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FRANZIUS-INSTITUTE
*for Hydraulic, Waterways
and Coastal Engineering*

GEFÖRDERT VOM



Bundesministerium
für Bildung
und Forschung

Ongoing TWIN-SEA activities and guiding questions for the workshop

Dr. Matthias Garschagen

Head of Section: Vulnerability Assessment, Risk Management and Adaptive Planning
United Nations University – Institute for Environment and Human Security (UNU-EHS)

Prof. Dr. Yekt Maunati

LIPI -- Research Center for Regional Resources (PSDR)

“Creating a **research network** in Southeast Asia with German universities for **improving preparedness** and developing “**low-regret**” **adaptation measures and strategies** to climate change and its related effects induced by natural hazards in the **coastal zones** in Southeast Asia and **Indonesia**.”

Key questions and research focus in first funding period (years 1 and 2)



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- a) How to identify and **assess current** and **future** natural **hazards** in the context of **climate change** and **climate variability** in Indonesia and Southeast Asia?
- b) How to **analyze** and **evaluate present and future vulnerability** patterns in selected **coastal zones** in Indonesia and Southeast Asia?
- c) How to develop **scenarios** for **vulnerability** and inter-related, different **risk profiles** at sub-national and local level?
- d) How to assess the **benefits** and **constraints** of different **approaches for risk reduction** and climate change adaptation under **different development pathways**?
- e) How to develop technical **“low-regret” adaptation concepts** and strategies to assist coping with climate change induced changes and losses by means of altered management approaches, e.g. following the “Working with Nature” concept.
- f) What are the requirements and needs for **online e-learning** material and tools at universities in Indonesia and Germany?
- g) How to enhance the **visibility and sustainability** of programmes and products of German-Indonesian Science cooperation at the international level?

A continuous road ...



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- Kick-off workshop in Bogor 2012
- First scientific workshop in Jakarta 2014
- Consolidation of working groups and work plan



Key achievements of the first scientific workshop in 2014



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- formation of working groups
- definition of research questions
- case studies
 - Jakarta
 - Semarang
 - Makasar
 - Bandar Lampung



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TWIN-SEA Creation of an Expert Network and Twin Institute in Indonesia and for South East Asia

– Adaptation concepts and “low regret” measures to climate
change and natural hazards –

1. Zwischenbericht – FKZ 01DP13005 – Anhang 1

1. Jahresbericht

G. David¹, N. Horstmann¹, B. Franz¹, Dr. N. J. Setiadi²,
G. A. Ketut Surtian^{2,3}, PD Dr. J. Birkmann² and Prof. Dr. T. Schlumann¹



Bundesministerium
für Bildung
und Forschung

BMBF – Bundesministerium für Bildung und Forschung
DLR – Projektträger, Internationales Büro
Heinrich-Konen-Straße 1
53227 Bonn

Bericht-Nr. 1, Anhang
Juni 2014

Working groups



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WORKING GROUP 1

Coastal management,
ecosystem services and low-
regret adaptation

WORKING GROUP II

Socio-economic vulnerability and
risk (including scenarios),
development pathways, societal
change

WORKING GROUP III

Role of educational activities
(e.g. E-learning) in promoting
DRR&CCA

Identification of problems / questions

State of the art and knowledge gaps

Resulting research questions

Workplan for potential collaboration: who (institutions/persons), what (research object), how (methods/data available), where (case studies), timeframe, expected outcomes, other potential collaborators

Moderators:

Prof. Dr. Torsten Schlurmann,
Dr. Augy Syahailatua,
Dr. Fabrice Renaud,
Dr. Heru Santoso

Moderators:

Dr. Matthias Garschagen
Prof. Dr. Yekti Maunati,
Prof. Dr. Joern Birkmann,
Prof. Dr. Robert Delinom,

Moderators:

