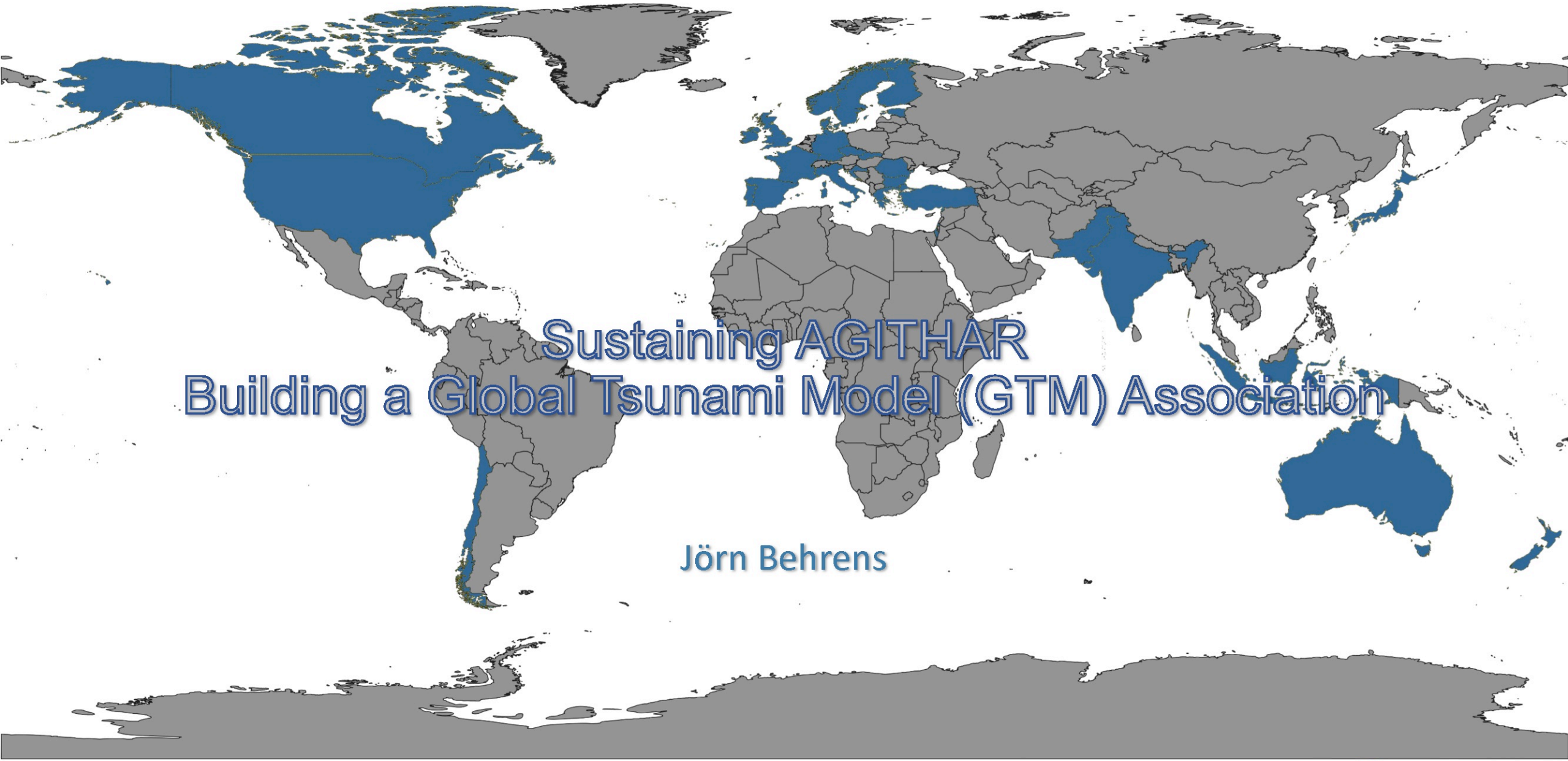

Sustaining AGITHAR
Building a Global Tsunami Model (GTM) Association

Jörn Behrens

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GTM

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AGITHAR's History

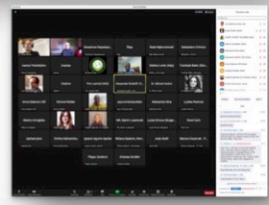
- AGITHAR Inaugurated 04/2019
- AGITHAR Ended 09/2023
- CIG 11/2023-10/2024

