



UNISDR

The United Nations Office for Disaster Risk Reduction

Disaster economics and governance of risks: investing today for a safer tomorrow

www.unisdr.org

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UNISDR Europe

Impacts of Disasters since the 1992 Rio de Janeiro Earth Summit

In 1992, the United Nations organized a conference on environment and development in Rio de Janeiro, called the Earth Summit. The purpose of the conference was to rethink economic growth, advance social equity and ensure environmental protection.

Twenty years later, the UN is organizing Rio+20, a chance to move away from business-as-usual and to end poverty, address environmental destruction and build a bridge to the future. Disaster risk reduction (DRR) plays an important part in this future of sustainable development.

Here's a look at the impact of disasters since the Earth Summit (1992-2012).



4.4
BILLION
AFFECTED

Roughly 64% of the world's population¹.



\$2.0
TRILLION
DAMAGE (USD)

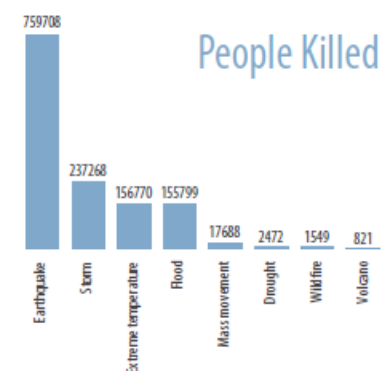
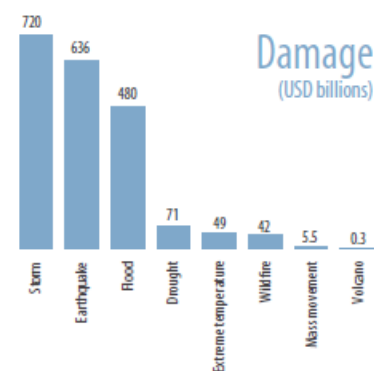
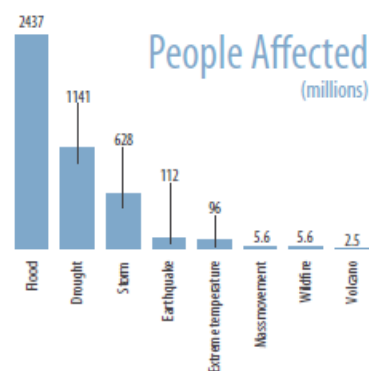
Approximately 25 years of total Overseas Development Aid².



1.3
MILLION
KILLED

Comparable to over 1500 airplane³ crashes.

Impact by disasters



Impact by top 10 countries



The United Nations Office for Disaster Risk Reduction

<http://www.unisdr.org>

Created on 11 June 2012

DATA SOURCES

EM-DAT - <http://www.emdat.be>: The OFDA/CRED International Disaster Database. Data version: 11 June 2012 - v12.07; Disasters: Natural Disasters as categorized in EM-DAT; Affected: The sum of injured, homeless, and people requiring immediate assistance during a period of emergency - it can also include displaced or evacuated people from disasters; Damage: Estimated figures; Killed: Persons confirmed as dead and persons missing and presumed dead.

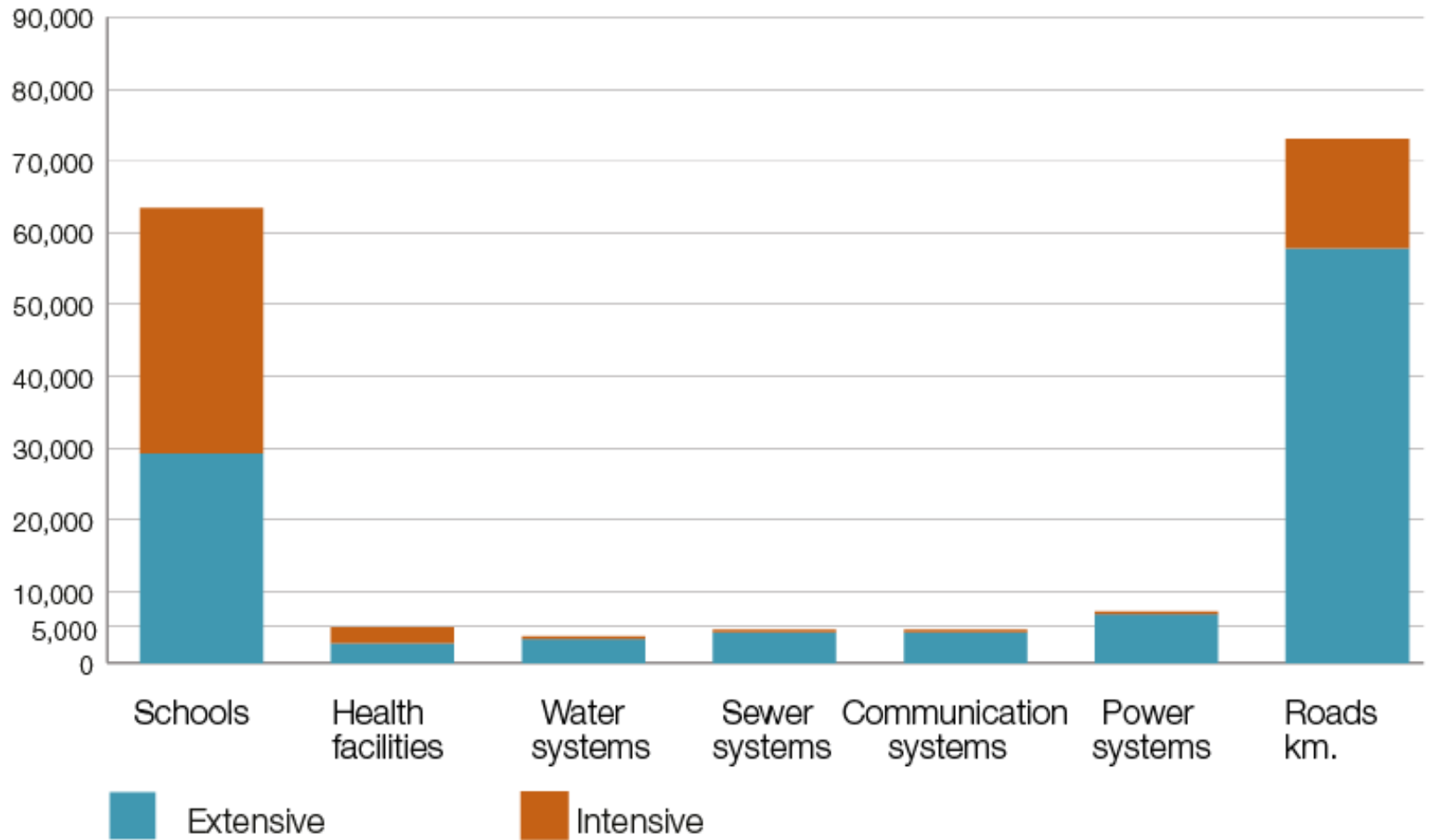
¹ UN Stats - <http://unstats.un.org>: Estimated mid-year world population for 2010 is 6.9 billion.

² OECD - <http://stats.oecd.org>: ODA from 1986-2010 totals approximately USD1.7 trillion.