Dr. Joerg Szarzynski,
Dr. Rachmat Fajar Lubis, Dr.
Erick Tambo,

Achievements and ongoing work

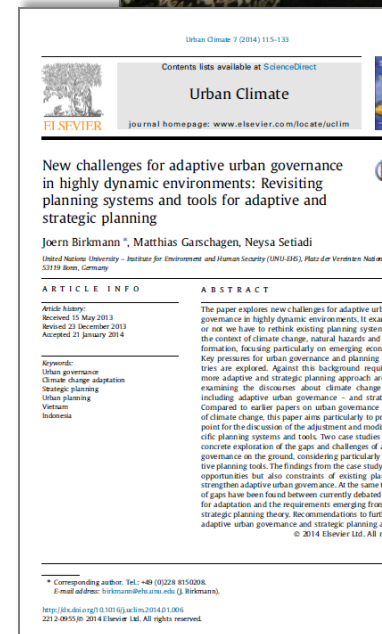


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- joint research
 - fieldwork implementation
 - joint conceptual work
 - etc.
- exchange of guest scientists
 - Prof. Yekti Maunati
 - Dr. Fabrice Renaud
 - M.Sc. students
 - etc.
- additional 'projects' related to TWIN-SEA
 - PhD and M.Sc. students (e.g. PROMOS)
 - LIPI research groups
- joint presentations
 - Deltas in Times of Climate Change
 - etc.
- drafting of joint publications
 - working paper
 - journal articles
 - etc.



Objectives of this workshop



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- 1) to present and discuss the past work, preliminary findings and current state of the work within the three working groups, as defined in the last workshop in Jakarta;
- 2) to strengthen the TWIN-SEA expert network through providing the space for exchange and through involving additional experts;
- 3) to discuss and define a work plan for the next two years and the overall future for the TWIN-SEA network.

Second International TWIN-SEA Workshop on
***"Climate and Societal Change in Coastal Areas in
Indonesia and South East Asia"***
(Updated draft stand March 22, 2015)

GEDUNG PDII LIPI
Jl. Jend. Gatot Subroto 10, Jakarta,
Indonesia, March 23-24, 2015

Organized by:

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 **FRANZIUS-INSTITUTE**
for Hydraulic, Estuarine
and Coastal Engineering

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LIPI

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- 1) How do the findings of your presentation relate to the work within TWIN-SEA?
- 2) Which are the most pressing remaining knowledge gaps in the field you presented on?
- 3) To what extent are the problems and issues raised by you related to gaps in knowledge vs. challenges with implementation and law enforcement? In other words, what can science contribute to the next steps of tackling the problems you referred to?

Day 1: Monday, 23rd of March 2015

08:30 – 09:00 *Registration and welcoming coffee*

I –Introduction to TWIN-SEA Project, Linking the Workshop to the Broader Strategic Planning

Moderator: *Dr. Fabrice Renaud*, **Rapporteur:** *Ms Ayu Surtiari*

09:00 **Welcome Address and Opening of the Workshop**

Prof. Dr. Iskandar Zulkarnain (LIPI)

09:15 **TWIN-SEA and Other Relevant Research Activities on Natural Hazards and Risk in Indonesia and Southeast Asia**

Prof. Dr. Torsten Schlurmann (FI)

09:30 **LIPI Medium-Term Strategies, Core Research Topics, and Contribution to Expert Network Building in South East Asia**

Dr. Siti Nuramaliati Prijono (LIPI)

09:45 **Ongoing TWIN-SEA Activities and Guiding Questions For The Workshop**

Dr. Matthias Garschagen (UNU-EHS)

10:00 **State of the Art, Workshop Expectations, and Future Perspectives Related to E-Learning within TWIN-SEA**

Dr. Joerg Szarzynski (UNU-EHS)

10:15 **Group Picture**

-10:40 **Press Interview (VIP Room)**

Coffee/Tea break (25 minutes)

II – Programs and Activities on DRR and CCA at The National and Local Level in Indonesia

Moderation: *Prof. Yekti Maunati*, **Rapporteur:** *Mr. Gabriel David*

10:40 Integration of DRR and CCA within the Indonesia National Mid-Term Development Planning 2014-2018

Ms. Tri Dewi Virgiyanti (BAPPENAS)

10:50 Latest Development on Indonesia Climate Change Adaptation Policy and Programs

Mr. Arif Wibowo (Ministry of Environment)

11.00 Indonesia Disaster Risk Reduction Policy, to Implement the Sendai Framework for Disaster Risk Reduction 2015-2030

Mr. Lilik Kurniawan (BNPB)

11.10 Climate Change and the Need for Adaptation

Prof. Dr. Rizaldi Boer (CCROM IPB)

11.20 Development the Concept of Vulnerability Assessment in Indonesia for Natural and Climate Change Hazard: Challenges and Opportunities for Implementation.