Period	Time	Total Amount
1	05/2019-04/2020	~110.000 €
2	05/2020-10/2021	0 €
3	11/2021-10/2022	~138.000 €
4	11/2022-09/2023	~131.000 €
CIG	11/2023-10/2024	max. 125.000 €


Brussels, April 2019


Valletta, October 2019


Rome, January 2020




Berlin, July 2023


London, May 2023


Malaga, June 2022


Prague, September 2022


Hamburg, Feb 2023

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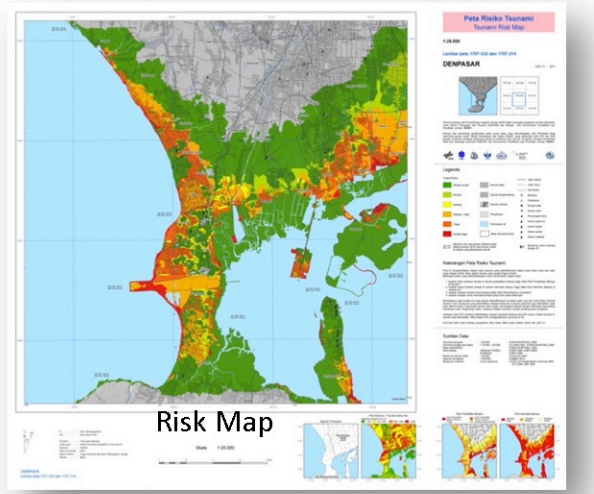
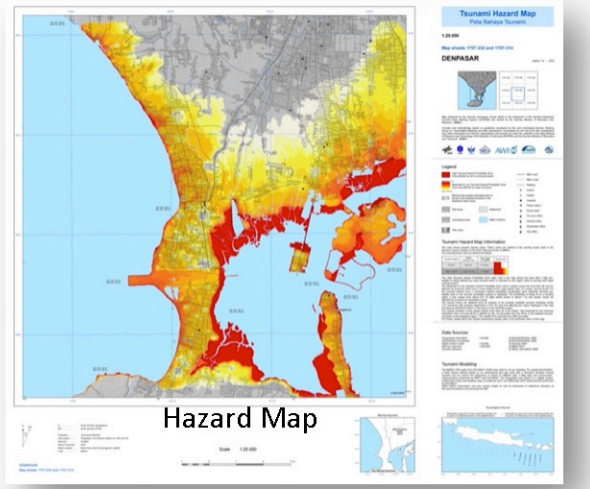
Challenges

- Assess, benchmark, improve, and document **methods** to analyze tsunami hazard and risk,
- Understand and communicate the **uncertainty** involved, and
- Interact with **stakeholders** in order to understand the societal needs and thus
- Contribute to their effort to **minimize losses**