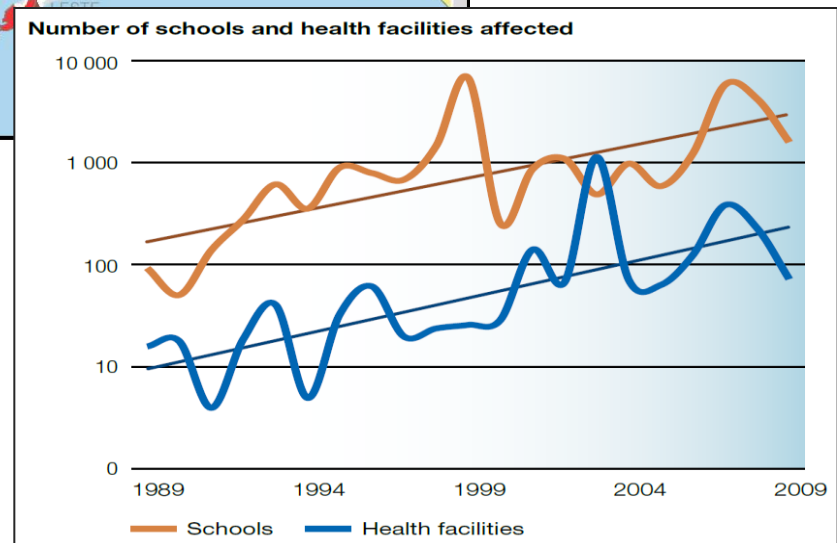
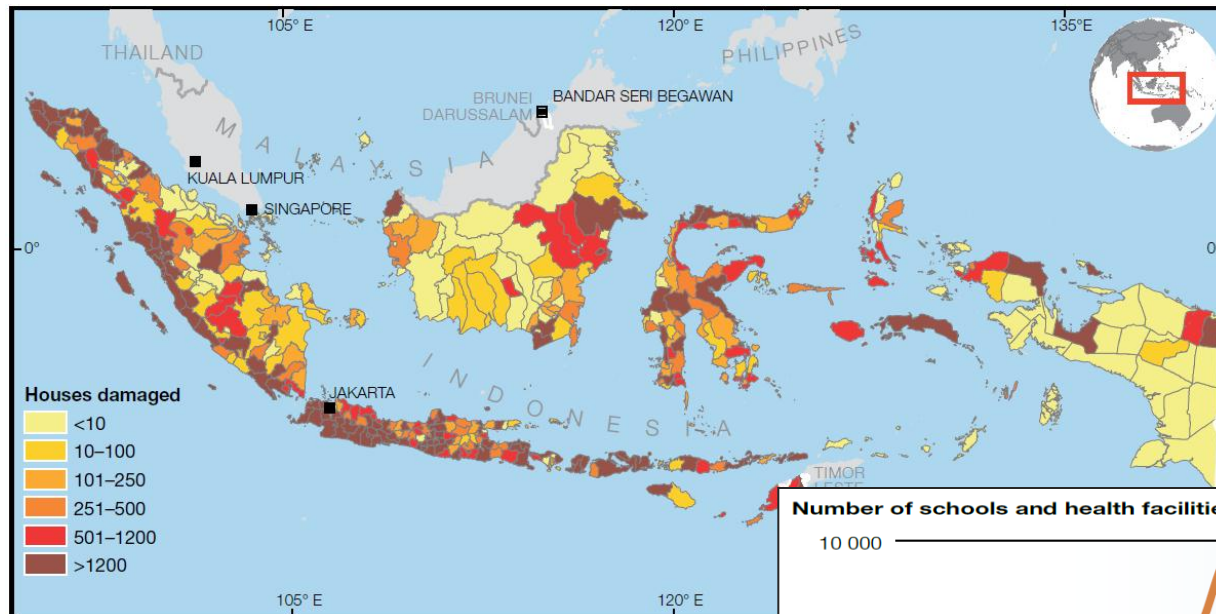
³ Airbus - <http://www.airbus.com>: A380 maximum capacity is 853.

*Developing or increasing our
countries' stock of risks and
liabilities?*

Once upon a time ...

