




Forensic Investigations of Disasters
FORIN

Anthony Oliver-Smith & Irasema Alcántara-Ayala

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- I. FORIN Workshop 2.0**
 - II. FORIN activities**
 - III. FORIN publications**
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 - V. Other publications**
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 - VII. Other activities**

I. FORIN WORKSHOP 2.0

- ✓ Funding for the workshop came from a grant from the UNISDR developed by **Tony Oliver-Smith** with cooperation from **Mark Pelling** and **Joern Birkmann** at the Sanya, China SC meeting last May.
- ✓ The grant funds did not become available until the contract between UNISDR and ICSU which administered the grant, was signed in **October of 2014.**
- ✓ The workshop took place in **mid-November 2014.**
- ✓ Written contributions from participants came due **in January.**
- ✓ A drafting committee meeting was held **in February** and a first draft went out to participants for review and to external readers in March.
- ✓ We now have all comments in hand and are working on a second draft to be fine-tuned at a drafting group meeting **in August.**

II. FORIN ACTIVITIES

The FORIN working group has held four workshops, two of which were in 2014 and supported two drafting group meetings (2015), published several articles, including two editorials in the International Journal of Disaster Risk Reduction, and is now producing its second iteration.

III. FORIN IN SENDAI

World Conference on Disaster Risk Reduction in Sendai, Japan. Co-chairs Anthony Oliver-Smith and Irasema Alcántara Ayala gave a dual presentation on the FORIN perspective in the IRDR organized panel.



UN World Conference on
Disaster Risk Reduction
2015 Sendai Japan

IV. FORIN PUBLICATIONS

An article on FORIN for the Routledge Encyclopedia of Natural Hazards has been solicited and is being written by two members of the working group.

The Journal of Forensic Research has solicited our contribution with the hopes of devoting an entire issue to FORIN. We are in the process of developing a proposal to that end.



V. FORIN WORKING PLAN

In the FORIN work plan work plan developed in 2012, the proposed case studies program is contingent upon funding. Estimated cost for each core case study is \$250,000. In order to identify and recruit projects and lead investigators, that funding should be in hand.

While the FORIN working group has generated funds for four workshops and two drafting group meetings, there has been no parallel effort from the IPO to obtain funding for other aspects of the work plan.



VI. OTHER PUBLICATIONS

2015 “Hazards and Disaster Research in Contemporary Anthropology,” *International Encyclopedia of the Social and Behavioral Sciences*, 2nd edition. New York: Elsevier.

2014 “Environmental Migration: nature, society, and population movement,” In Stewart Lockie, David A. Sonnenfeld and Dana R. Fisher (eds.) *Routledge International Handbook of Social and Environmental Change*. London and New York: Routledge. Pp. 142-153.

2014 “Climate Change, Displacement and Resettlement,” In Scott Leckie (ed) *Land Solutions for Climate Displacement*. Oxford and New York: Routledge. Pp 53-109.

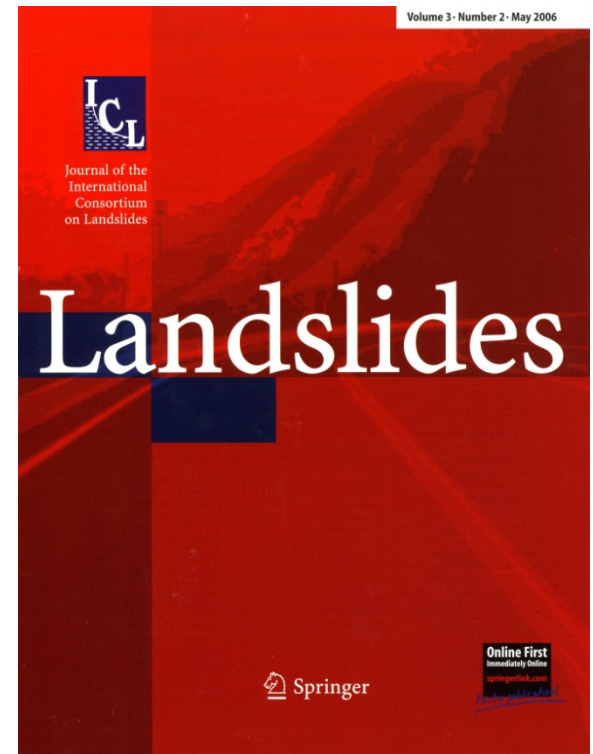


2014 Oliver-Smith, Anthony and Alex de Sherbenin. “Something Old and Something New: Resettlement in the Twenty First Century.” In Susan F. Martin, Sanjula Weerasinghe and Abbie Taylor (eds): Humanitarian Crises and Migration: Causes, Consequences and Responses, New York: Routledge. Pp. 243-263.

2014 “Climate Change Adaptation and Disaster Risk Reduction in Highland Peru,” in B.C. Glavovic and G.P. Smith (eds) Adapting to Climate Change, Environmental Hazards, DOI 10.1007/978-94-017-8631-7_4 Springer Science+Business Media Dordrecht 2014. Pp. 77-100.

2014 Oliver-Smith, A and A de Sherbinin Resettlement in the 21st Century, Forced Migration Review 45:23-25

2014 Alcántara-Ayala, I. and A. Oliver-Smith, 2014, “ICL Latin-American Network: on the road to landslide reduction capacity building,” Landslides DOI 10.1007/s10346-013-0464-7.

