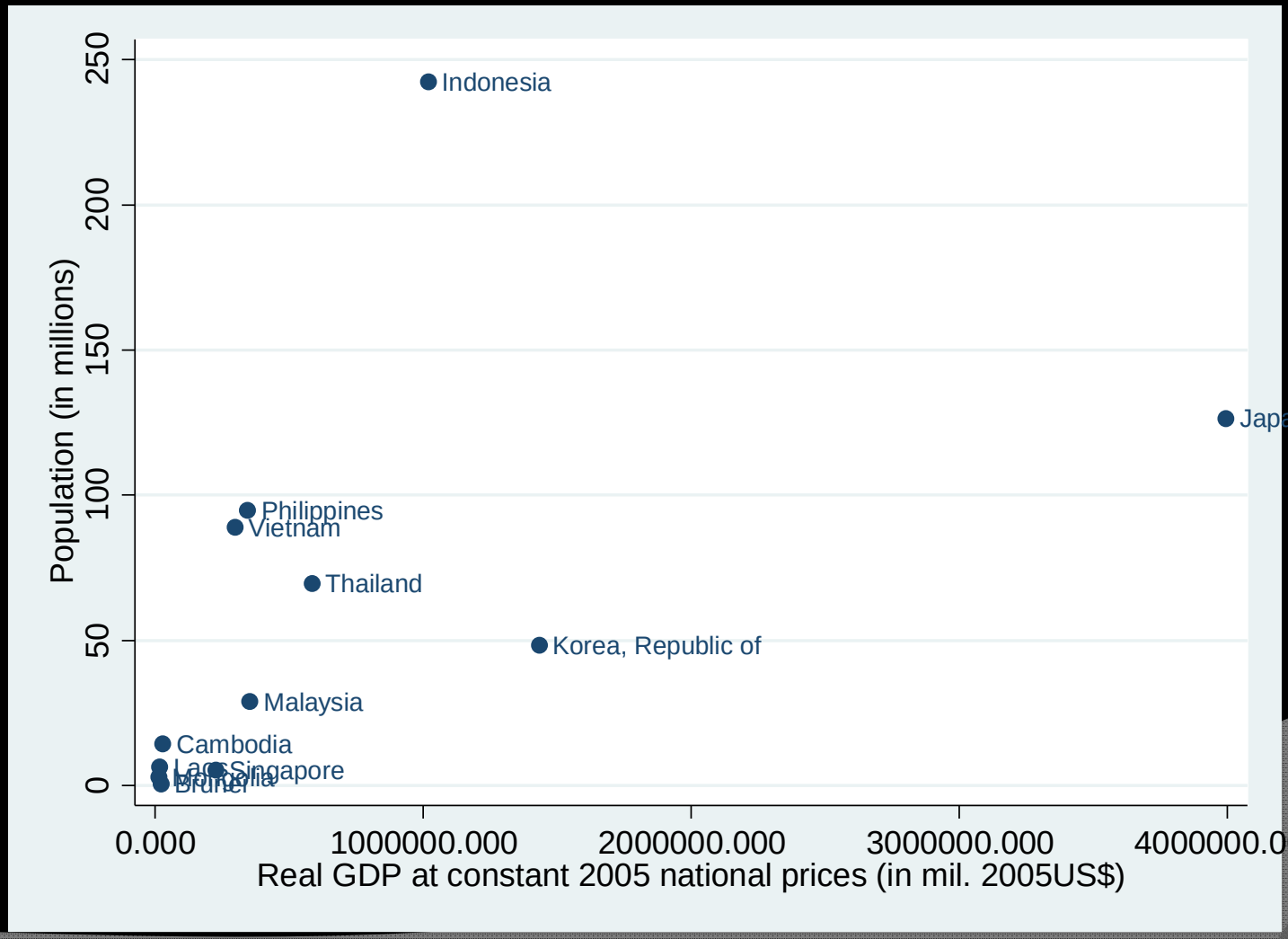
Rising global economic losses and damage, 1980-2012