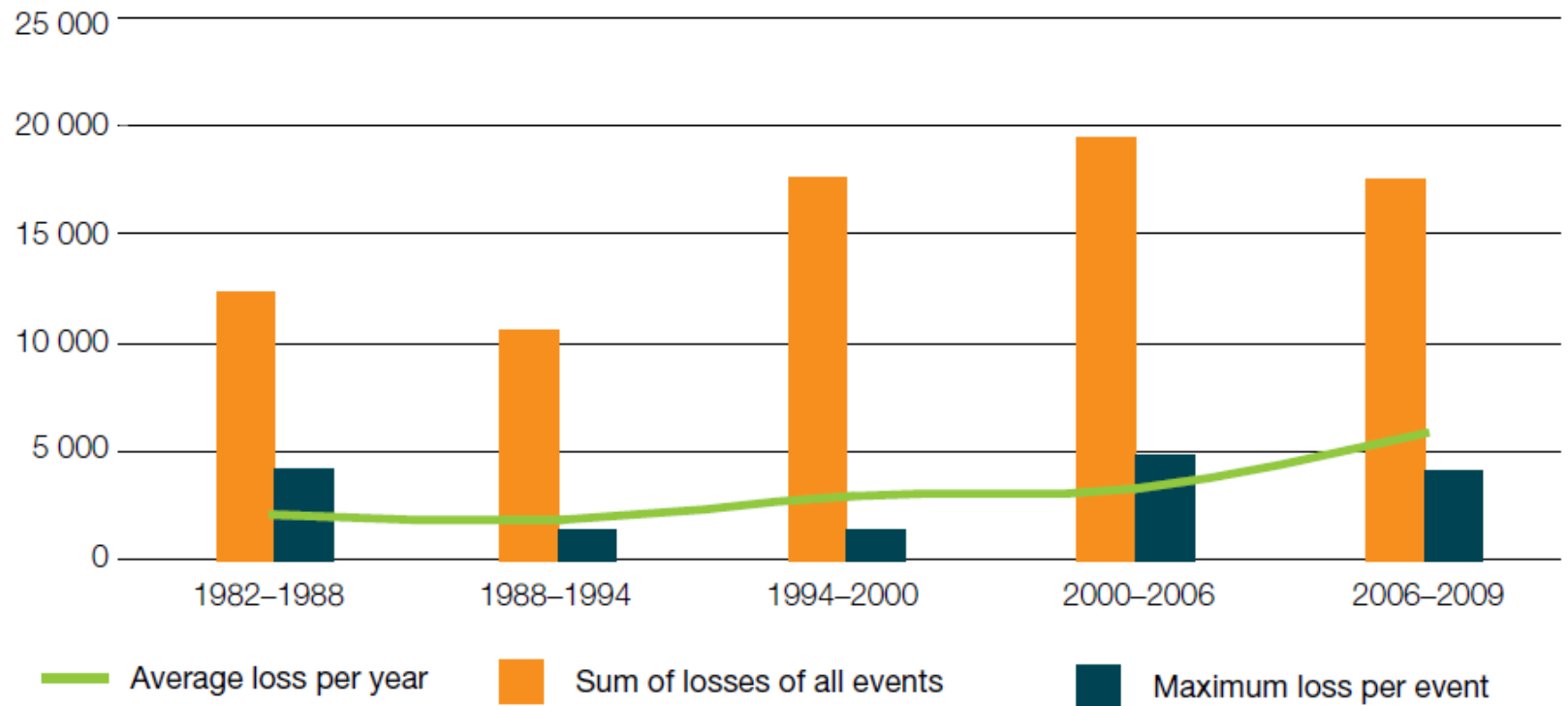


Increasing disaster losses



Growing losses

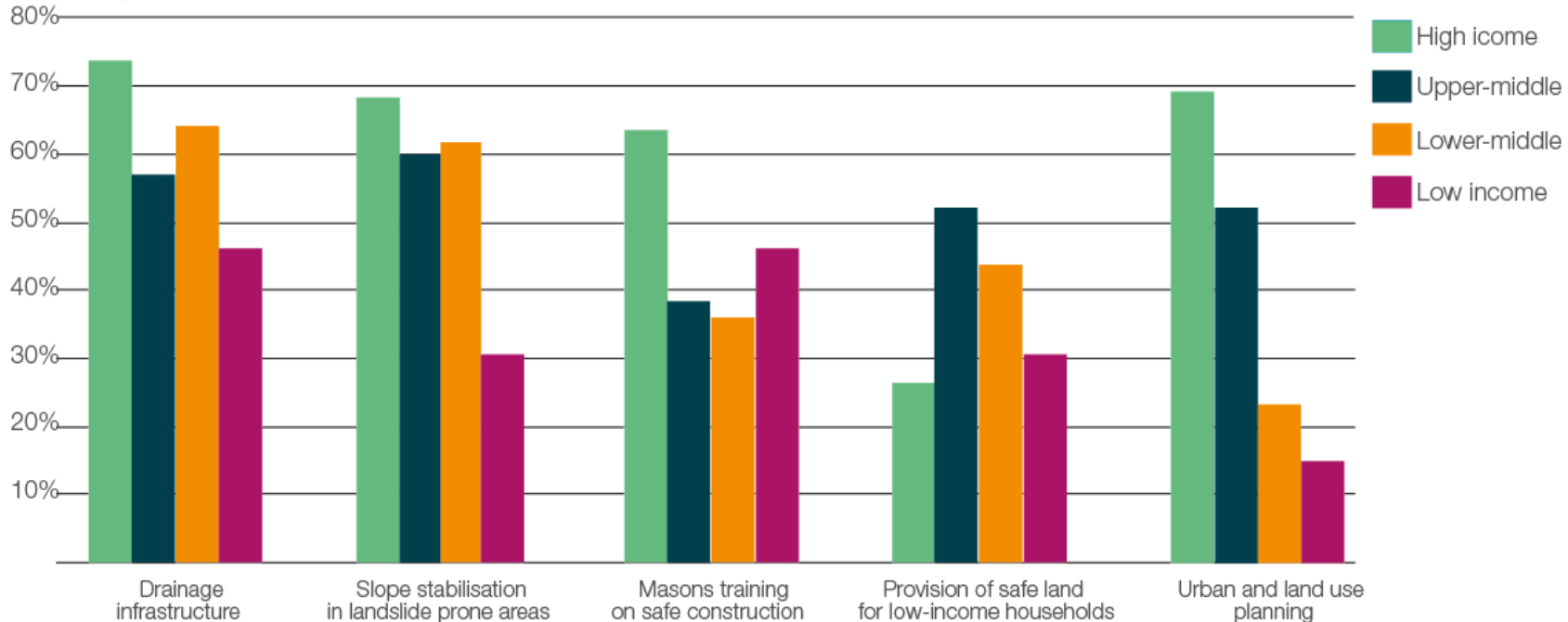
Economic loss (million US\$)



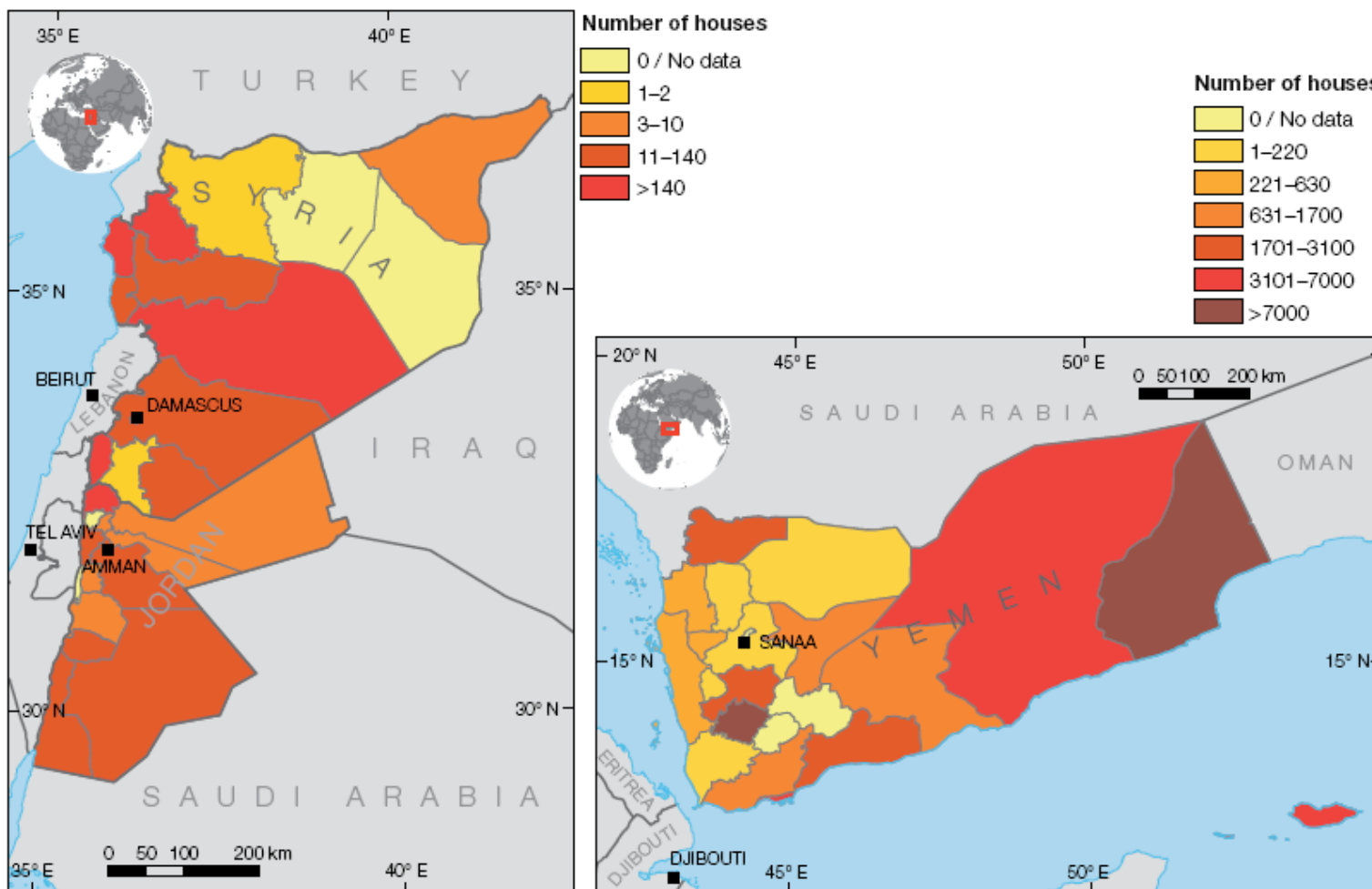
Disaster losses by Presidential period Mexico 1982 – 2009

...and low investment in vulnerability reduction (HFA reports 2011)