Dr. Herryal Z. Anwar / Ms. Emilia Yustiningrum (LIPI)

11.30 USAID DRR/CCA Programs in Indonesia

Dr. Jennifer Jadin (USAID)

11.40 Q&A for the session (30 minutes)

12:10-13:10 Lunch Break (1 hour)

Day 1: Monday, 23rd of March 2015 (continue)

III –STATE OF THE ART OF WORKING GROUP II: Vulnerability and Pathways for Adaptation

Moderation: *Prof. Torsten Schlurmann*, **Rapporteur:** *Dr Riyanti Djalante*

13.10 **Between Collapse and Transformation: Adaptation Pathways in Coastal Megacities (Skype)**

Prof. Dr. Mark Pelling (King's College London)

13.25 **Spatial Planning and Risk Reduction: Lessons between Indonesia and Germany? (Skype)**

Prof. Dr. Joern Birkmann (University of Stuttgart)

13.40 **Q&A for the session (20 minutes)**

14:00 **Firms' Decision Making under Risk and Regional Adaptive Resilience in Indonesia**

Prof. Dr. Javier Revilla Diez / Mr. Thomas Neise (University Cologne)

14.15 **Dynamic Vulnerability in Jakarta: Drivers and Challenges in the Future**

Prof. Dr. Yekti Maunati (LIPI) / Ms. Ayu Surtiari (LIPI/UNU-EHS)

14.30 **Q&A for the session (15 minutes)**

14:45-15:00 Coffee/Tea break (15 minutes)

IV –STATE OF THE ART OF WORKING GROUP II: Vulnerability and Pathways for Adaptation (continue)

Moderation: *Dr Herry Yogaswara*, **Rapporteur:** *Ms. Syarifah Dalimunthe*

15.00 DRR and CCA at Coastal Areas and Small Islands

Dr. Hendra Yusran Siry (MAAF)

**15:15 The Relationship between Ethnic Heterogeneity/Homogeneity and the Effectiveness of
Collective Coping Capacity to Environmental Risk in Selected Slums in Jakarta**

Mr. Iker Urdangarin Meabe (UNU-EHS/University of Bonn)

15.25 Water Resources In Megacities: Virtual Water Flows and Consumption Economies

Ms. Lisa-Michelle Bott / (University Cologne)

15.35 Q&A for the session (25 minutes)

V –Summary of discussions in day 1

Moderation: *Dr. Matthias Garschagen*, **Rapporteur:** *Mr. Antoni Ros Martinez*

16:00 Joint discussions

– Plan for day 2

17:00 *Dr. Matthias Garschagen (UNU-EHS)*

End of Day 1

Day 2: Tuesday, 24th of March 2015

I - Opening

08.30 **Overview of the day**

Dr. Matthias Garschagen (UNU-EHS)

II – DRR and CCA Activities in Indonesia

Moderation: *Prof Gadis Sri Haryani* **Rapporteur:** *Mr. Iker Urdangarin Meabe*

09:00 **Private Actors involvement in DRR and CCA**

Mr. Indrajah Sentil (NAUE GmbH & Co. K)

09:10 **REDD+ in Indonesia**

Mr. Heru Prasetyo (Former Head of Indonesia National REDD+ Agency)

09:20 **Development of Disaster and Climate Resilient Cities in Indonesia**

Prof. Dr. Jan Sopaheluwakan (ISURI – UI)

09:30 **Progress of Integrating DRR and CCA**

Ms. Malika Amril (UNDP)

09:40 **BMKG Climate Change Adaptation Programs and Activities**

Prof. Dr. Edwin Aldrian (Director of the Center for Research and Development - BMKG)

09:50 **ACCCRN Program in Indonesia**

Ms. Aniessa Delima Sari (Mercy Corps Indonesia)

10.00 **Q&A for the session (35 minutes)**

10:35 - 10:50 Coffee Break (15 minutes)

III – STATE OF THE ART OF WORKING GROUP I: Ecosystem-based Disaster Risk Reduction

Moderation: *Dr Fadjar Lubis*, **Rapporteur:** *Ms. Lisa Michelle-Bott*

10:50 How are Decision on Eco-DRR taken in Indonesia: Preliminary Results from a Survey Carried Out with National and Local Level Administrations

Dr. Fabrice Renaud (UNU-EHS)

11:05 Building Resilience in Coastal Areas. Analysis of the Different Measures Implemented in TimbulSloko, Pilot Scenario for Demak Regency and Java's North Coast

Mr. Antoni Ros Martinez (UNU-EHS)

11:20 Climate Change and Water Issues

Prof. Dr. Robert Delinom (LIPI)

11:35 Proposed Initiatives to Understand the Performances and Limitations of Ecosystem Services, and to Conserve Ecosystem Services to Minimize Disaster Risk

Dr. Heru Santoso (LIPI)

11:50 An Overview of Ecosystem-Based and Low-Regret Coastal Protection Measures In DRR

Mr. Gabriel David (FI) / Mr. Johan Risandi (MAAF)

12:10 Q&A for the session (50 minutes)