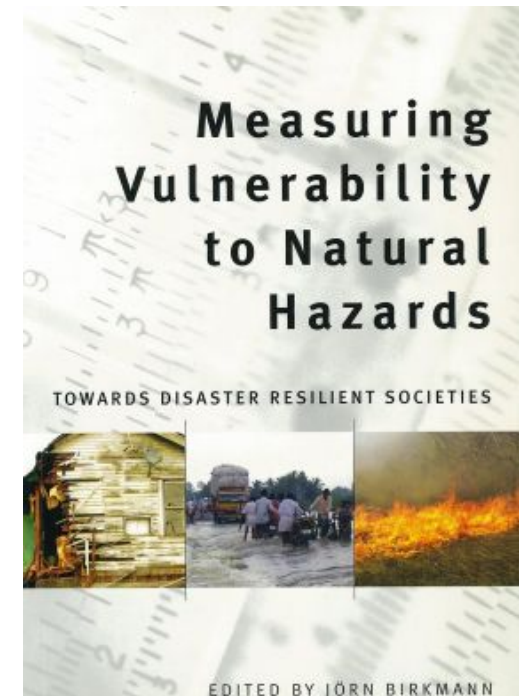


2013 “A Matter of Choice,” International Journal of Disaster Risk Reduction 3 (2013) 1–3.

2013 “Catastrophes, Mass Displacement and Population Resettlement,” in Rick Bissell (ed) Preparedness and Response for Catastrophic Disasters, Boca Raton: CRC Press. Pp 185-223.

2013 Joern Birkmann, Matthias Garschagen; Nishara Fernando, Vo Van Tuan, Anthony Oliver-Smith and Siri Hettige “Dynamics of vulnerability: Relocation in the context of natural hazards and disasters” in Joern Birkmann (ed) Measuring Vulnerability to Natural Hazards. 2nd Edition Tokyo: United Nations University Press. Pp 505-550.

2013 James Morrissey and Anthony Oliver-Smith Perspectives on Non-Economic Loss and Damage Understanding values at risk from climate change Policy Brief #9 June, Bonn: UNU-EHS Publication Series.



2013 Ian Burton, 2014 "Misunderstanding "Natural" Disasters and Climate Change", Chapter 12, pp. 71-74 in A.M. Herzberg (edit). Vol XIX. Communication , Knowledge and Understanding. Proceedings of the Conference on Statistics, Science and Public Policy held at Herstmonceux Castle, Hailsham, UK, April 23-26, 2014. Queen's University, Kingston, Ontario, Canada.

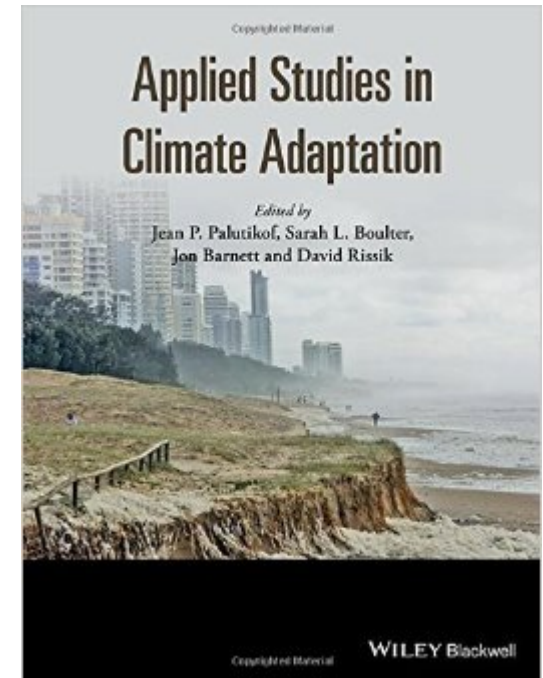
2013 Burton, I. O.P.Dube, et. al. 2012."Managing the Risks: international level and integration across scales".pp. 393-345, Chapter 7 in Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, "Field, C.B., V. Barros, T.F. Stocker et.al. (Edits).Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK.



2013 Ian Burton, 2015. "Practical adaptation: past, present and future". pp. 383-385 in Jean P. Palutikof et al. (eds). Applied Studies in Climate Adaptation". Wiley, Chichester, UK.

2014 Thea Dickinson and Ian Burton, 2015. "The Disaster Epidemic: Research, Diagnosis, and Articulation of Hazard, Politics and Ecology". Springer, Dordrecht, Netherlands.

2013 J. Richard Eiser, Ann Bostrom, Ian Burton, David M. Johnston, John McClure, Douglas Paton, Joop van der Pligt, Mathew P. White. 2012. "Risk interpretation and action: a conceptual framework for responses to natural hazards". pp. 5-16, International Journal of Disaster Risk Reduction. Vol 1. 2012.



2013 Lavell, A. with Lilian Reyes (2012). Extensive and Every Day Risk in the Bolivian Chaco: Sources of Crisis and Disaster. Revue de Geographie Alpine, 100-1.

2013 Lavell, A et al (2012) Coordinating lead author of chapter 1 of the IPCC-ISDR study on Managing the Risks of Extreme Events and Disasters to advance Climate Change Adaptation-SREX. Oxford University Press.

2013 Lavell, A.(2012) Disaster Risk Reduction and Public Investment Decisions: The Peruvian Case. GIZ, Ministry of Economy and Finance, Perú.