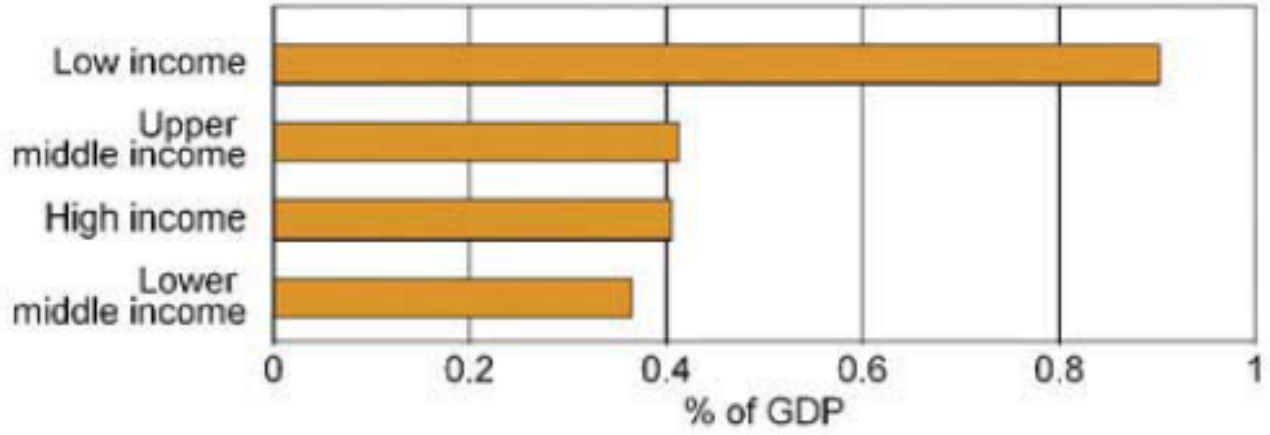
Disaster intensity effect on recovery

- Resource needs in recovery efforts are often beyond national capacities
- Exacerbates national risk transfer systems for high-effect scenarios
- Increase in institutional/societal risk perception to support long-term policies

Variation in national wealth



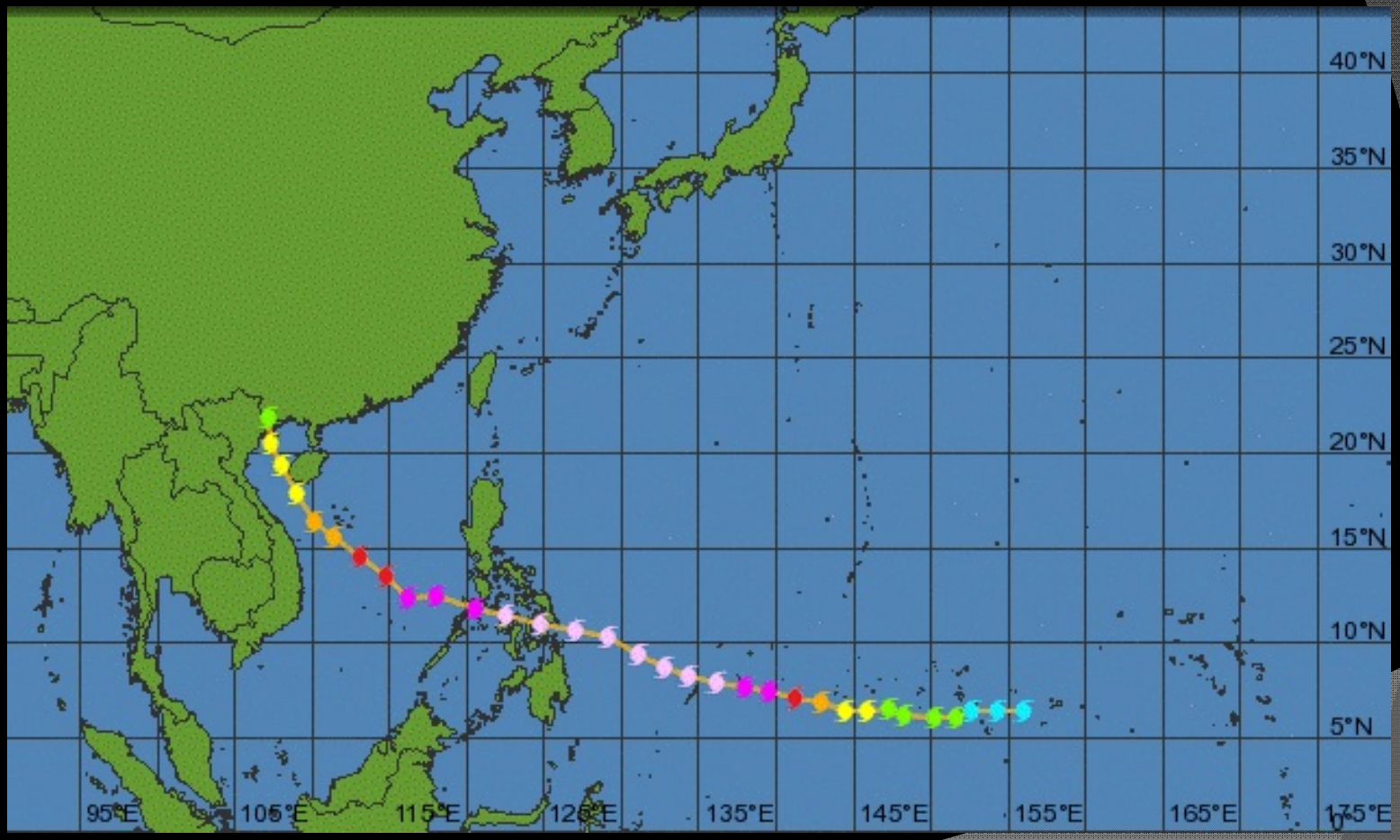
Asian and Pacific average annual impact of disasters by income classification, 2002-2011



