The Global Tsunami Model (GTM)

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Preconference Interactive Session
Cancun, Mexico

UNISDR
The United Nations Office for Disaster Risk Reduction

GFDRR
Global Facility for Disaster Reduction and Recovery

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model

Extreme, infrequent and uncertain events

- ✓Infrequent tsunamis dominate disaster risk in different parts of the world
- ✓This is a relevant hazard in several SIDS
- ✓Considerable increase of exposure in tsunami hazard prone areas

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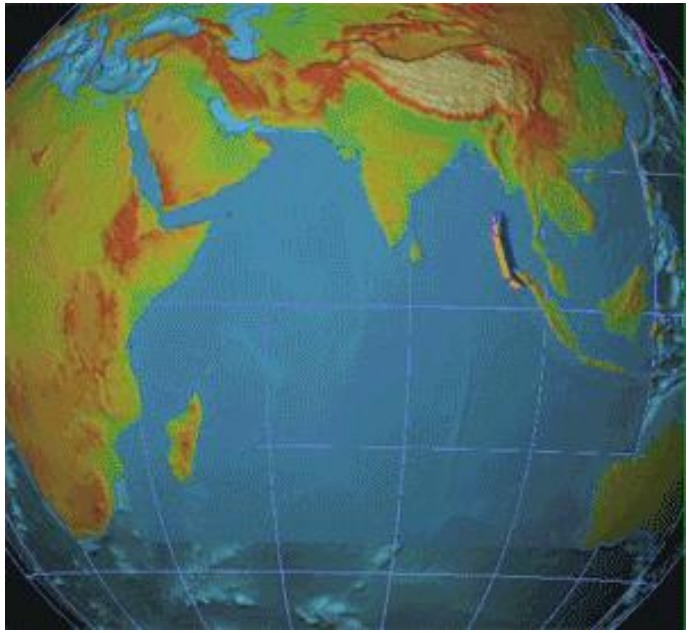
Extreme, infrequent and uncertain events

- ✓The tsunamis of 2004 (Sumatra) and 2011 (Tohoku) account for a large share of monetary and human losses in the past 100 years



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Extreme, infrequent and uncertain events

- ✓Several uncertainties exist in the hazard and vulnerability components of tsunami risk
- ✓When possible, those are to be identified, quantified and when possible reduced
- ✓Lack of standards for its comprehensive assessment while potential consequences are formidable

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Why is GTM needed?

- ✓Collective and non-exclusive initiative for improved understanding of tsunami hazard and risk
- ✓Highlight tsunami relevance at stakeholders and decision-makers level
- ✓Improvement of analysis methodologies and tools

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Current stage

- ✓Multi-institutional work on hazard and risk for UNISDR's GAR
- ✓Formal endorsement by multi-lateral institutions involved in DRR and DRM activities
- ✓Collaboration with other global hazard and risk assessment initiatives such as GVM, GFP and GEM

GAR
Global Assessment Report on Disaster Risk Reduction

UNISDR
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GTM's objectives and mission

- ✓Facilitate compatibility and improve ***probabilistic tsunami hazard and risk analysis methods*** through the development of ***standards, guidelines, methods, tools,*** and identification of key research aspects

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- ✓Development of regional and global ***reference probabilistic tsunami hazard and risk maps***, as well as ***standardized processes for developing local hazard and risk analyses***

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- ✓The provision of a ***consistent input and contribution to multi-hazard risk assessment*** through high-level harmonization with initiatives covering other perils

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GTM's objectives and mission

- ✓Establish ***reference pools of experts*** for completing and developing tsunami hazard and risk assessments from stakeholders
- ✓The provision of a ***consistent input and contribution to multi-hazard risk assessment*** through high-level harmonization with organizations covering other natural hazards
- ✓The interaction with stakeholders to ensure relevance and proper dissemination of results and ***uncertainty communication to non-scientists***
- ✓To develop the above products while ***being mindful of their benefits for society***

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Contributions to the SFDRR

- **Priority 1. Understanding disaster risk**
- Priority 2. Strengthening disaster risk governance to manage disaster risk
- Priority 3. Investing in disaster risk reduction for resilience
- Priority 4. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction

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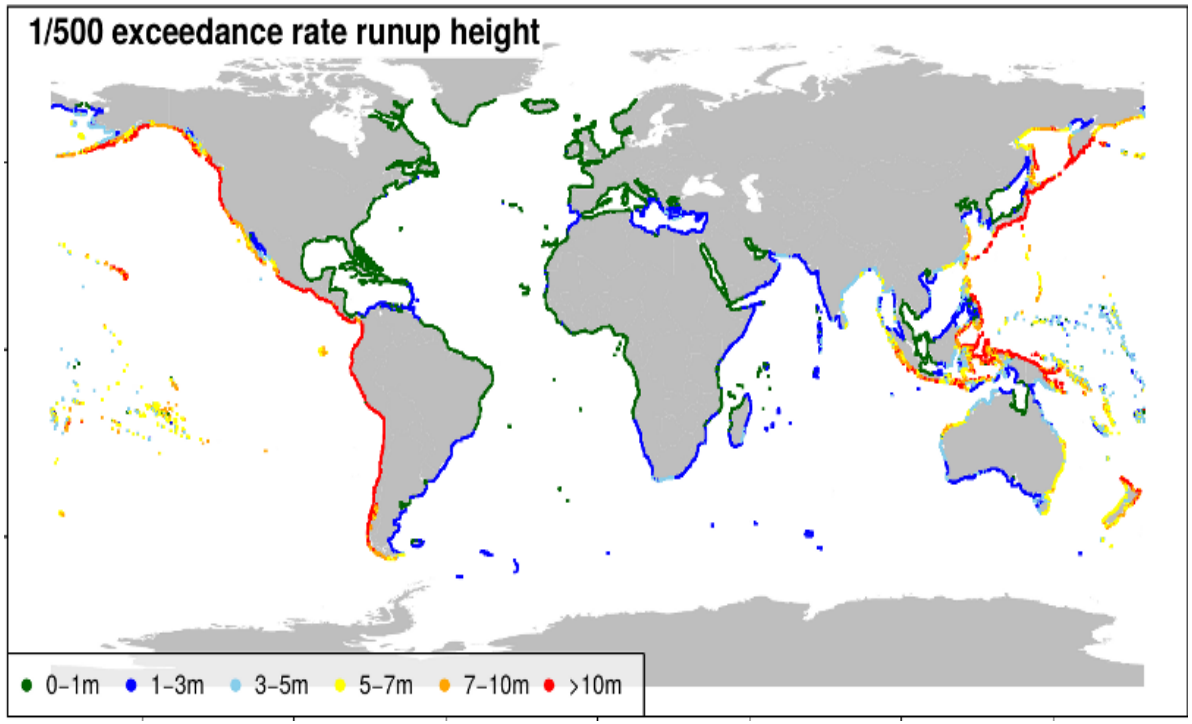
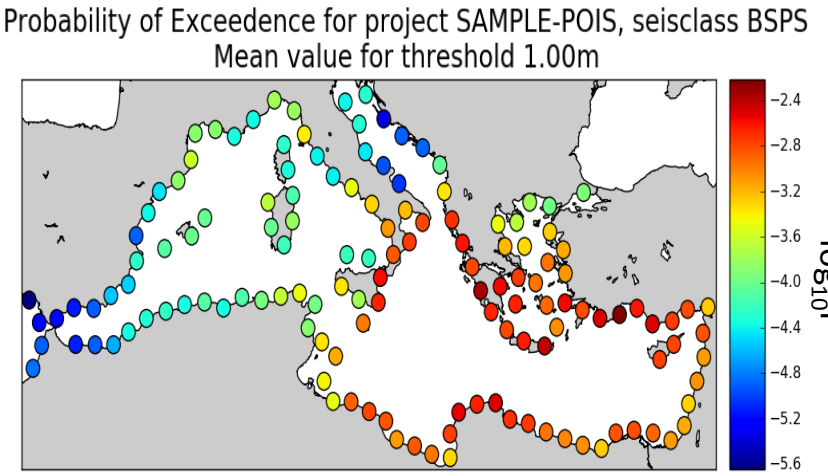
Global and regional hazard maps