2013 Lavell, A, Brenes, A and Girot, P. (2013) LA RED in LatinAmerica. World Social ScienceReport.

2013 Lavell, A and A Maskrey (2014). The Future of Disaster Risk Management. Environmental Hazards. Routledge Press.

GAR

**Global Assessment Report
on Disaster Risk Reduction**

2015

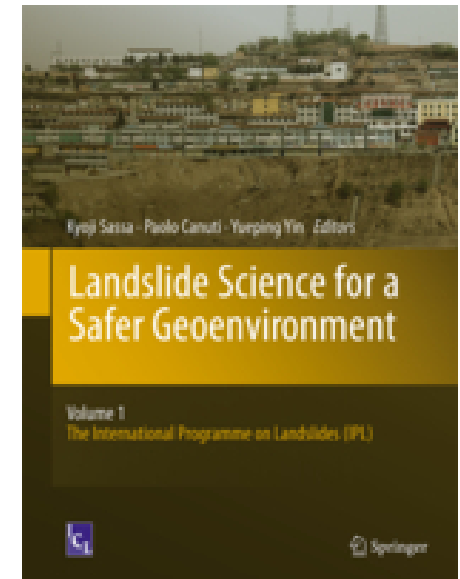
The Pocket GAR 2015
Making Development Sustainable:
The Future of Disaster Risk Management



2013 Mikos, M., Rouhban, B., Alcántara-Ayala, I., Li, X., 2014, Introduction: International Programme on Landslides—IPL, In: Sassa, K., Canuti, P., Yin, Y. (Eds.), Landslide Science for a Safer Geoenvironment, Vol. 1, Springer, 71-74.

2014 Murillo-García, F. G. Fiorucci, F., Alcántara-Ayala, I., 2014, The development of a detailed landslide inventory for a temperate region in Mexico by using very high resolution (VHR) satellite stereo-images, In: Sassa, K., Canuti, P., Yin, Y. (Eds.), Landslide Science for a Safer Geoenvironment, Vol. 2, Springer, 821-828.

2015 Murillo-García, F., Rossi, M., Fiorucci, F., Alcántara-Ayala, I., 2014, Landslide Vulnerability Evaluation: The Case of the Indigenous Population of Pahuatlán-Puebla, Mexico, In: Lollino, G. et al (eds.), Engineering Geology for Society and Territory – Vol. 2, Springer.



2013 Dykes, A.P., and Alcántara-Ayala, I., 2015, Environmental change and landslide hazards in Mexico, En: Alan P Dykes, Mark Mulligan, John Wainwright (eds.), Monitoring and Modelling Dynamic Geomorphological Environments, Wiley-Blackwell (in press).

2014 Alcántara-Ayala, I., and Oliver-Smith, A., 2015, The necessity of Early Warning Articulated Systems (EWASs): Critical Issues Beyond Response, In: Sudmeier-Rieux, K. Fernandez, M., Penna, I., Jaboyedoff, M. and J.C. Gaillard (eds.), Linking sustainable development, disaster risk reduction, climate change adaptation and migration, Springer (in press).

**Early Academic
WARNING SYSTEM**



Forensic Investigations of Disasters

FORIN 2.0



Anthony Oliver-Smith, Irasema Alcántara-Ayala,
Ian Burton & Allan Lavell

I. FORIN: OBJECTIVES

- ✓ Academic research objectives
- ✓ Educational objectives
- ✓ DRM Policy objectives
- ✓ Development objectives



Academic research objectives (1/3)

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- To provide evidence that supports that disaster risk, and thus disaster, are essentially socially constructed through concatenated processes generated by underlying, root causes and risk drivers in society.

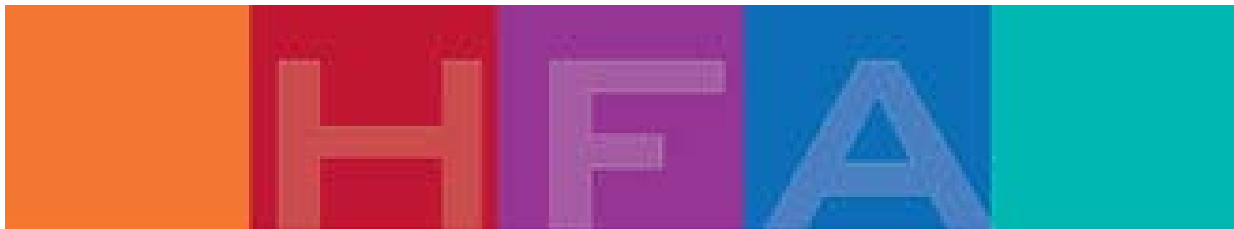
Some Risk Drivers...

- Ideologies: Political Systems & Economic Systems
- Urbanization
- Deforestation
- Population density
- Coastward migration
- Increasing inequality
- Land concentration
- Corruption/ impunity
- Discrimination-ethnic/racial/religious/gender/class
- Lack of institutional capacity



Academic research objectives (3/3)

- To experiment with multi-disciplinary and multi-stakeholder inputs and encourage participation by decision makers in the research process in order to facilitate take up in policy terms.
- To strengthen the existing research community and to build a strong, interdisciplinary, 'in-country' capacity of young researchers for policy-oriented research.
- To contribute with high quality research results to the Hyogo 4 objective.