Wealth variation effect on recovery

- Lack of financial depth constrains market solutions for disaster recovery
- A lack of personal savings leads to…
  - Complete loss of property and livelihood
  - External recovery intervention

Multi-national disaster effects



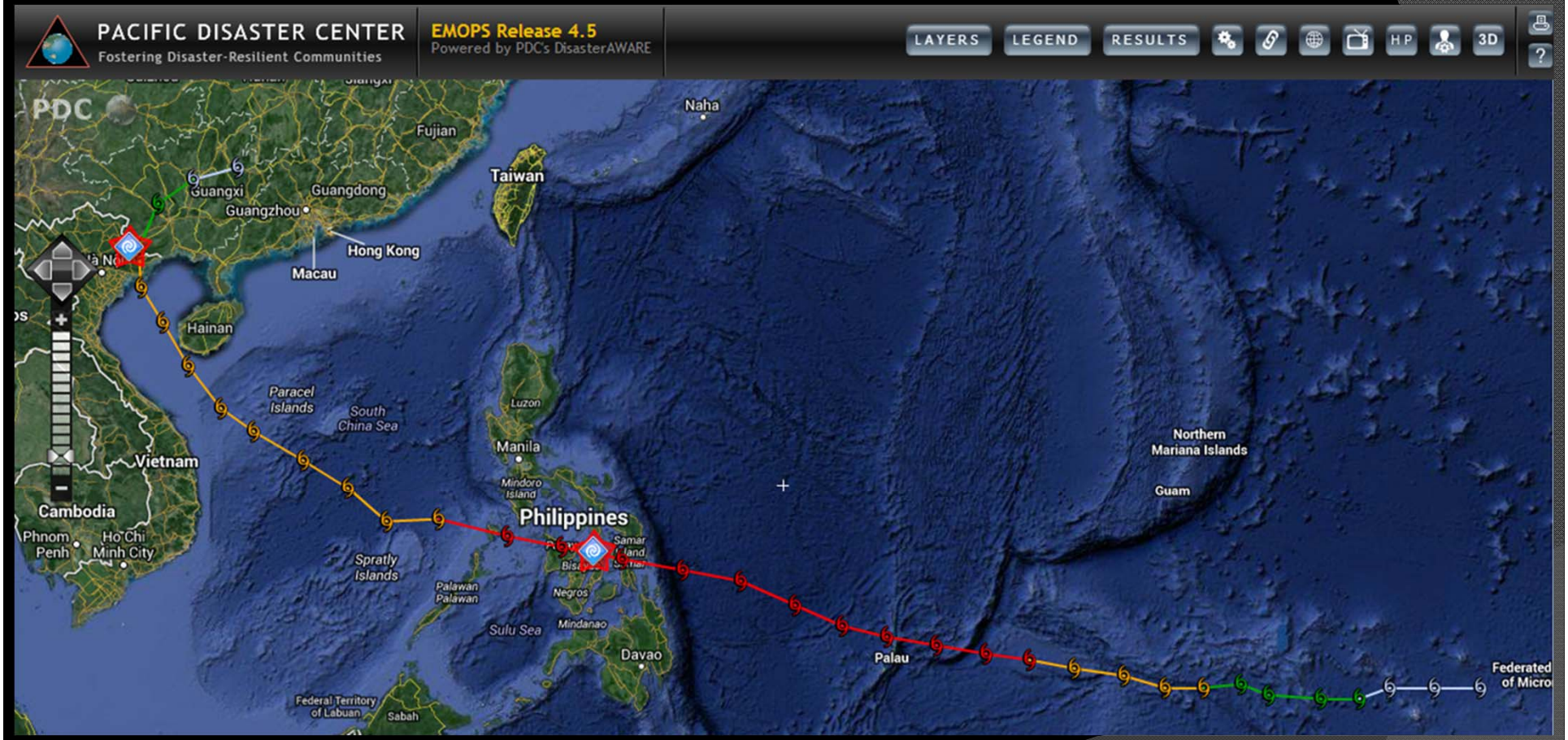
Spatial effect on recovery

- Multiplication of actors
- Inefficiencies in recovery efforts due to a lack of coordination
- Country-level disaster outcomes may not be sufficient for recovery planning