Risk Map



Hazard Map

Lauterjung/Letz, 2017

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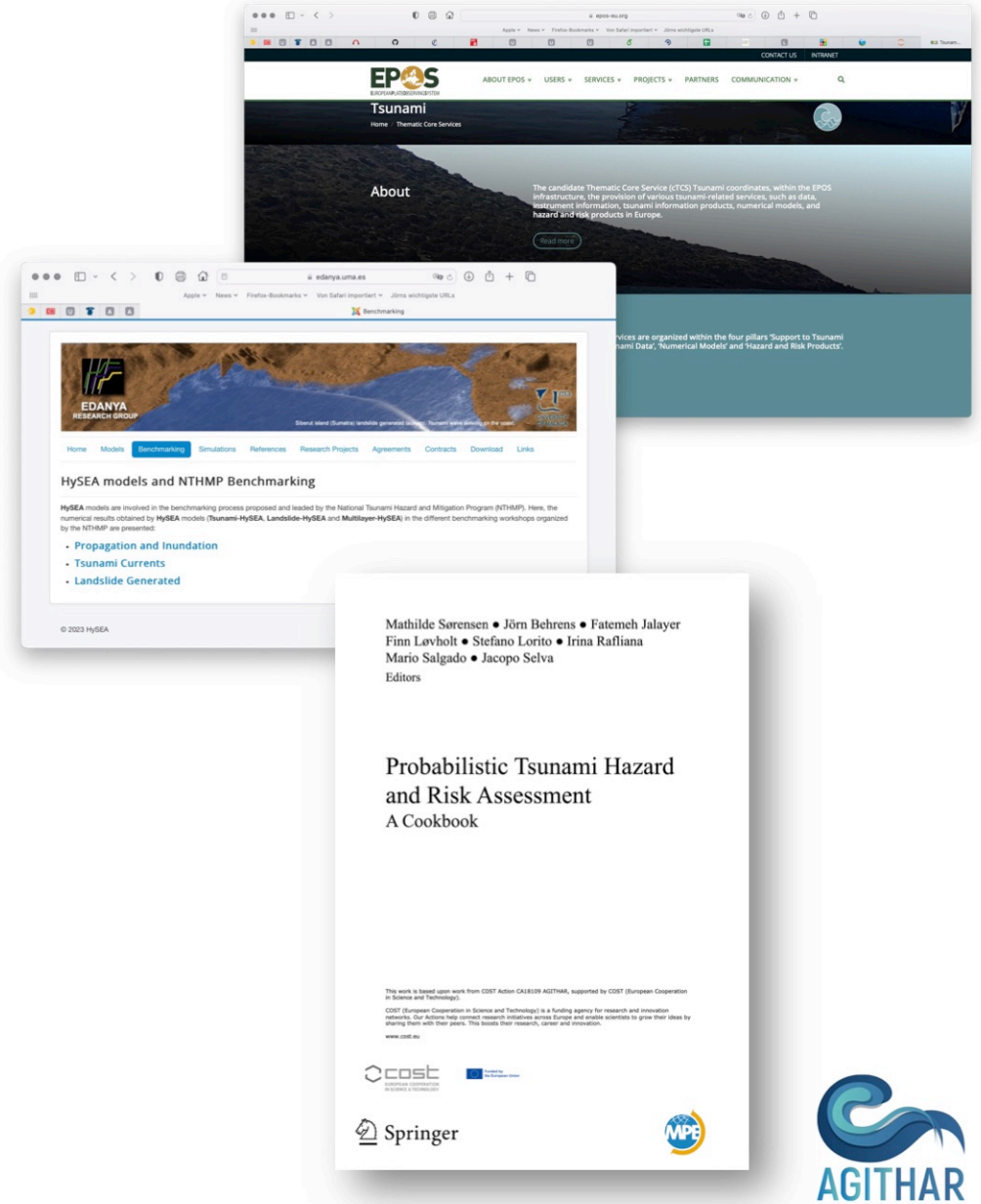
Objectives

- Assessment and provision of a common inventory of PTHA and PTRA approaches
- Identification and development of performance metrics and test cases (benchmarks) for individual components
- Open Access data repositories with standardized interfaces
- Development of a structure for standardized PTHA and PTRA workflows
- Quality assurance for PTHA and PTRA
- Implementation and dissemination of PTHA and PTRA methods to stakeholders and end users
- Joint guideline development of workflows with stakeholders