Percentage of countries

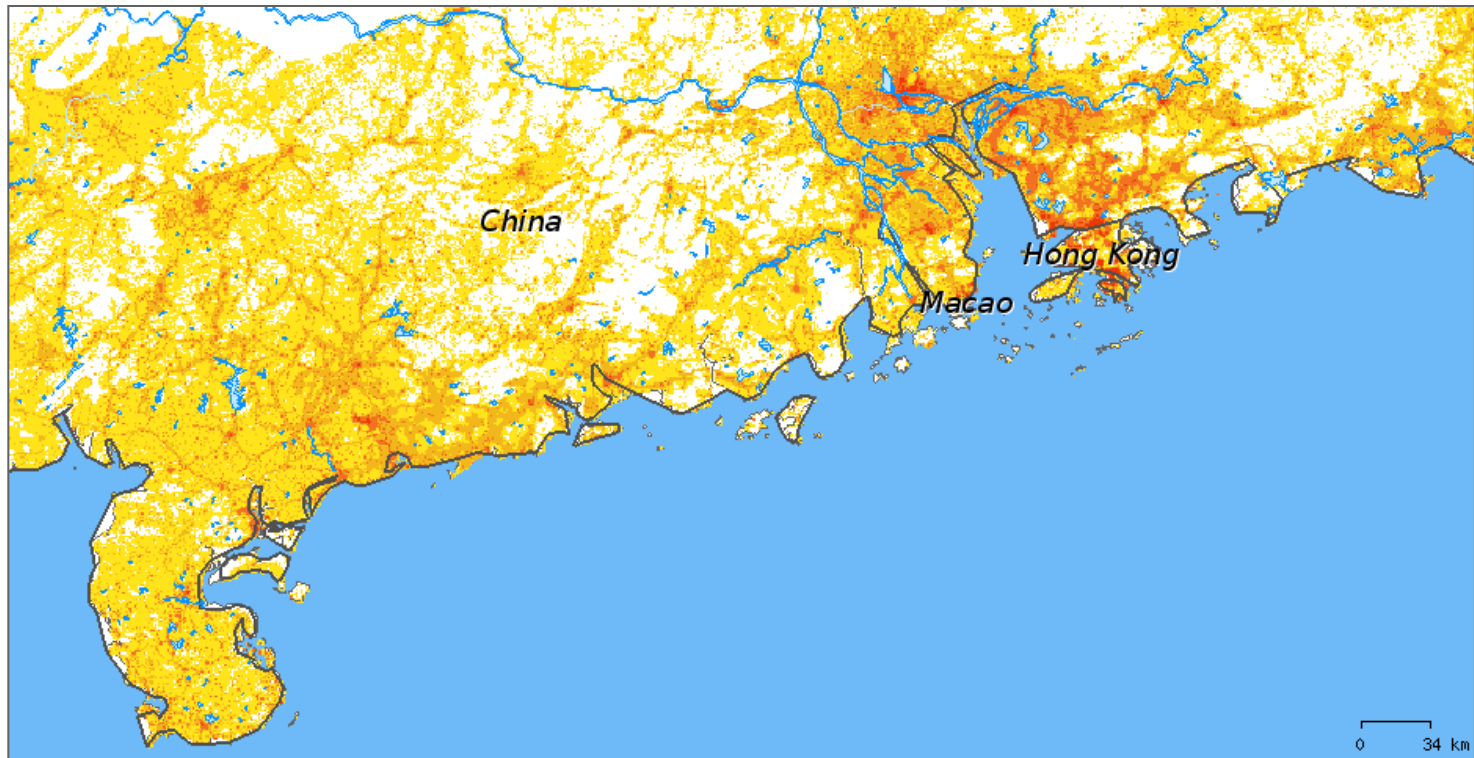


Damages absorbed by governments and individuals



Housing damage by governorate in Jordan and the Syrian Arab Republic and by province in Yemen (1989-2009)

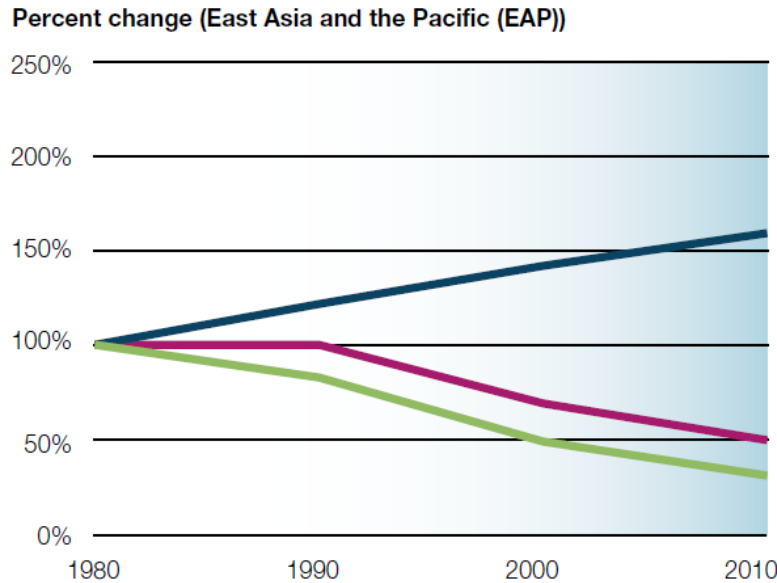
Increased exposure of people and economic activities to weather-related hazards



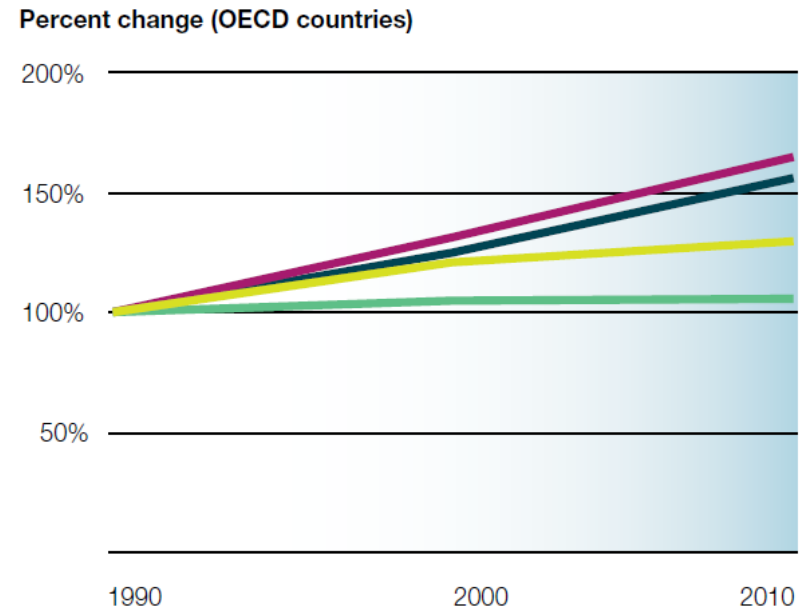
Population exposed to tropical cyclones, China coast section