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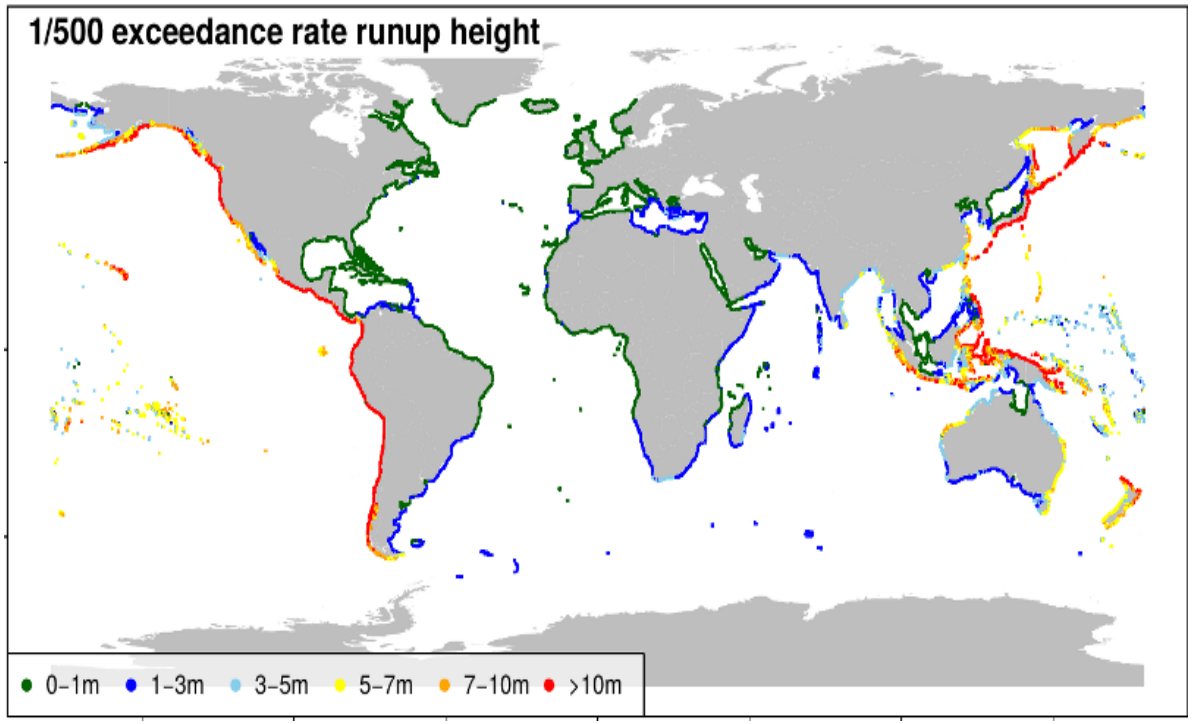
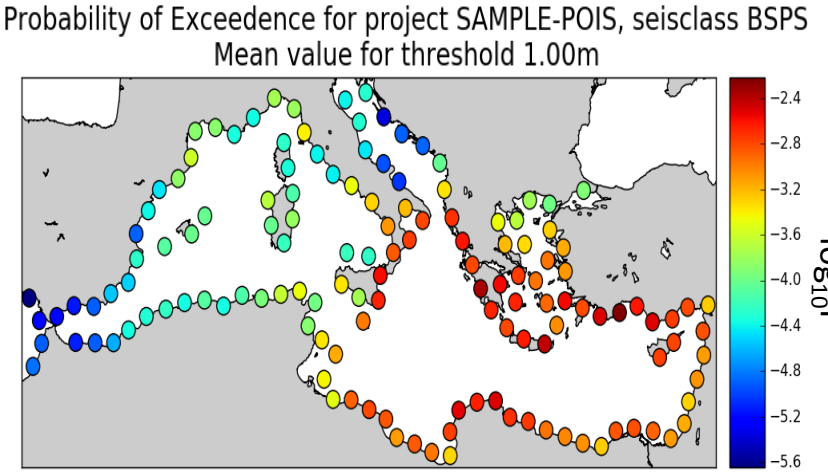
TSUMAPS NEAM
Probabilistic TSUnami Hazard MAPS for the NEAM Region

Global and regional hazard maps



ThinkHazard!