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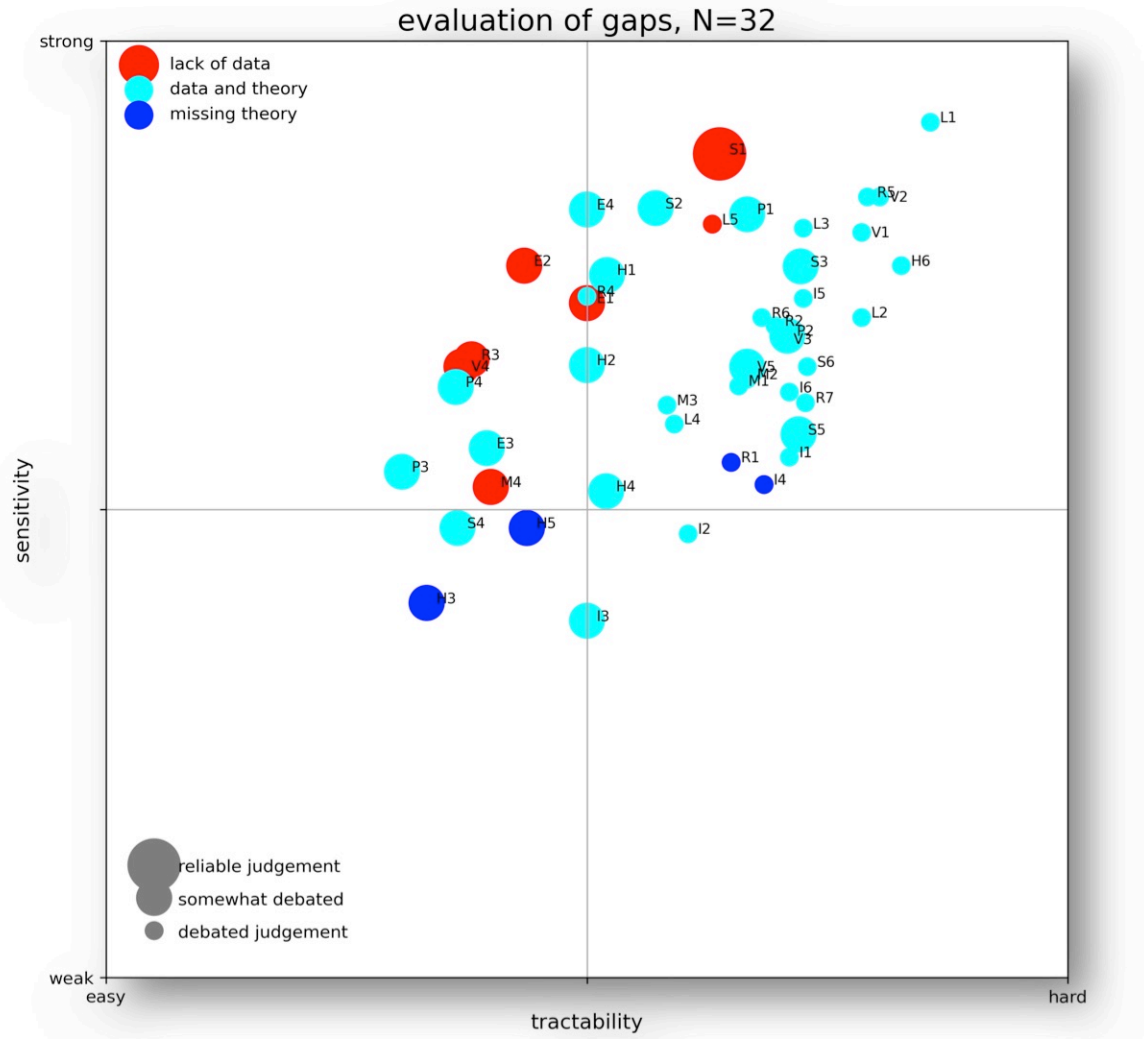
Results – D1: Research Gaps



J. BEHRENS, F. LØVHOLT, F. JALAYER, S. LORITO , M.A. SALGADO-GÁLVEZ, M. SØRENSEN, et al. (2021): *Probabilistic Tsunami Hazard and Risk Analysis – A Review of Research Gaps*, Frontiers in Earth Science, 9:114, DOI:10.3389/feart.2021.628772.

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Further Results

D4: Interdisciplinary cooperation research

D1: Risk communication

Rödder S and Schaumann F (2022), *"It's something that I do every day." Exploring interdisciplinarity and stakeholder engagement in tsunami science*. Front. Earth Sci. 10:949803. DOI:10.3389/feart.2022.949803.

I. Rafliana, F. Jalayer, A. Cerase, L. Cugliari, M. Baiguera, D. Salmanidou, et al. (2022): *Tsunami risk communication and management: Contemporary gaps and challenges*. Int. J. Disaster Risk Reduction, 70:102771. DOI:10.1016/j.ijdrr.2021.102771.