PDC's technology solutions

- Common operating platform
- Data workflows
  - Aggregating
  - Sharing
  - Producing
- Moving into new domains to broaden system use

DisasterAWARE EMOPS



DoD/GSAF

USPACOM

USARPAC

USNORTHCOM

USTRANSCOM

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US Embassy Manila

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HING

ORNG

FEMA

UN

WFP

Int'l Charter

ASEAN

HISG

JRM ROC

FSM OEEM

AFP (PHL)

Yap State DCO

Palau NEMO

APAN

VNM DMC

PHL NDRRMC

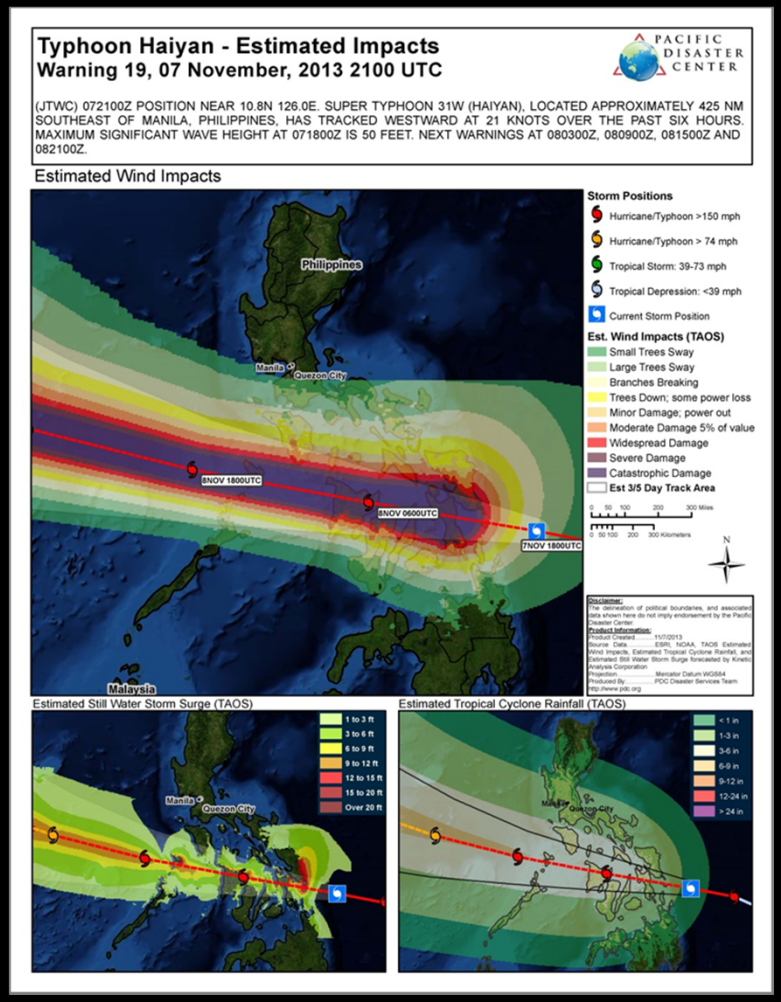
ESRI Public Safety

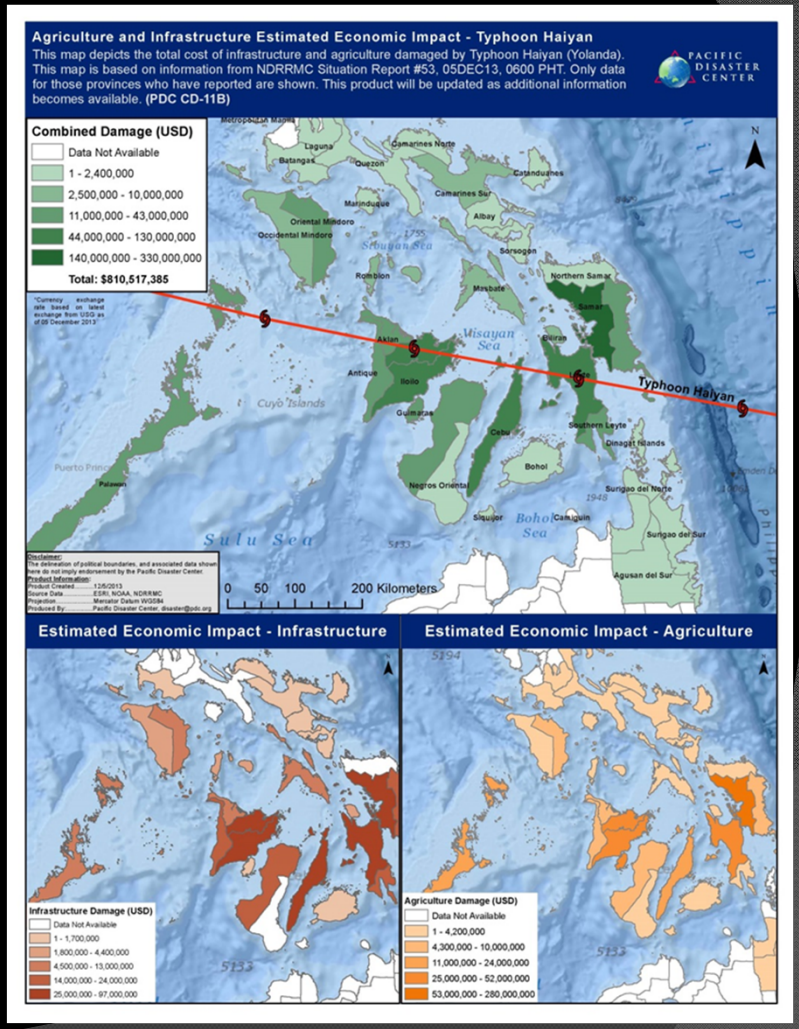
PACIFIC DISASTER CENTER

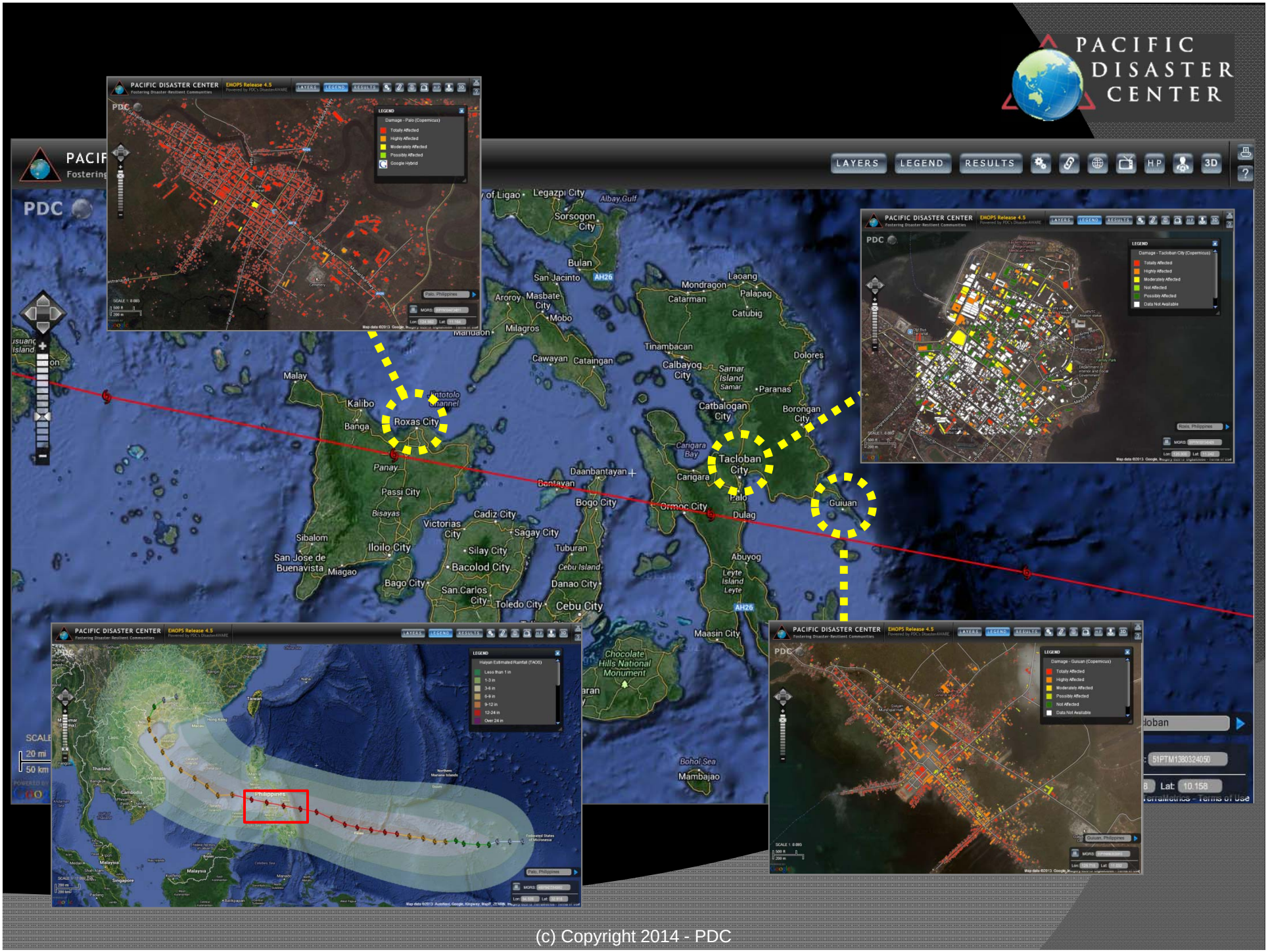
International partners


VinAware
Powered by PDC's DisasterAWARE
CÁC LỚP
CHÚ GIẢI
KẾT QUẢ
Núi Sơn Trà
Da Nang
Ba Na
604
607
CHÚ GIẢI
Quảng Nam Giao thông (Transportation)
Đường quốc lộ (National Highway)
Đường tỉnh lộ (Provincial Road)
Đường sắt (Railroad)
Đường trong thành phố
Bệnh viện (Hospital)
Thủy điện (Hydro dam)
Quảng Nam UBND (Peoples Committee Office)
UBND xã
EMOPS
DisasterAWARE v5.1.2
UTC
23:55
WASH DC
19:55
HAWAII
13:55
H&P
User Profile
Edit your profile settings
Language
Español
US English
Español
Việt
ไทย
Indonesian
User Account Information
Change password
Update account information
DisasterAWARE Alert Service
Time Zone Preferences
Honolulu
HAWAII
JOHNSTON ATOLL (US)