Falling mortality – rising economic loss risk

Cyclone mortality risk

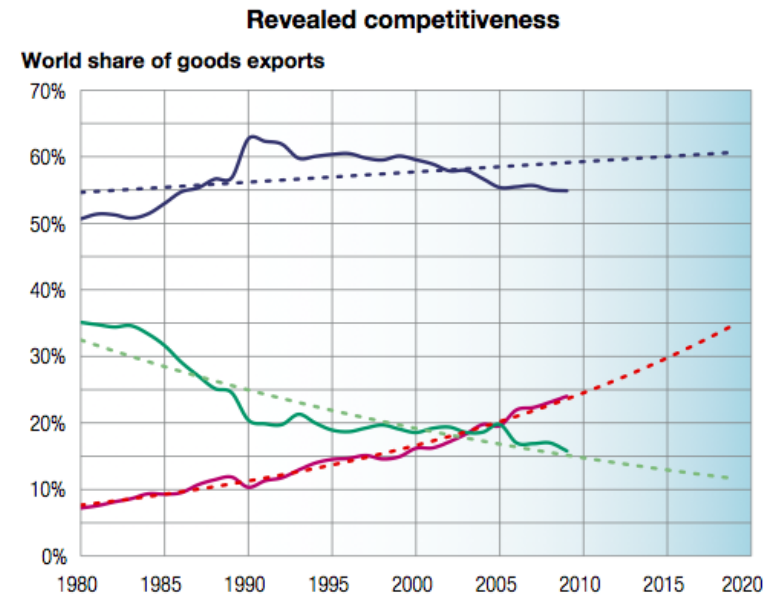
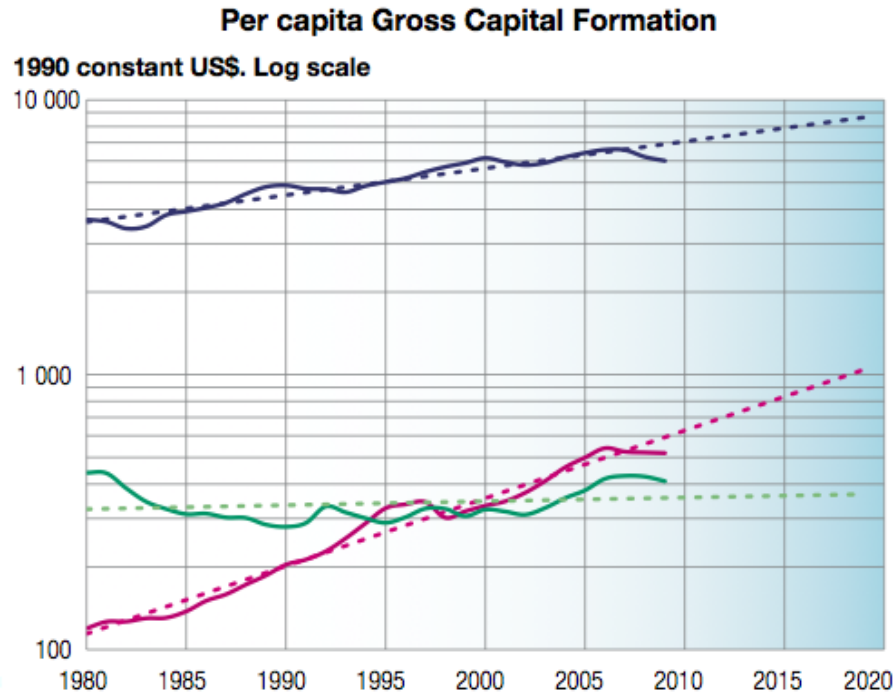


Flood economic loss risk



█ Exposure
 █ Risk
 █ Vulnerability
 █ GDP per capita

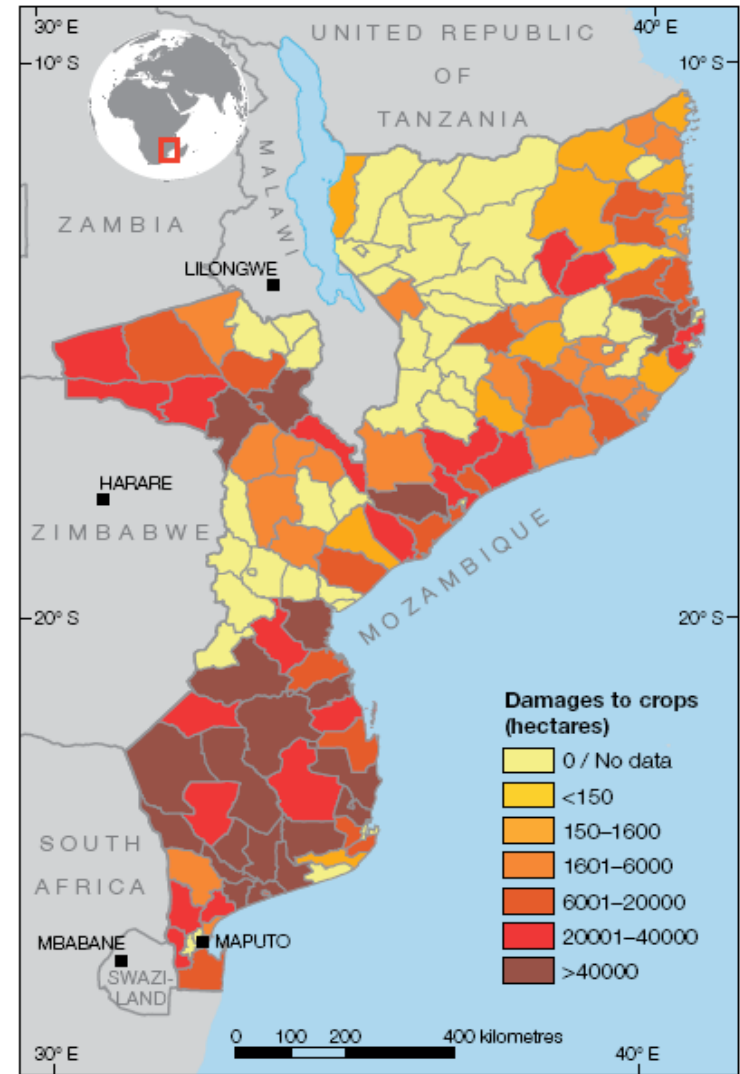
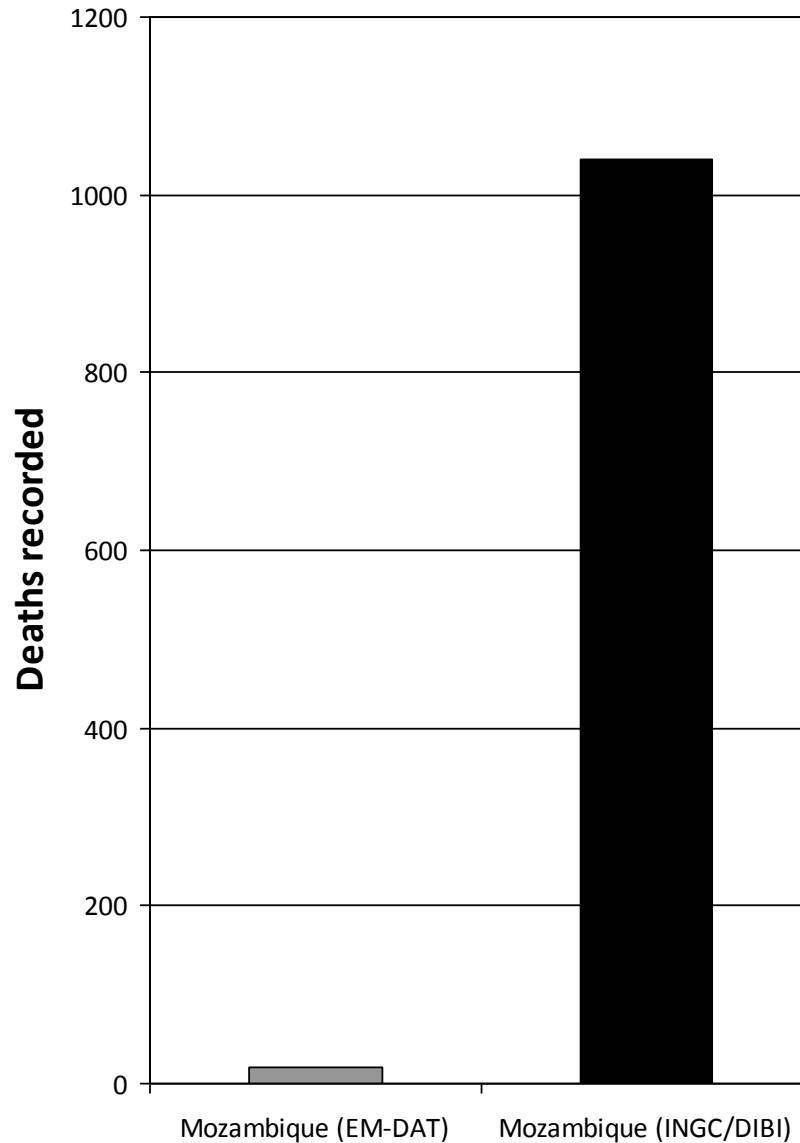
... reflecting conditions and capacities for vulnerability reduction