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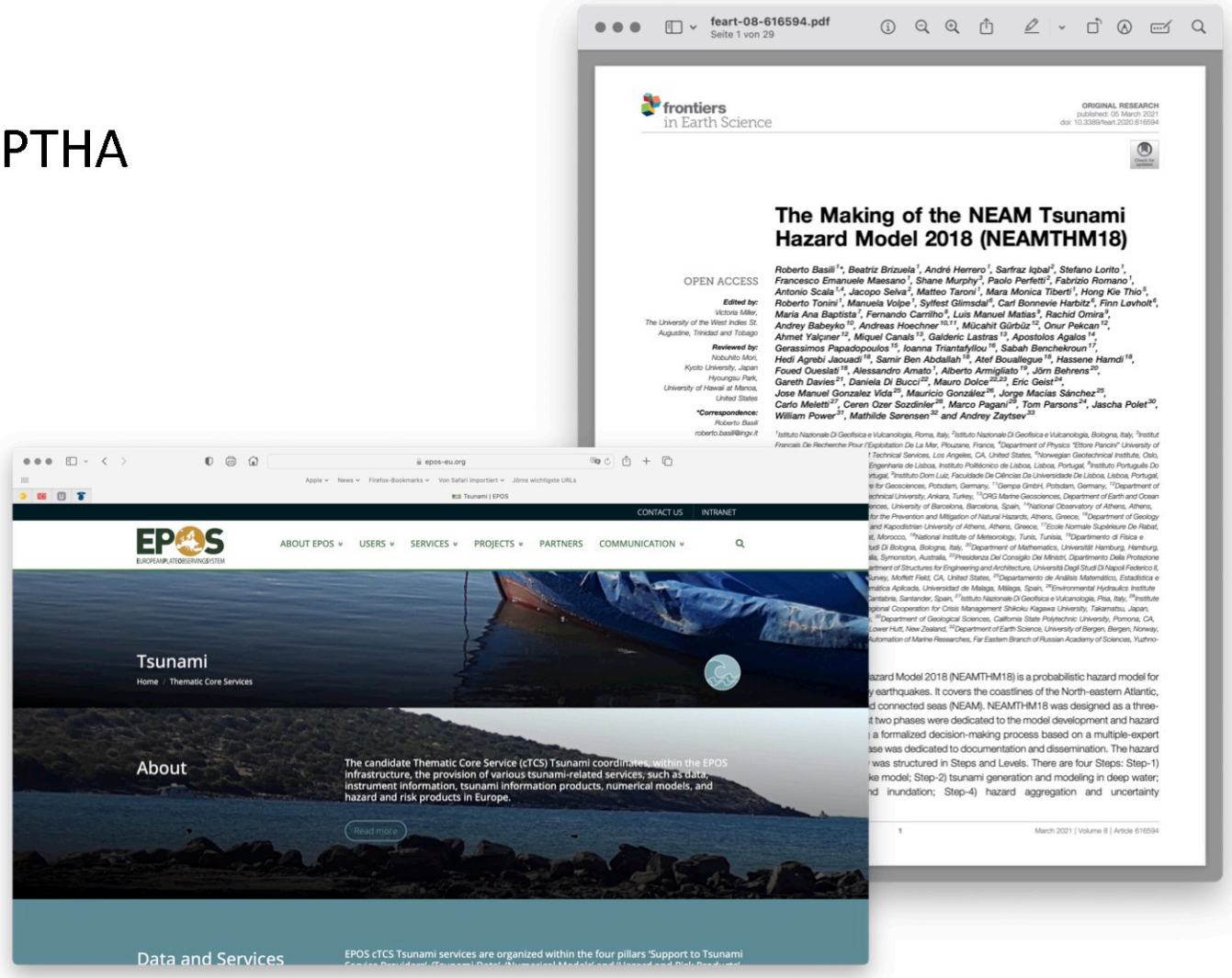
Further Results