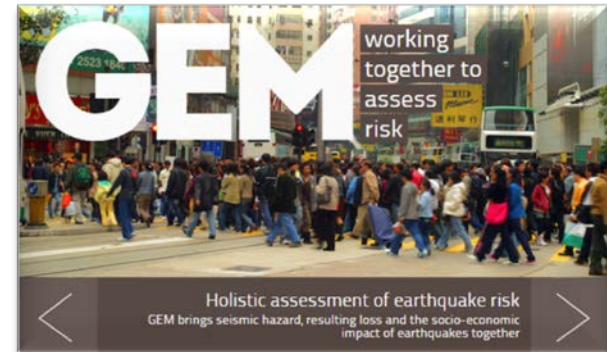
Educational objectives (1/2)

- To provide research-based evidence that can feed into educational programs at all levels-pre-university and university- illustrating and substantiating social construction views of disaster risk and interdisciplinary approaches to understanding and research.
- To encourage a wider and more prevalent participation of different disciplines in research and discussion on risk and disaster issues.



Educational objectives (2/2)

- To develop a reference bank of quality case studies to be placed on the IRDR website for wide availability.



Radix - Radical Interpretations of Disaster

Welcome to RADIX:
Home for Radical Interpretations of Disasters
and Radical Solutions

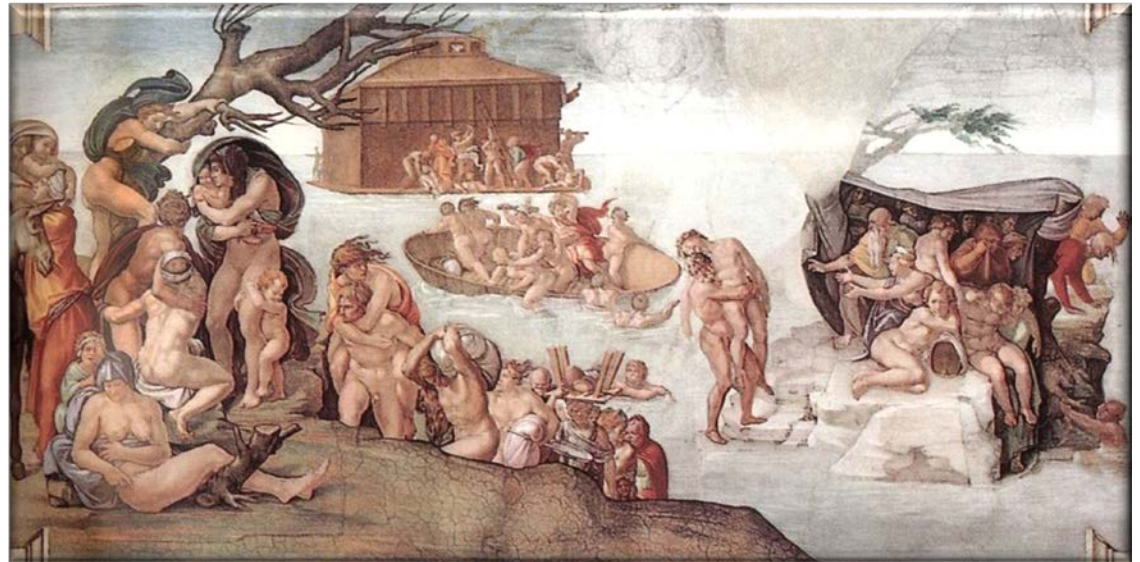
DRM Policy objectives (1/2)



- To promote realistic and sustainable risk management and risk reduction policy-making through science-based research and findings.
- To focus on understanding and reducing the human consequences of disaster (social and economic) with a secondary concern for physical or environmental losses.
- To help guide priority and more productive public and private investment in risk reduction.

DRM Policy objectives (2/2)

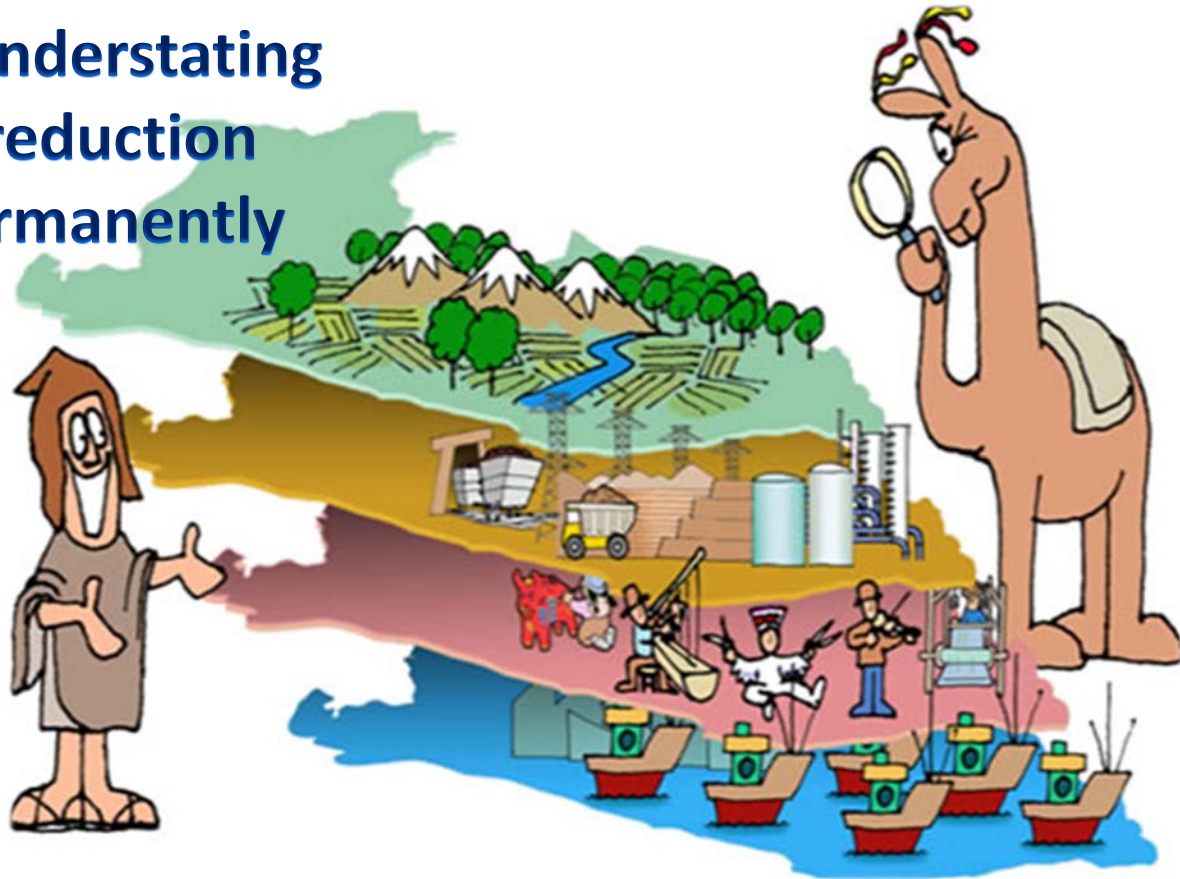
- To help change paradigms, by shifting responsibility for risk and disaster from nature and the physical environment, distributing it according to real circumstances and conditions involving all sectors of society, including the individual and the collective.