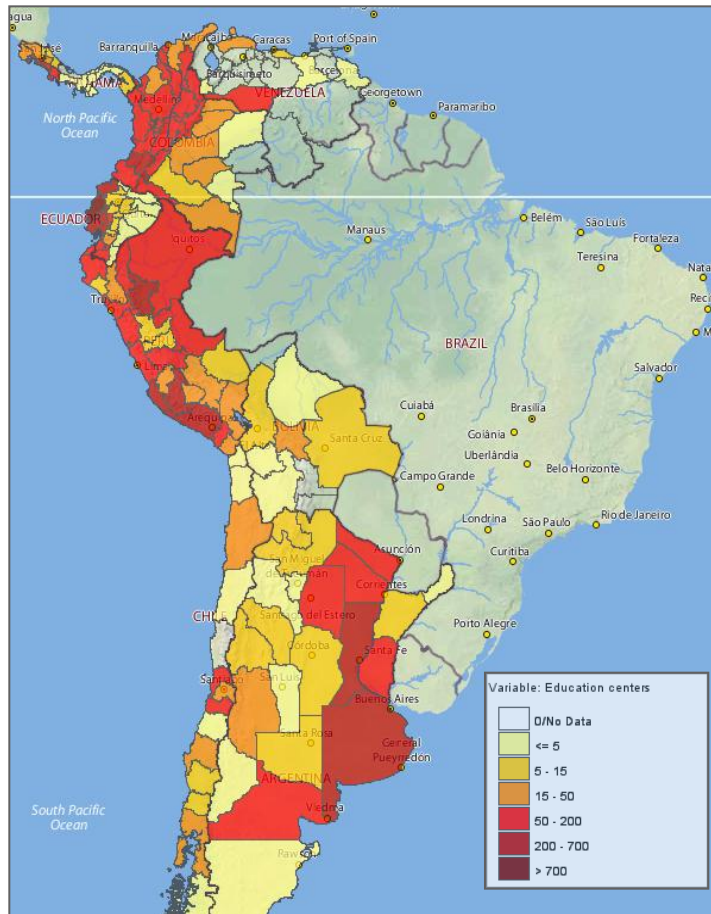
— OECD countries
 — Consistently progressing developing countries
 — Other developing countries

Revealing risk

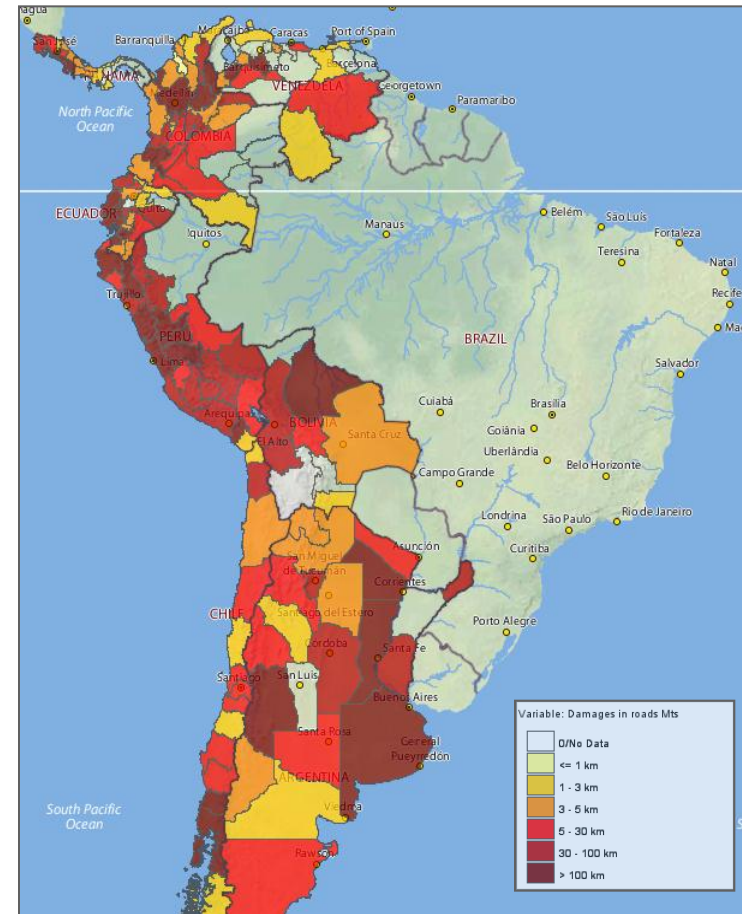
Drought impacts in Mozambique (1990 – 2009)



Systematically account for disaster losses



Number of education facilities damaged (1970-2009)
per province (Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Panama, Peru, Venezuela)



Kilometers of road damaged (1970-2009)

Temporal Analysis: distribution of losses over time

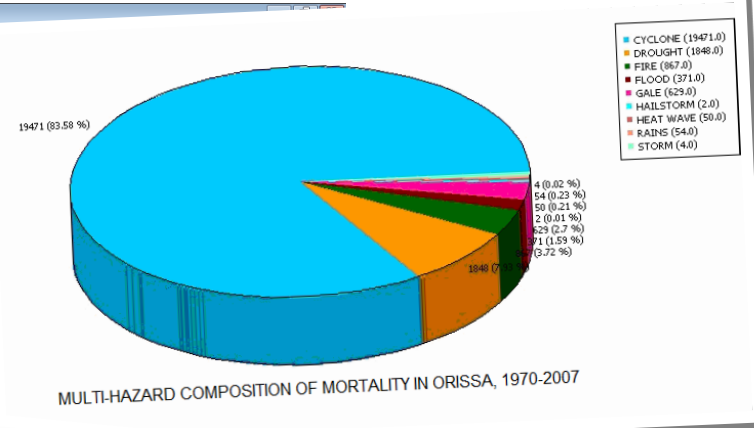
DesInventar on-line Query/Search - Windows Internet Explorer
 http://desinventar.DesInventar/results.jsp
 DesInventar on-line Query Search - http://www.ndmindia.nic.in/info_42_en