D3: Repository

D2: Report on SPTHA



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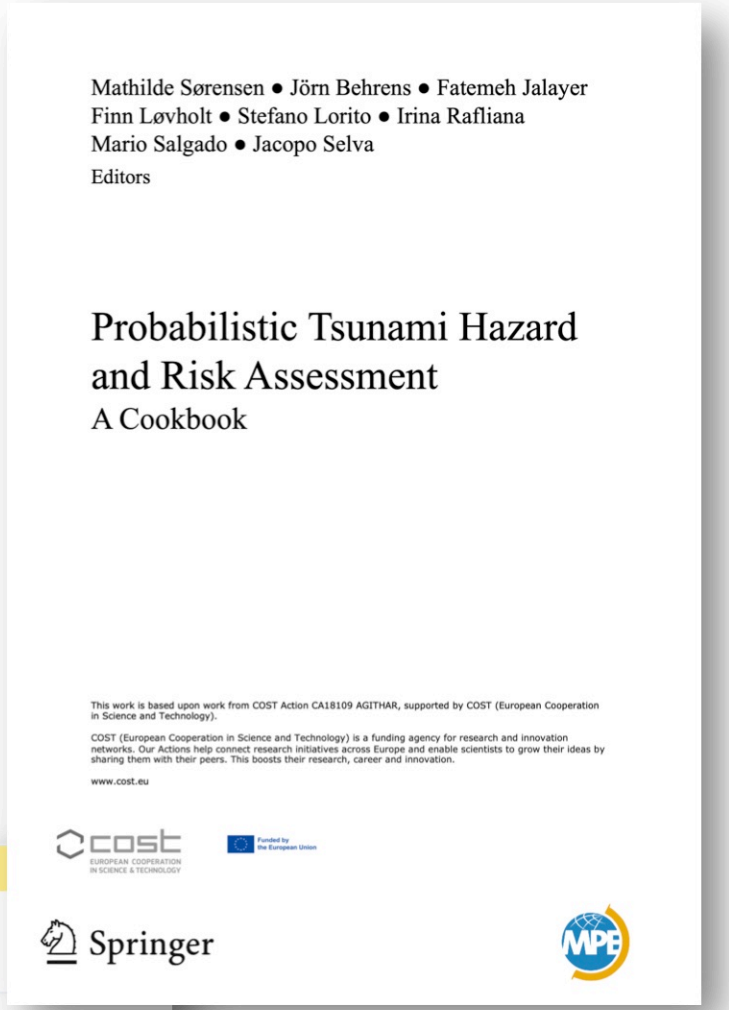
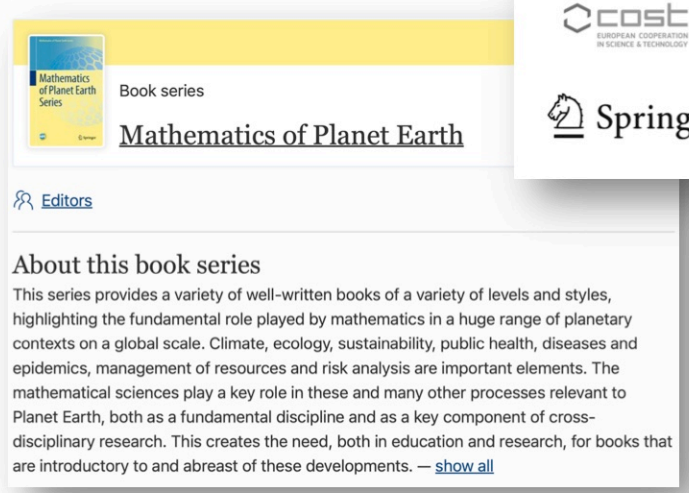
Cookbook

Contents:

- Introduction
- Ingredients Chapters
- 25+ Recipes
- Extended References
- To be published by Springer Nature
- OpenAccess!





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Global Tsunami Model

- proposed to the tsunami community at IUGG June 2015, discussed among partners in several meetings since (AGU, EGU…)
- **Loose structure committing partners** to the GTM through signing of Letter of Interest (LoI's)
- **~36 Partners signed LoIs, more interested (involved in meetings etc)**
- INGV and NGI receive LoI's on behalf of GTM and perform majority of secretary work

GTM Contributions

Related project results contributing to GTM:

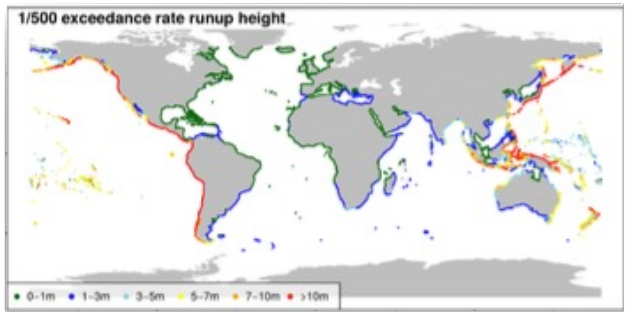
✓GAR15 global tsunami risk maps
- Full tsunami risk analysis, but not disaggregation of hazard
- Focused on losses estimation for nations