Information management

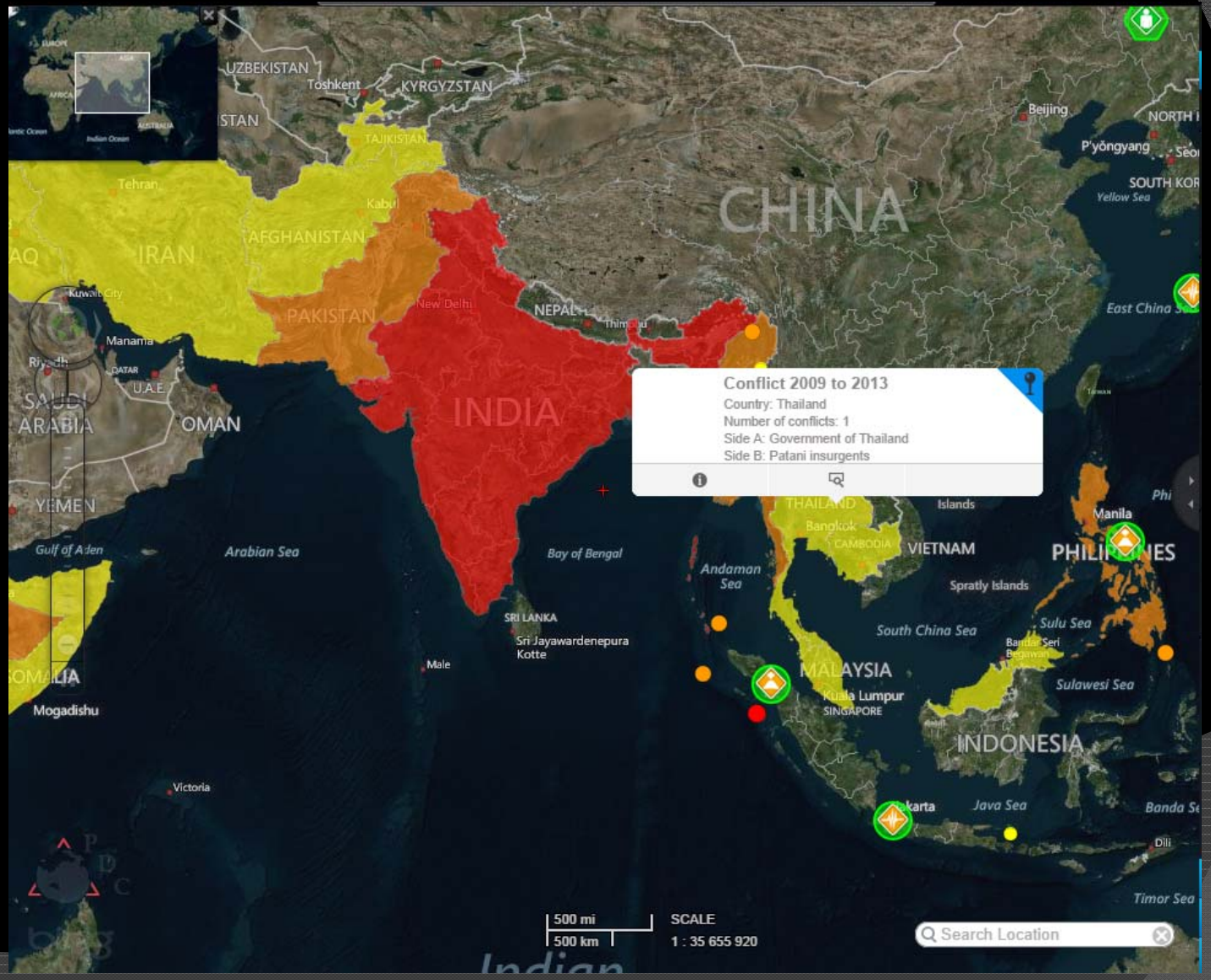




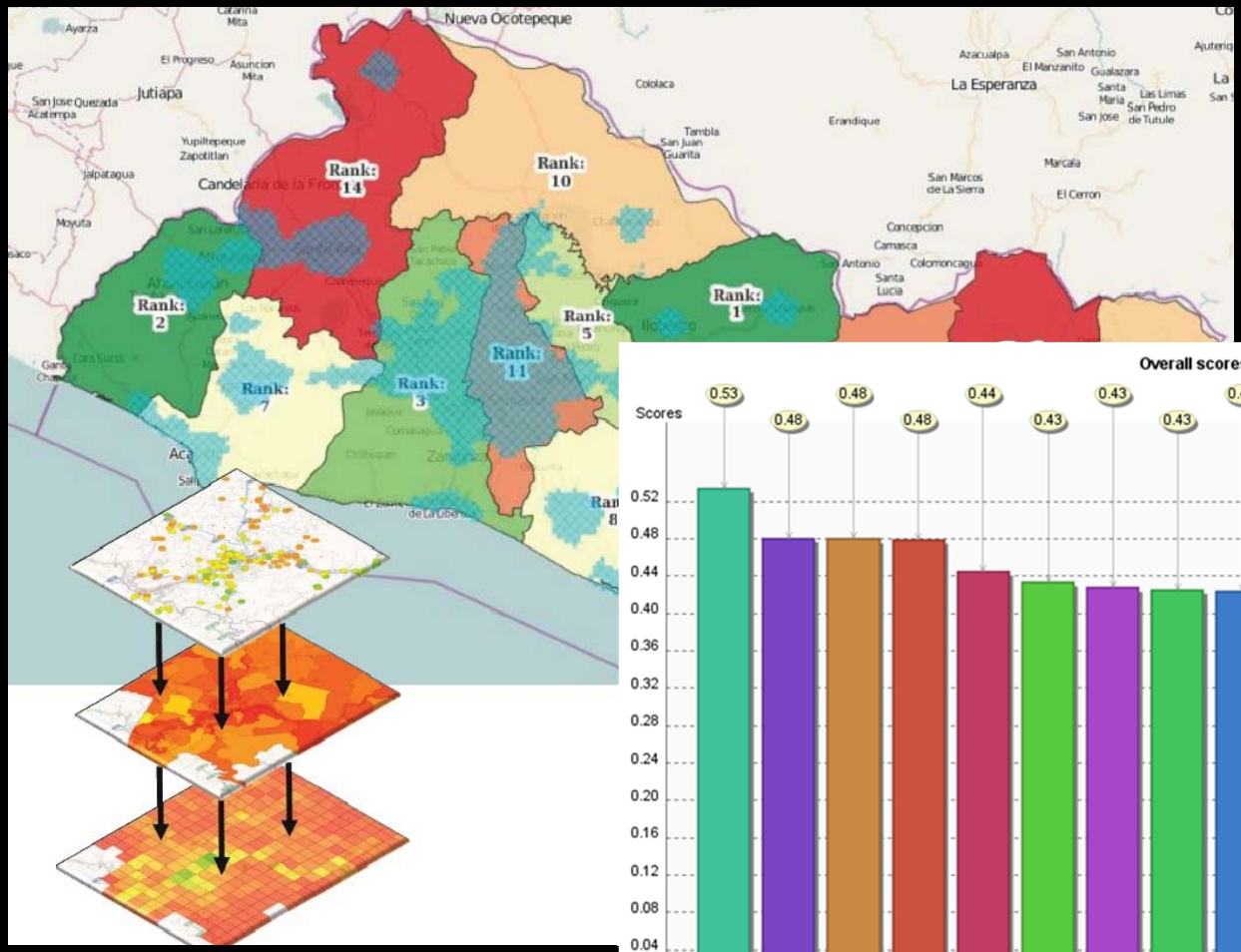


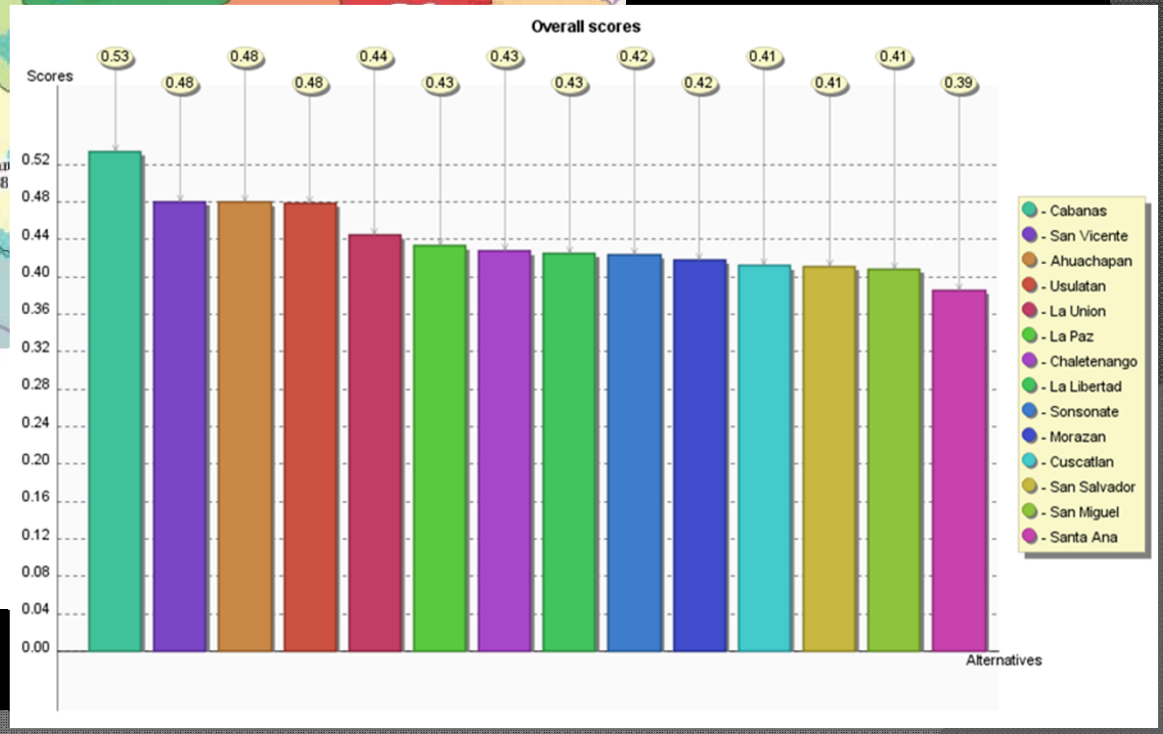
Indirect damage estimates

Related domain information



Multi-criteria decision analysis





Solution points by issue

- Disasters are too big
  - Improve international response mechanisms
  - Distributed systems
  - Minimize duplication of effort
- Too costly (either solutions are too expensive or people are too poor)
  - Make the economic case for improvement (the right data)
  - Low regret solutions
- Data to facilitate risk-based decision-making toward mitigation
  - Direct and indirect damage modelling

- Questions??