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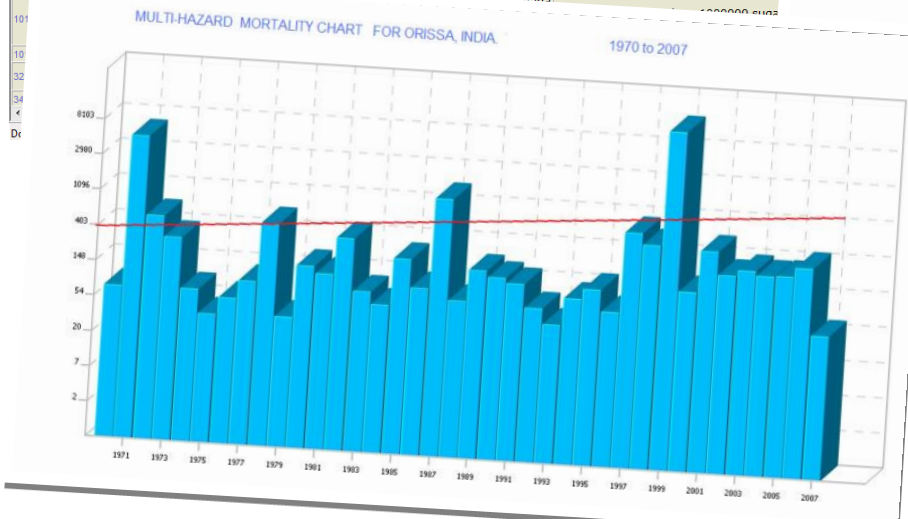
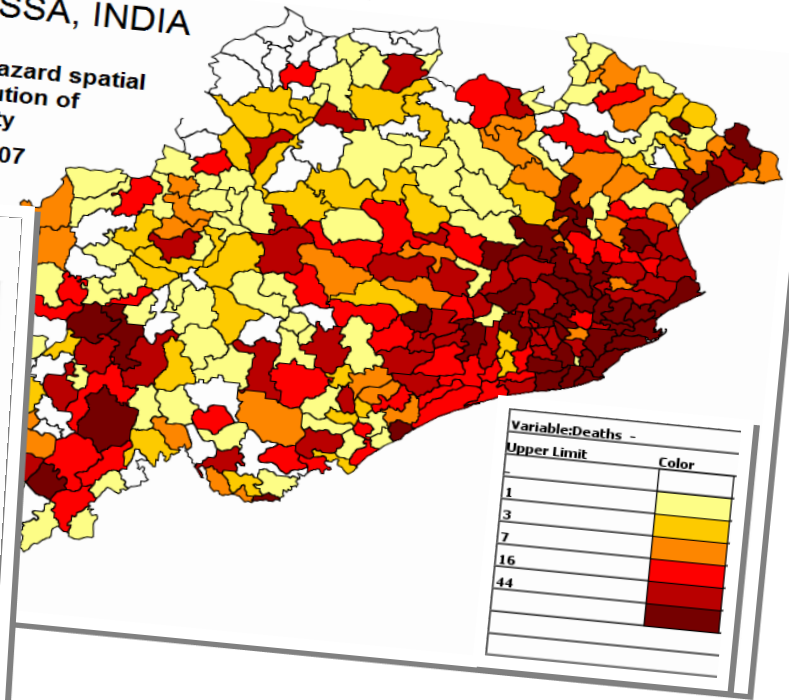
Query | View data | View map | Charts | Statistics | Reports | Thematic | Crosstab

Region **Orissa** - [OR] Data: Query Results Standard Extension

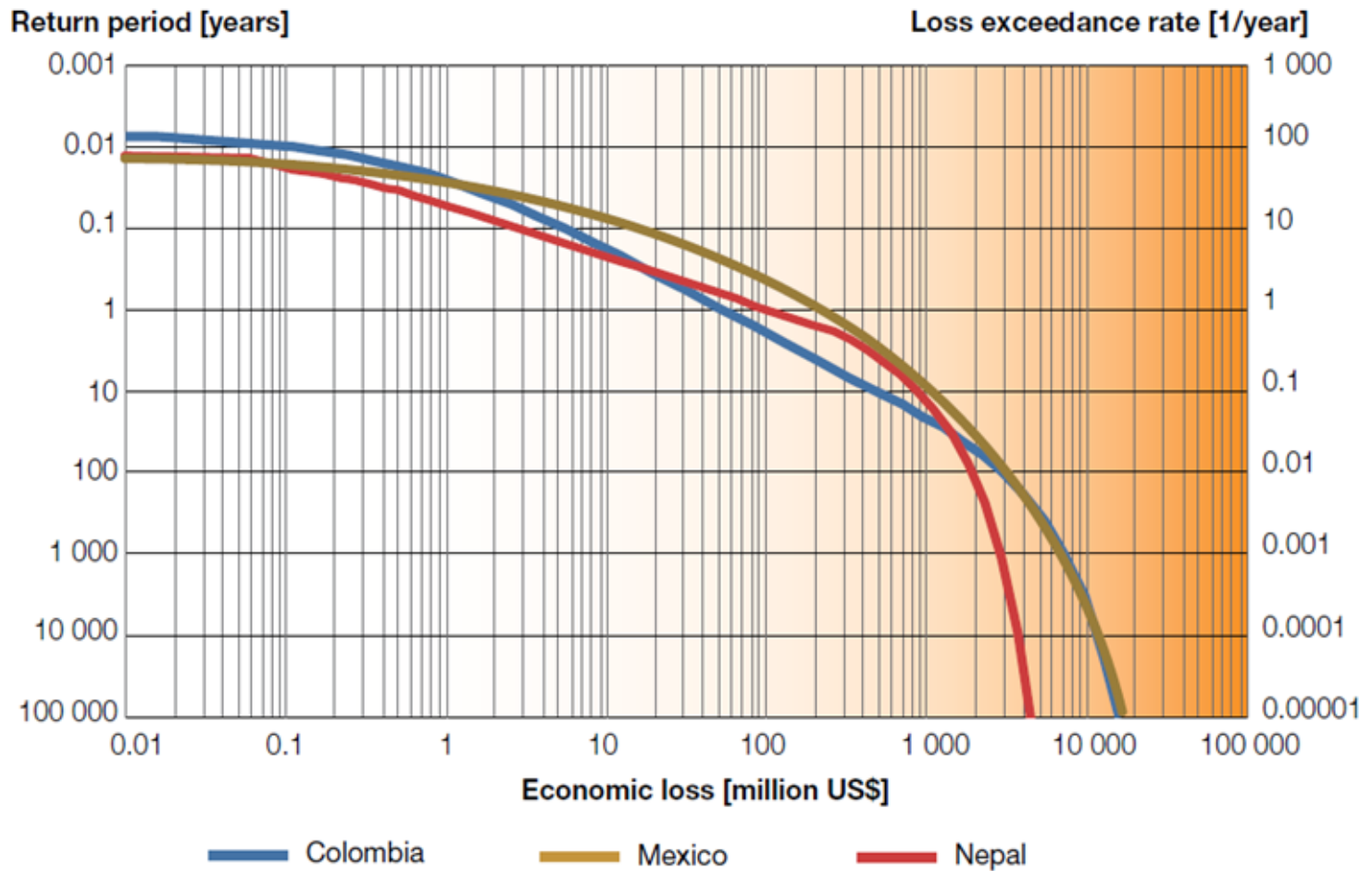
Serial	Event	State	District	Block	Date	Location	Comments	Deaths	Injured
62	CYCLONE	Orissa	Jajpur	Bari	1970/06/18	Bari panchayat		1	2
195	CYCLONE	Orissa	Balasore		1970/11/15			11	
10056	GALE	Orissa	Kendrapara	Kendrapara	1985/03/31	Chhoti Village	Many trees are fell on the road.		
10092	STRONG WIND	Orissa	Cuttack	Cuttack Sadar	1985/04/30	Cuttack Sadar			6
10099	STORM	Orissa	Jagatsingpur	Jagatsingpur	1985/04/29	Jagatsinghpur		2	
10100	GALE	Orissa	Jajpur	Jajpur	1985/04/29	Kaliapani, chirigunia Patana, Dhabahali		2	250
10103	STORM	Orissa	Bhadrak	Tihidi	1985/05/04	Nuananda		4	
10108	GALE	Orissa	Keonjhar	Jhumpura	1985/05/07	Naopani		1	
10109	GALE	Orissa	Keonjhar	Jhumpura	1985/05/07	Habidori		1	
10110	GALE	Orissa	Keonjhar	Jhumpura	1985/05/07	Brahmanajharlo		1	
10113	STORM	Orissa	Jajpur	Jajpur	1985/05/11	Jajpur.			
10116	CYCLONE	Orissa	Sambalpur	Dhankauda	1985/05/11	Gosala, Atabira, Chiplima	67 villages affected in the above cyclone and hailstorm. 8287 houses destroyed and 6568 hectre foodgrain destroyed. 11kv and 33kv power lines affected in this area. Many peop has injured due to the cyclone, & hailstorm.		
242	STORM	Orissa	Balasore	Nilagiri	1971/04/30	Tenda village, Nilgiri	Many houses were affected and many bird was died.		
10121	STORM	Orissa	Jajpur	Rasulpur	1985/05/15	Ismailpur	The above 2 people died when one cocon tree has fell down on them.		
10128	CYCLONE	Orissa	Koraput	Koraput	1985/05/18	Many areas.			
10129	GALE	Orissa	Keonjhar	Champua	1985/05/26	Ranipur, Naopani Hatidori, Brahmanajilla, Tipandi, Nahapada	Due to this Tornado many houses damag and many cattle also died.		
10131	STORM	Orissa	Jajpur	Berhampur	1985/05/28	Berhampur			