- To substantiate that generic causes have local manifestations: “one size solutions do not work everywhere”.

Development objectives (1/2)

- To advance understanding of how “development” processes can lead to disaster risk and those disasters can be major impediments to development.
- To contribute to an understating as to how disaster risk reduction can be incorporated permanently and organically into development planning decision-making.



Development objectives (2/2)



- To communicate to the public, mainly through the media and community-based organizations (CBOs), key messages to shape values, perceptions and behavior that are required for a paradigm shift in this area of study.

Root cause analysis



II. METHODS

1. Retrospective Longitudinal Analysis (RLA)
2. Projective Longitudinal Analysis (PLA): Disaster Scenario Building
3. Comparative Case Analysis (CCA)
4. Meta-Analysis (MA)



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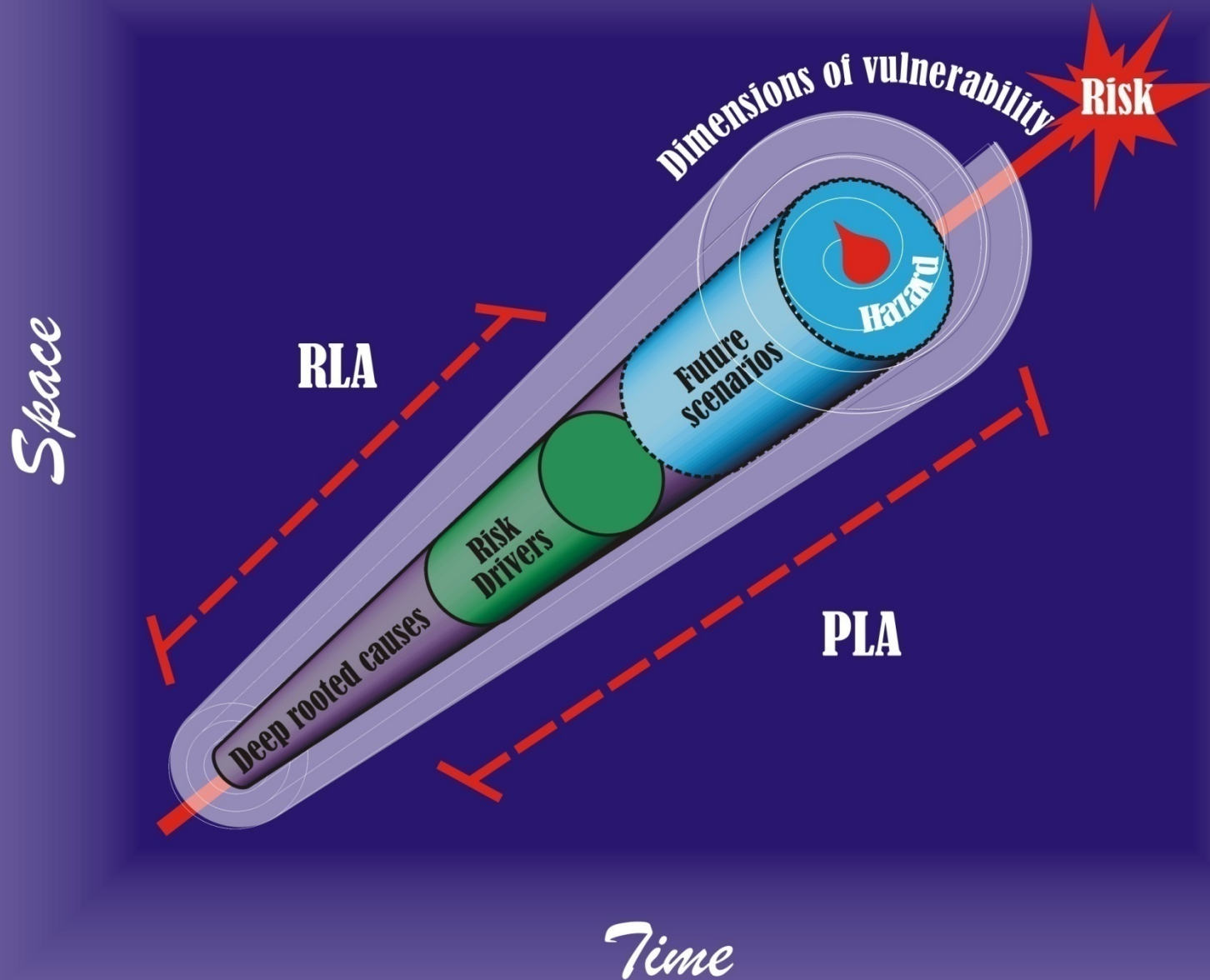


2015

Year



Longitudinal Analysis



Longitudinal analysis (LA)

Longitudinal analysis can be either historically oriented (backward looking) or future oriented.