13:00 - 14:00 Lunch Break

Day 2: Tuesday 24th of March 2015 (continue)

IV –Break Out Group Session (WG I, II, III) (2 hours 30 minutes)

14.00 **Working Group Discussions (2 hours)**

Led by Group Leader / Coordinator

16.00 **Coffee Break (10 minutes)**

16.10 **Reporting (10 minutes for each WG, total 30 minutes)**

V – Closing Remarks

Moderation: Dr. Matthias Garschagen, Rapporteur: Ms. Ayu Surtiari

16:40 **Achievements and Way Forward for TWIN SEA network**

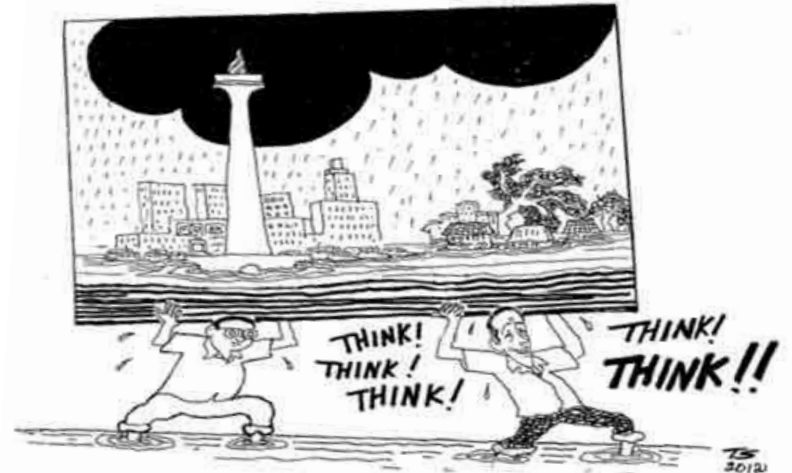
– **Closing Statements: LIPI, FI, UNU,**

17:00

End of Workshop

Break out groups: objectives

- involve new members into working groups !!!
- update and expand on work plan
- plan exchange
 - btw. Germany and Indonesia
 - within Germany and Indonesia
 - btw. scientific and practical partners
- publication strategy
 - JOINT peer-reviewed papers
 - policy briefs
 - etc.
- suggested platforms for exchange
 - newsletter
 - online platform
 - e-learning
- etc.





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Thank you very much for your kind attention!

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TWIN-SEA: Work plan and schedule

- 2 project phases:
 - 1st (years 1 and 2): knowledge generation, development of e-learning material and the development of adaption options (“business opportunities”)
 - 2nd (years 3 and 4): identification of business cases and orientation towards implementation

Phase I		1 st year				2 nd year			
WP	Content	Qt1	Qt2	Qt3	Qt4	Qt1	Qt2	Qt3	Qt4
I	Establishment of cooperation structures: expert network and twin institute								
II	Assessment of natural hazards, climate change, climate variability								
III	Assessment of actual and future vulnerabilities to hazards and climatic stressors identified and assessed in WP II								
IV	Identification of key drivers of risks in the past and in the future								
V	Development of new methods to capture and assess future vulnerability and risks – e.g. scenario methods for vulnerability								
VI	Enhancement of methods to evaluate risk reduction and adaptation measures under different development pathways								
VII	Knowledge transfer and generation of e-learning modules towards blended learning								
VIII	Outreach and dissemination								
IX	Products and innovation potentials stemming from research results								
Phase II (to be further elaborated)		3rd year				4th year			
		Qt1	Qt2	Qt3	Qt4	Qt1	Qt2	Qt3	Qt4
	Definition phase								
	Industry involvement								
	Development of guidelines								