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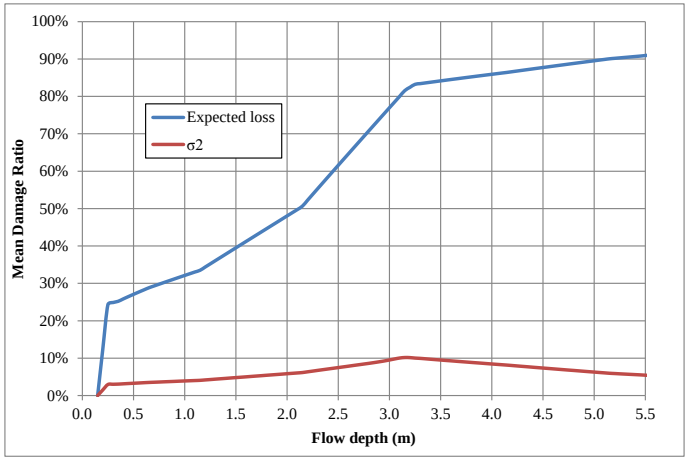
Physical vulnerability functions



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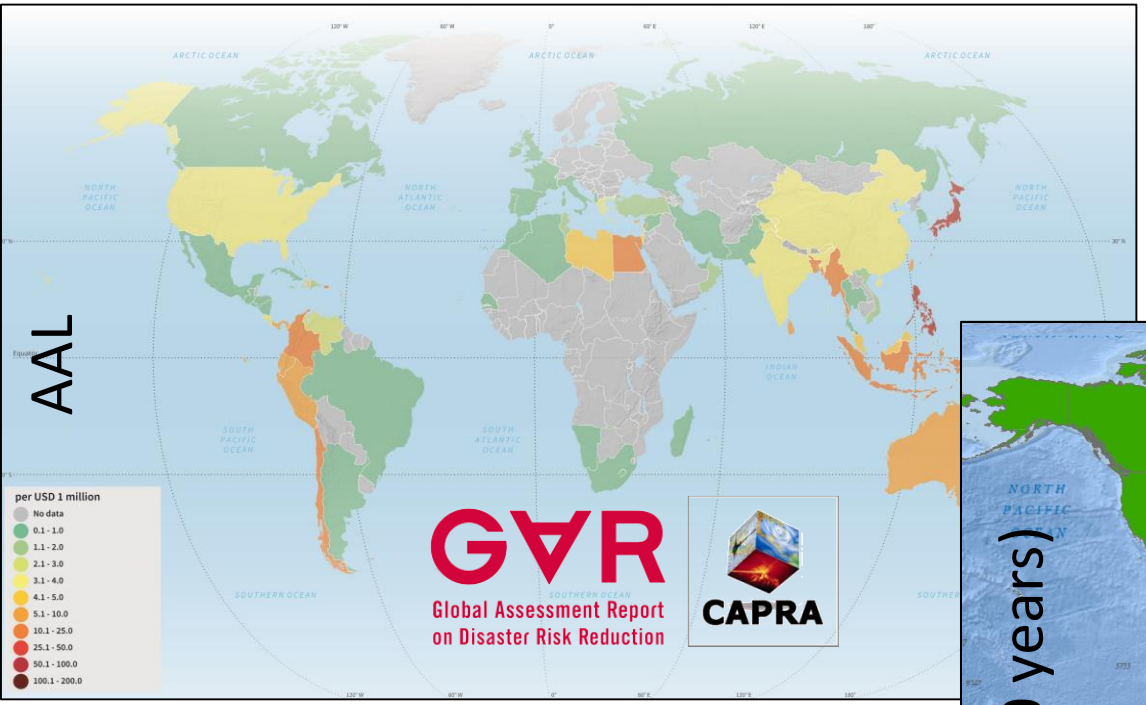
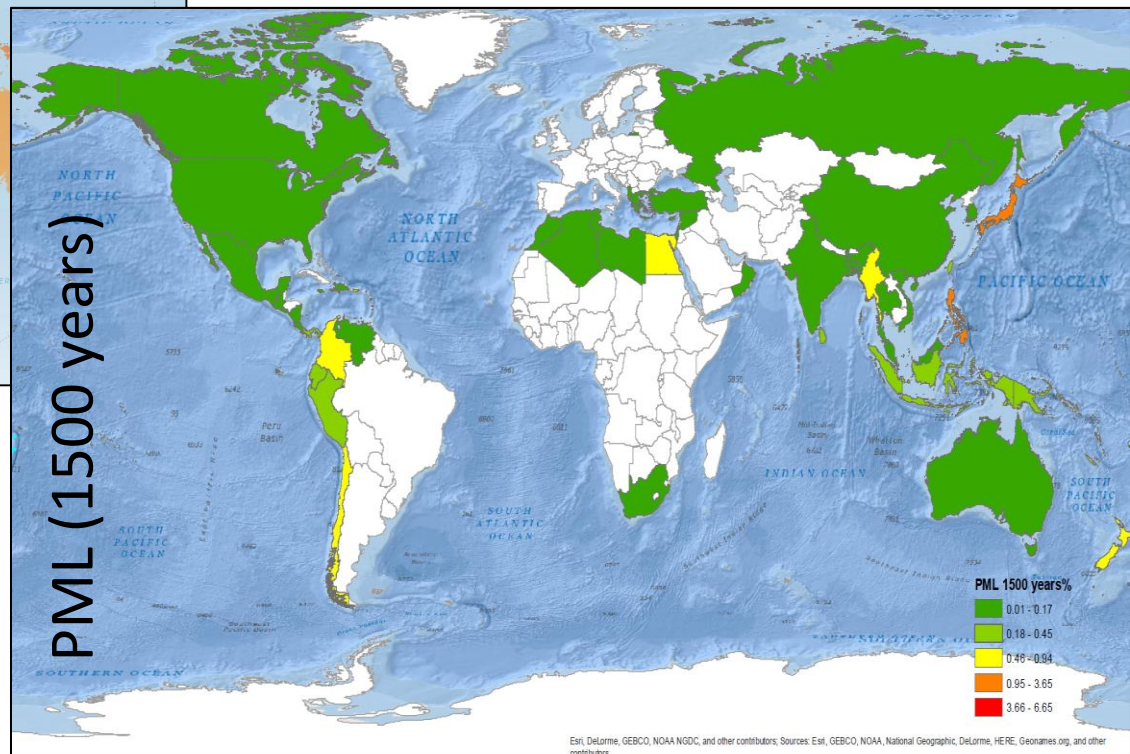
Source: http://www.telegraph.co.uk