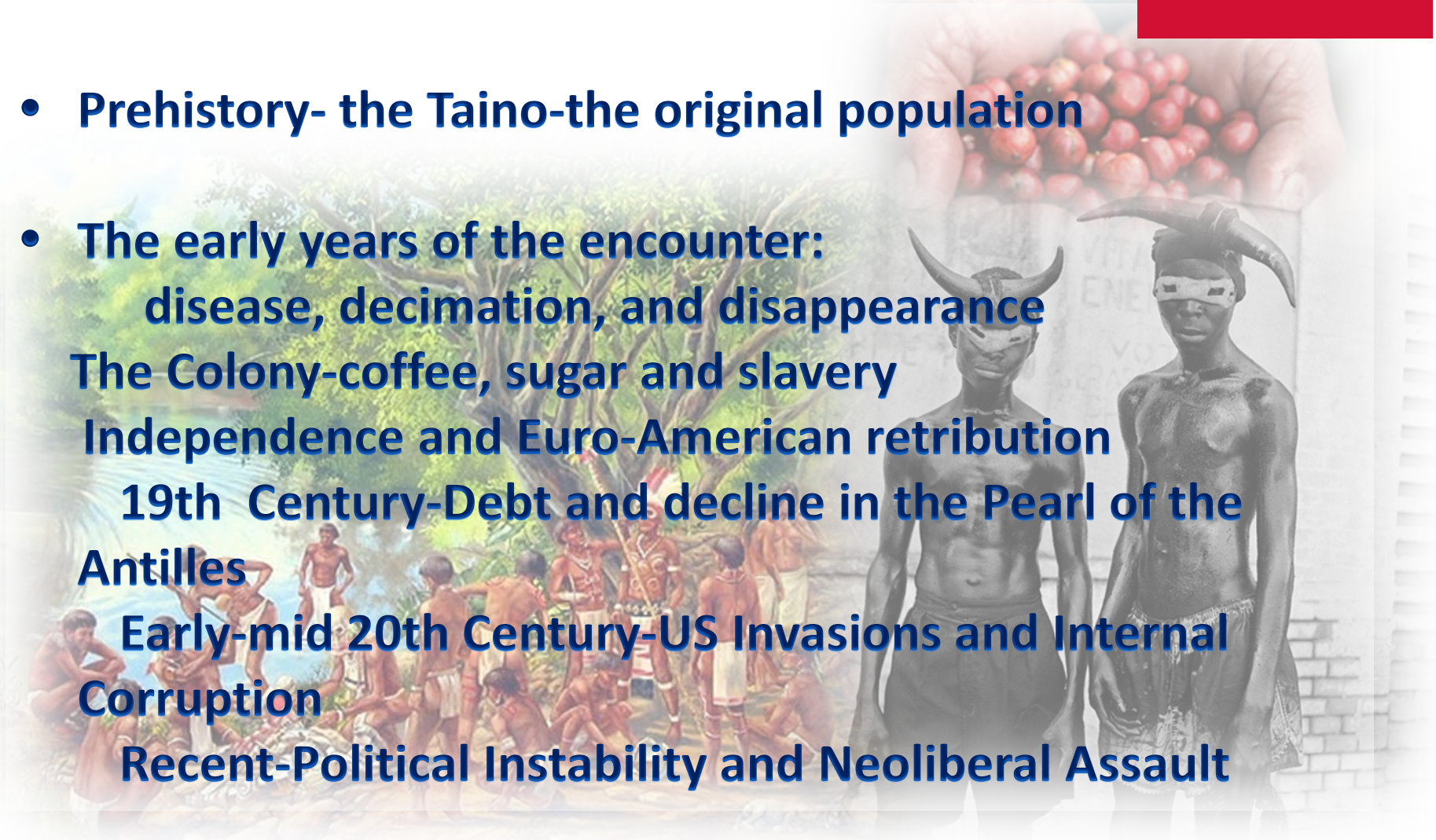
To advance understanding of how “development” processes can lead to disaster risk and those disasters can be major impediments to development.

- ***Retrospective longitudinal analysis (RLA)*** is concerned with the temporal development of the processes that produce disasters.
- ***Projective longitudinal analysis (PLA)***—Tracing the trajectories of root causes and risk drivers involved in particular destructive events of a known hazard that represents a realistic and possibly inevitable future event (basically look forward into the future scenarios).