✓TSUMAPS-NEAM
- Tsunami hazard maps for DG-ECHO (European Civil Protection)
- Makes use of GTM pool of experts: elicitation on critical, subjective choices (developing and weighting alternative models)

✓New global tsunami hazard assessment finalized
- Deeper analysis on earthquake model epistemic uncertainties

GAR
Global Assessment Report on Disaster Risk Reduction

2015



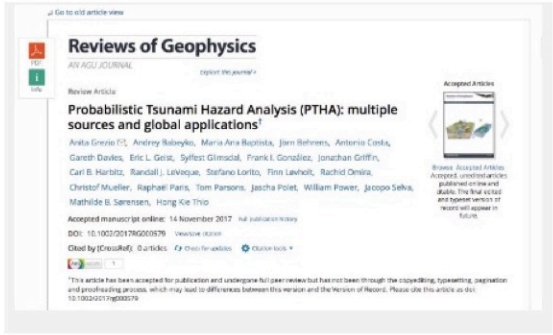
Davies et al., GSL Special Publ. 2017

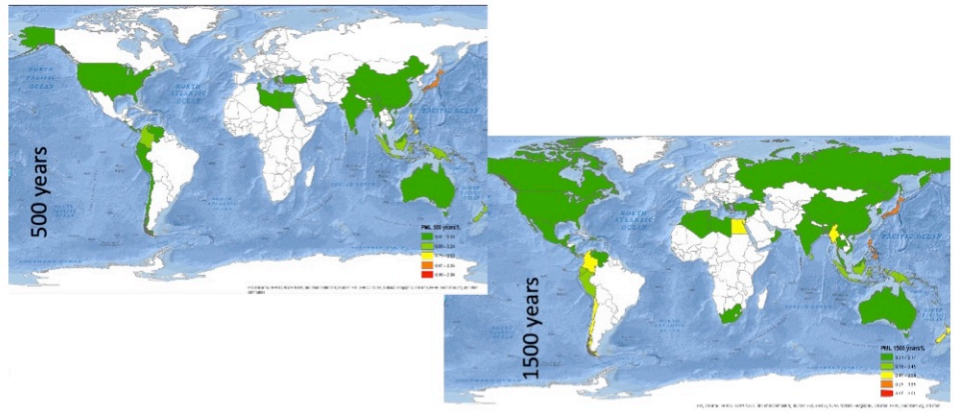
GTM

GTM Contributions

✓Reviews of Geophysics
- Probabilistic Tsunami Hazard Analysis (PTHA: multiple sources and global applications); Grezio et al., 2017

✓GAR19 (https://gar.unisdr.org)
- Global Assessment Report on Disaster Risk Reduction
- Background Paper: Global Trends in Advancing Tsunami Science for Improved Hazard and Risk Understanding; Lovholt et al. 2019

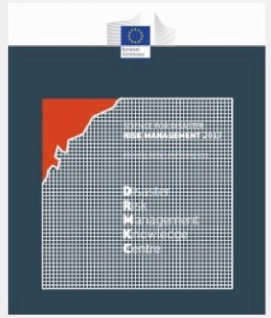




GAR Global Assessment Report on Disaster Risk Reduction

UNDRR

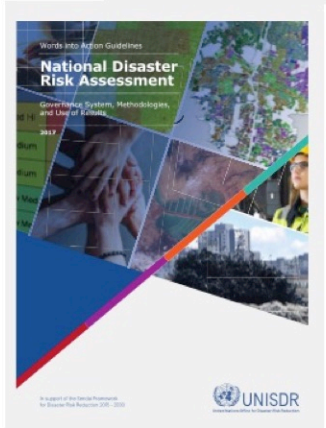
2019



Towards fulfilling implementation of the Sendai Framework for Disaster Risk Reduction (SFDRR):

✓UNISDR
- Words Into Action – the tsunami hazard section
- Tsunami awareness day blog http://www.unisdr.org/2016/tsunamiday/

✓Disaster Risk Mitigation Knowledge Centre (EC)
- JRC reference document of natural hazards



WORLD TSUNAMI AWARENESS DAY 5 NOVEMBER 2016

Development of GTM Association

- 03/24: General Assembly
- 04-07/24: Stakeholder Meetings
- Development of Mission/Vision
- Development of Business Model
- Development of Compliance/Structure