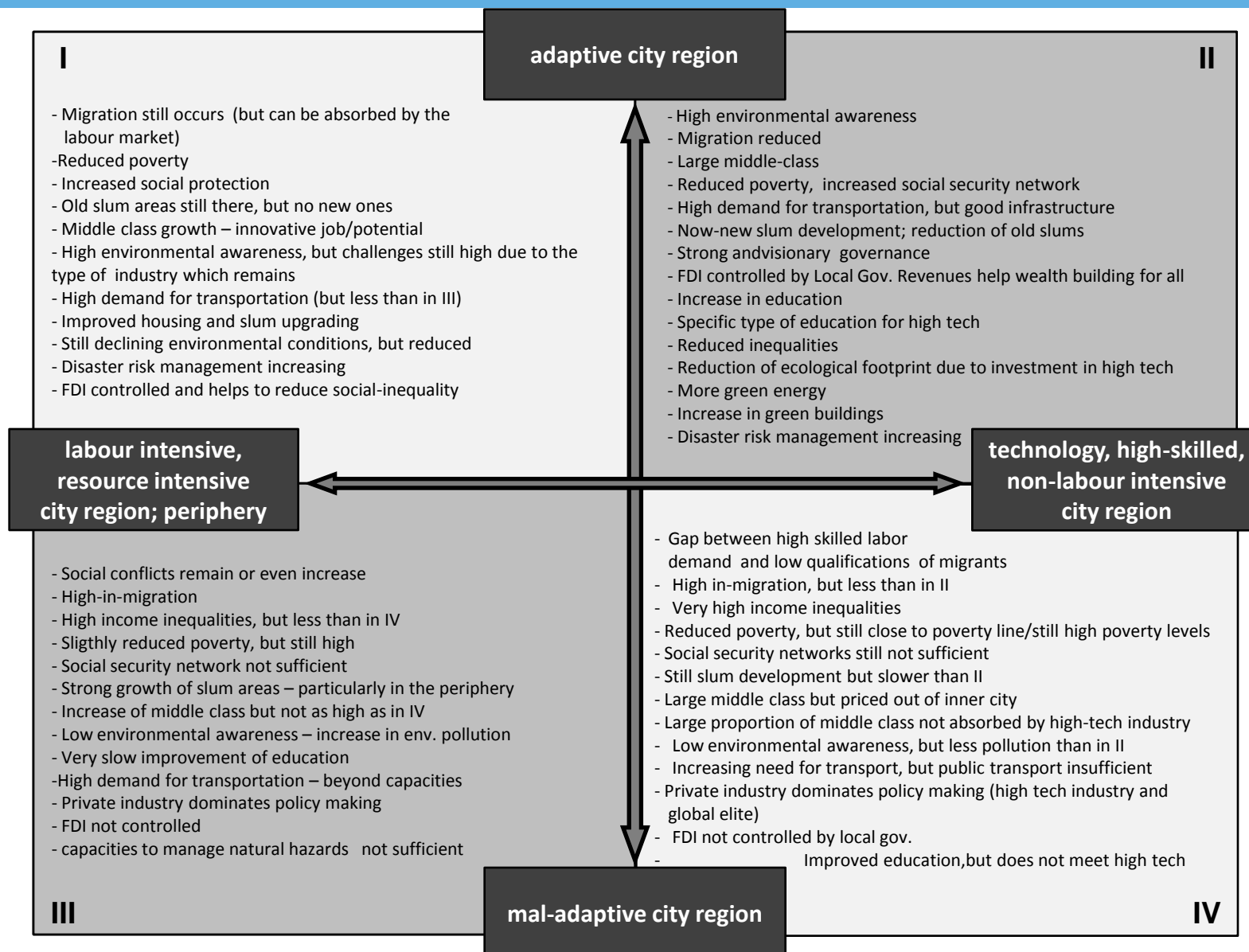
Example: Progress on scenarios for vulnerability



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Source: Birkmann, J.; Cutter, S.; Rothman, D.; Welle, T.; Garschagen, M.; van Ruijven, B.; O'Neill, B.; Preston, B.; Kienberger, S.; Cardona, O.; Siagian, T.; Hidayati, D.; Setiadi, N.; Binder, C.; Hughes, B.; Pulwarty, R. (2013) **Scenarios for vulnerability: opportunities and constraints in the context of climate change and disaster risk.** *Climatic Change*. Online First.

Main network partners -- thus far ...



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Network partners:

- Prof. Dr. Jakob Rhyner, UNU-EHS, Germany
- Dr. Matthias Garschagen, UNU-EHS, Germany
- Prof. Torsten Schlurmann, Leibniz University of Hannover, Germany
- Prof. Jan Sopaheluwakan, Indonesian Institute of Sciences, Indonesia
- Dr. Fabrice Renaud, UNU-EHS, Germany
- Prof. Gadis Sri Haryani, Indonesian Institute of Sciences, Indonesia
- Prof. Jörn Birkmann, University of Stuttgart, Germany
- Prof. Klaus Greve, University Bonn, Germany
- Prof. Dirk Vallée, RWTH Aachen, Germany
- Prof. Stefan Greiving, TU Dortmund, Germany
- Prof. Javier Revilla Diez, University Hannover, Germany
- Dr. Saleemul Huq, IIED, London, UK
- Prof. John Handmer, RMIT University, Melbourne, Australia
- Prof. Mark Pelling, King's College London, UK
- Dr. Nishara Fernando, University of Colombo, Sri Lanka
- etc.