Country level tsunami risk maps





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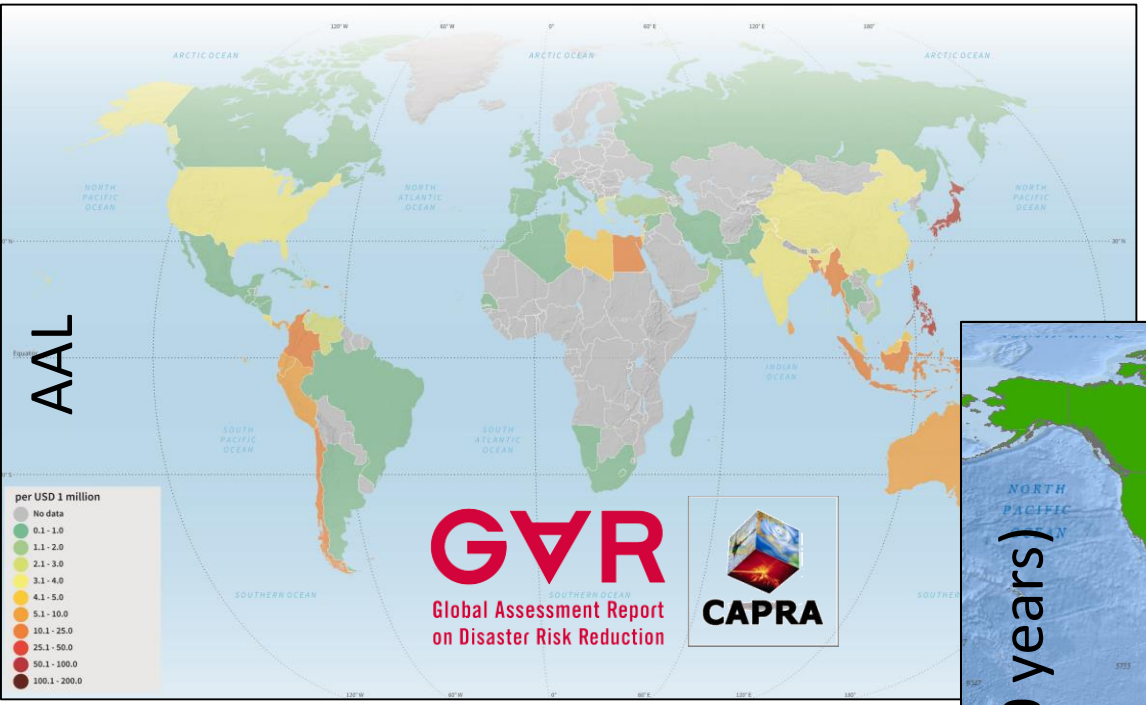