Case Study (RLA) : The Social Construction of Vulnerability and Risk in Haiti



- Prehistory- the Taino-the original population
- The early years of the encounter:
 - disease, decimation, and disappearance
- The Colony-coffee, sugar and slavery
- Independence and Euro-American retribution
- 19th Century-Debt and decline in the Pearl of the Antilles
- Early-mid 20th Century-US Invasions and Internal Corruption
- Recent-Political Instability and Neoliberal Assault



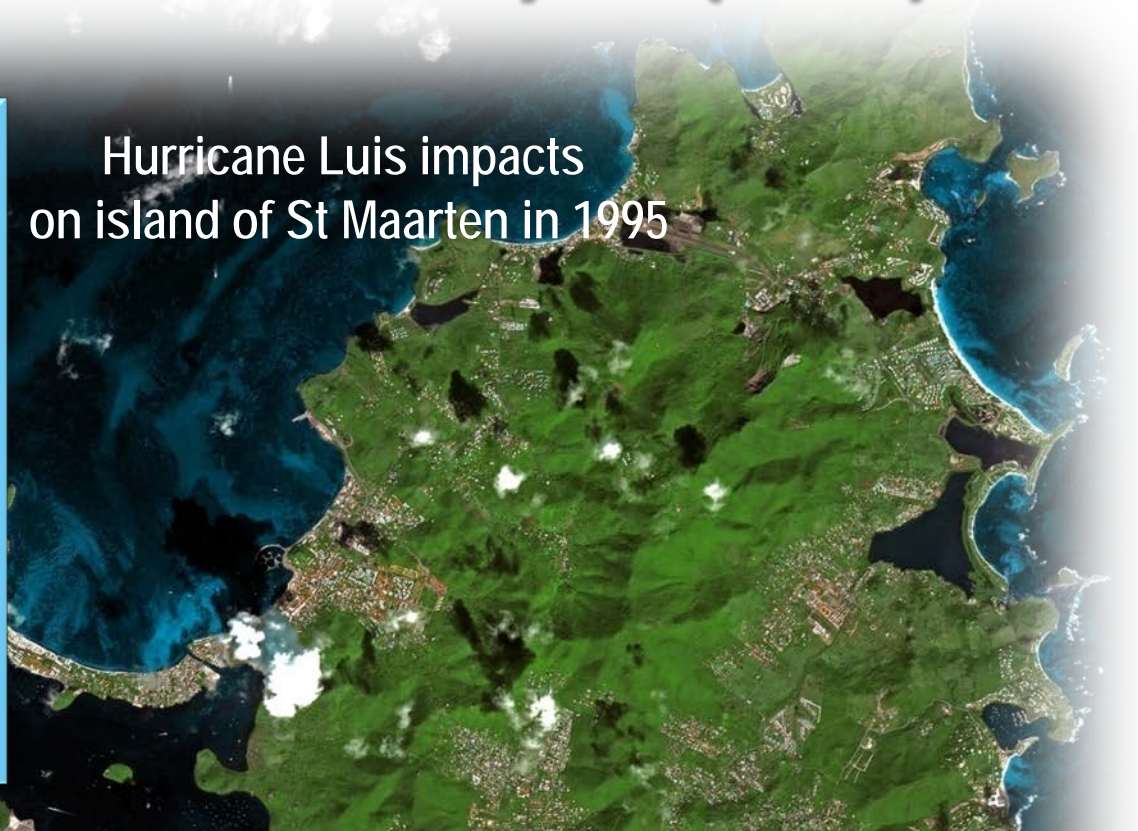
Case Study (RLA) : Hurricane Mitch and The Social Construction of Vulnerability in Honduras

- **Root causes:** Development model based on agricultural diversification and export-led growth
 - **Risk Drivers:** environmental degradation, deforestation, soil erosion, land concentration, population displacement, migration, urbanization
 - **Unsafe Conditions:** unsafe housing location, malnutrition, unsafe water, disease, poverty
- 
- The background image is a composite. It features a large-scale landslide on a steep hillside, with a yellow excavator positioned at the base of the slide, likely involved in road repair or debris removal. In the foreground, a map of Honduras is overlaid, showing various regions in different colors (green, yellow, red, blue). The map is semi-transparent, allowing the underlying scene of the landslide and the excavator to be visible. The overall scene illustrates the impact of environmental degradation and infrastructure damage following a natural disaster like Hurricane Mitch.

Comparative Case Analysis (CCA)



Hurricane Luis impacts
on island of St Maarten in 1995



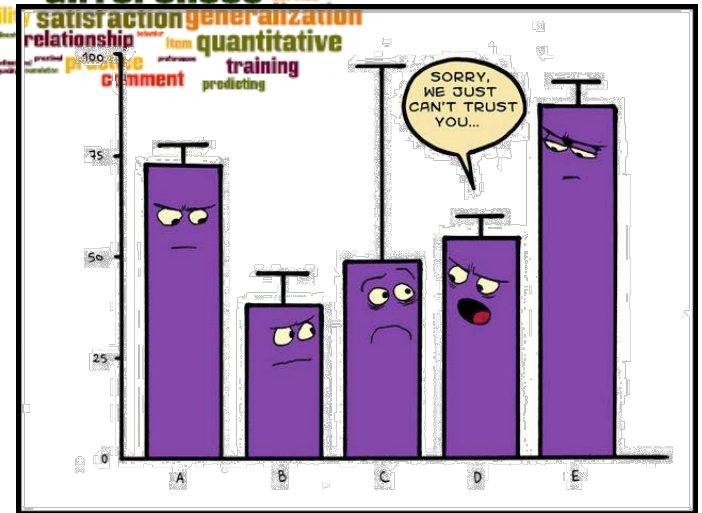
- **Comparative Case analysis**—an event-based analysis that seeks to identify underlying causes of disasters by comparing disaster impacts or contexts in different social contexts to disclose what the crucial factors were in the patterns of loss and damage.