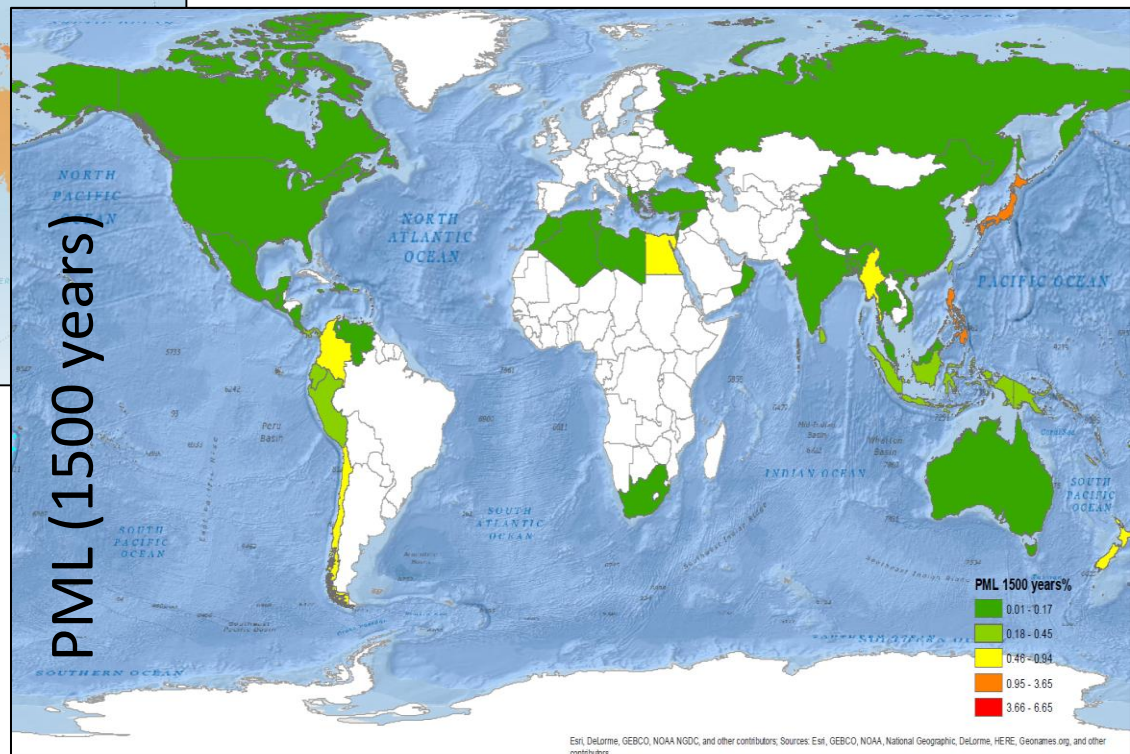

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Thank you!