Case Study (CCA): Hurricane Luis Impacts on Saint Maarten, 1995

- Less damage and loss on French side than on Dutch side of the island, despite stronger wind and rainfall.
- Explained by differences in normative and control frameworks of the two colonial regimes
- Dutch side: wide and flexible variety of building standards
- French: strict compliance with French national standards checked by the bureaux de controle



Meta-analysis (MA)

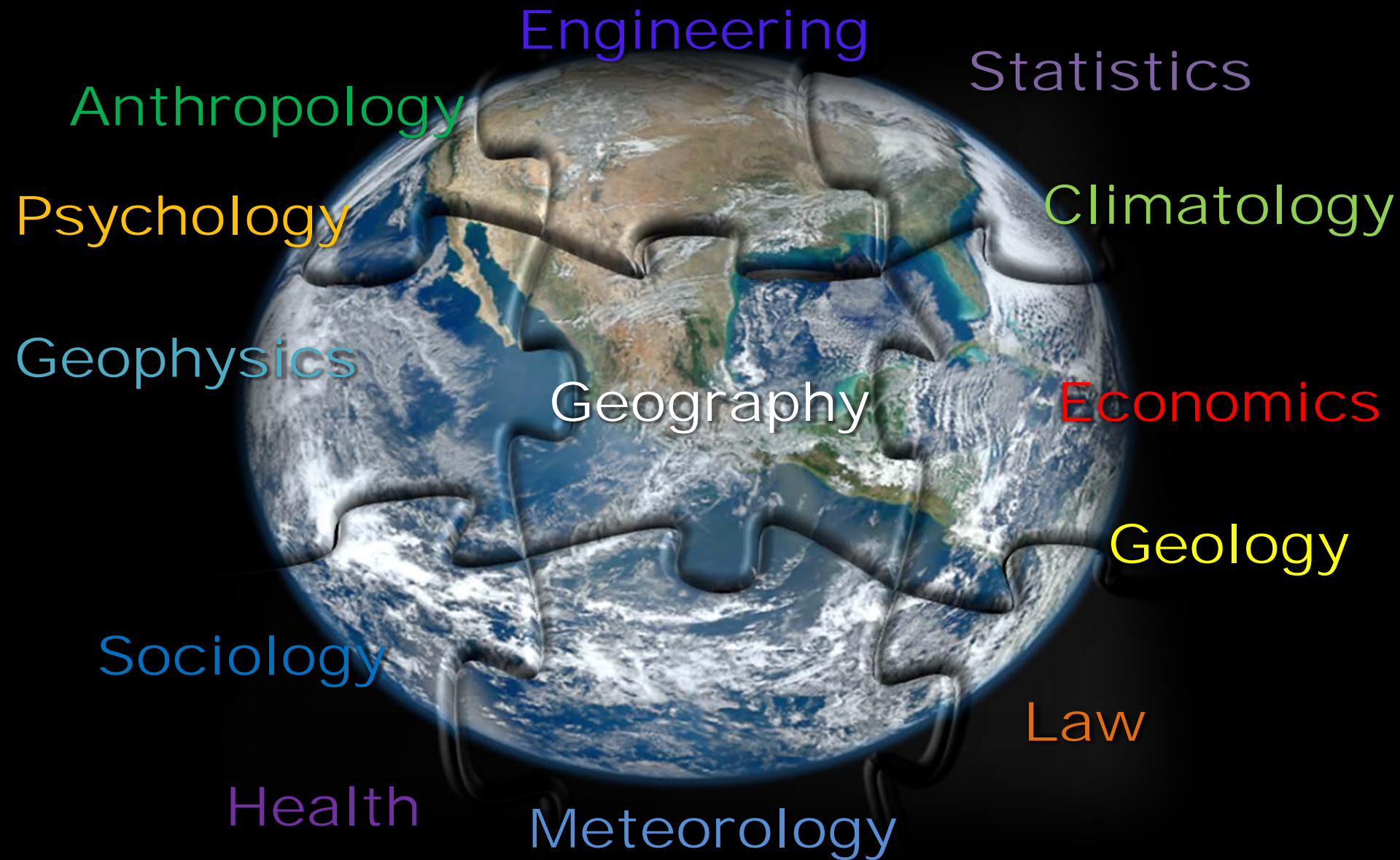


- Meta-analysis**—an event or system based review of the available literature carried out to identify and assess consistent findings across diverse studies for causal linkages as well as the effectiveness of interventions.

Meta-Analysis (MA): Crucibles of Hazard: Mega-Cities and Disasters in Transition (Mitchell 1999)

- **Goal: Identification of those features of urbanization in mega-cities that increase the risk of disaster. 10 cities**
- **Changes in composition, structure, spatial organization, governance and identity**
- **Global North: economic impacts: disruption of communication, financial markets, supply lines.**
- **Global South: increases in loss of life and material destruction.**

Integrated Science-Transdisciplinarity



VIII. OTHER ACTIVITIES





Institute of Remote Sensing and Digital Earth Chinese Academy of Sciences



中国科学院
CHINESE ACADEMY OF SCIENCES



SISTEMA NACIONAL DE
PROTECCIÓN CIVIL
MÉXICO



CENAPRED
MÉXICO





Unión de Universidades de América Latina y el Caribe

União das Universidades de América Latina e das Caraíbas

Association of Universities of Latin America and the Caribbean

Unión d'Universités de l'Amérique Latine et les Caraïbes





The 2015 UN
SASAKAWA
AWARD
for Disaster Risk Reduction

谢谢谢谢

Thanks