ORISSA, INDIA
 Multi-hazard spatial distribution of mortality 1970-2007

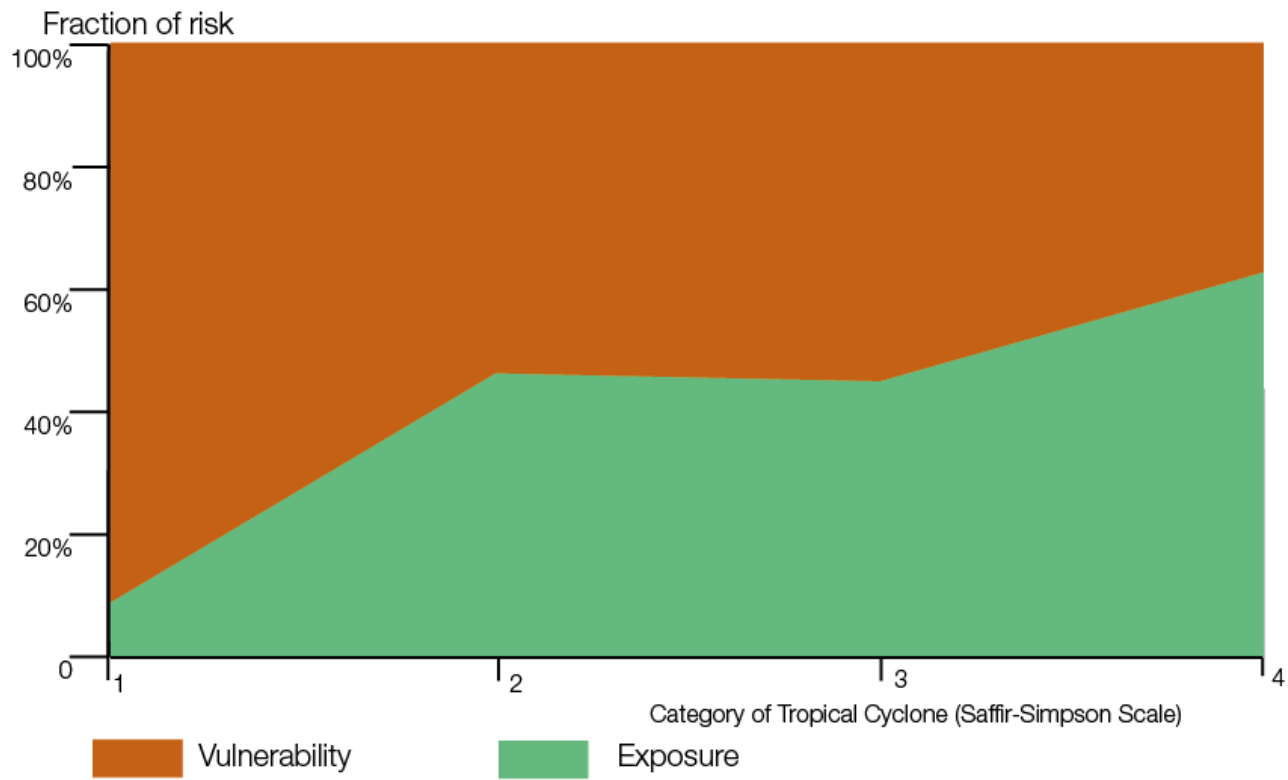


The risk footprint



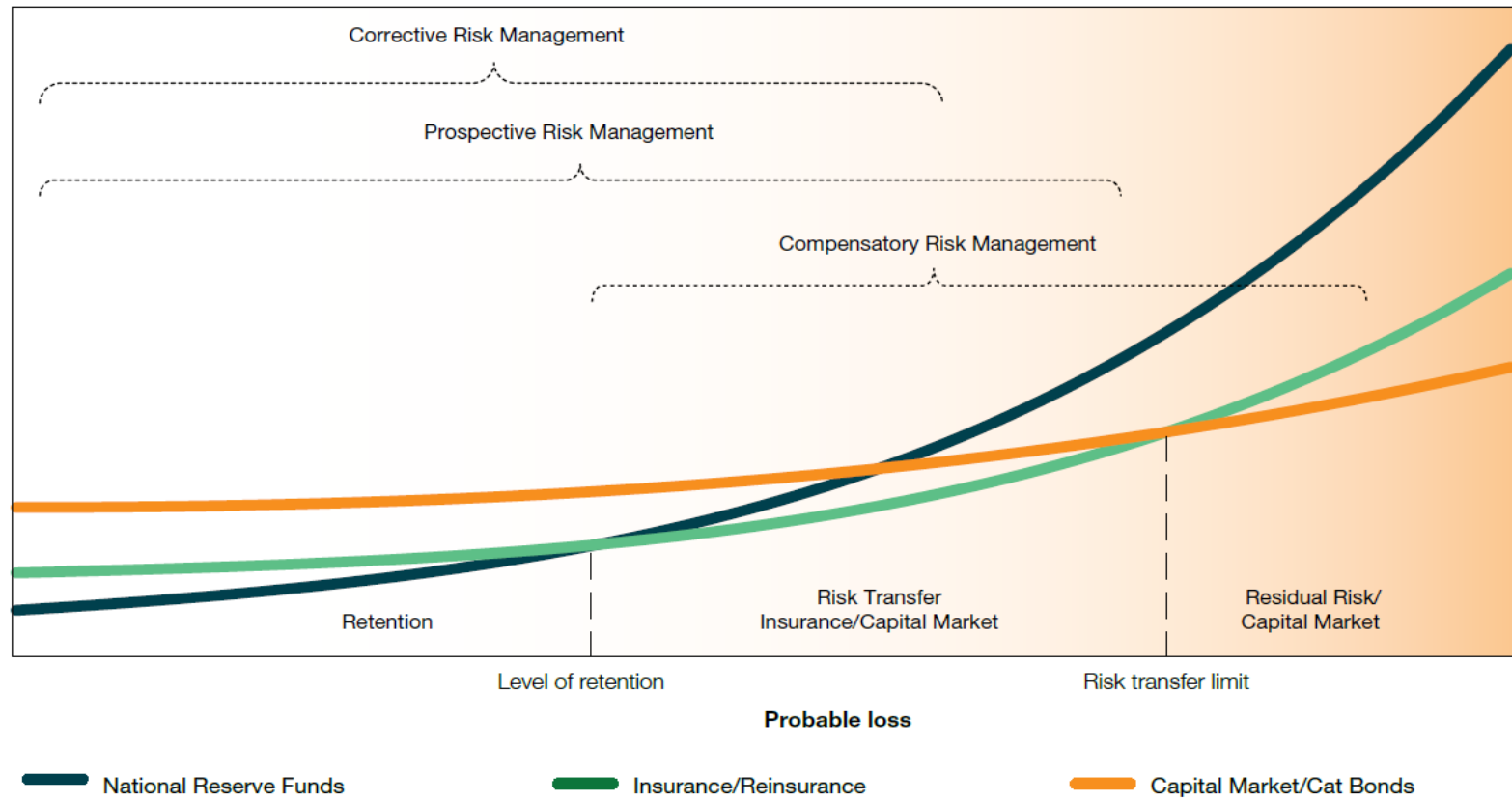
Identify risk strata

Contribution of cyclone severity, exposure and vulnerability parameters to tropical cyclone risk

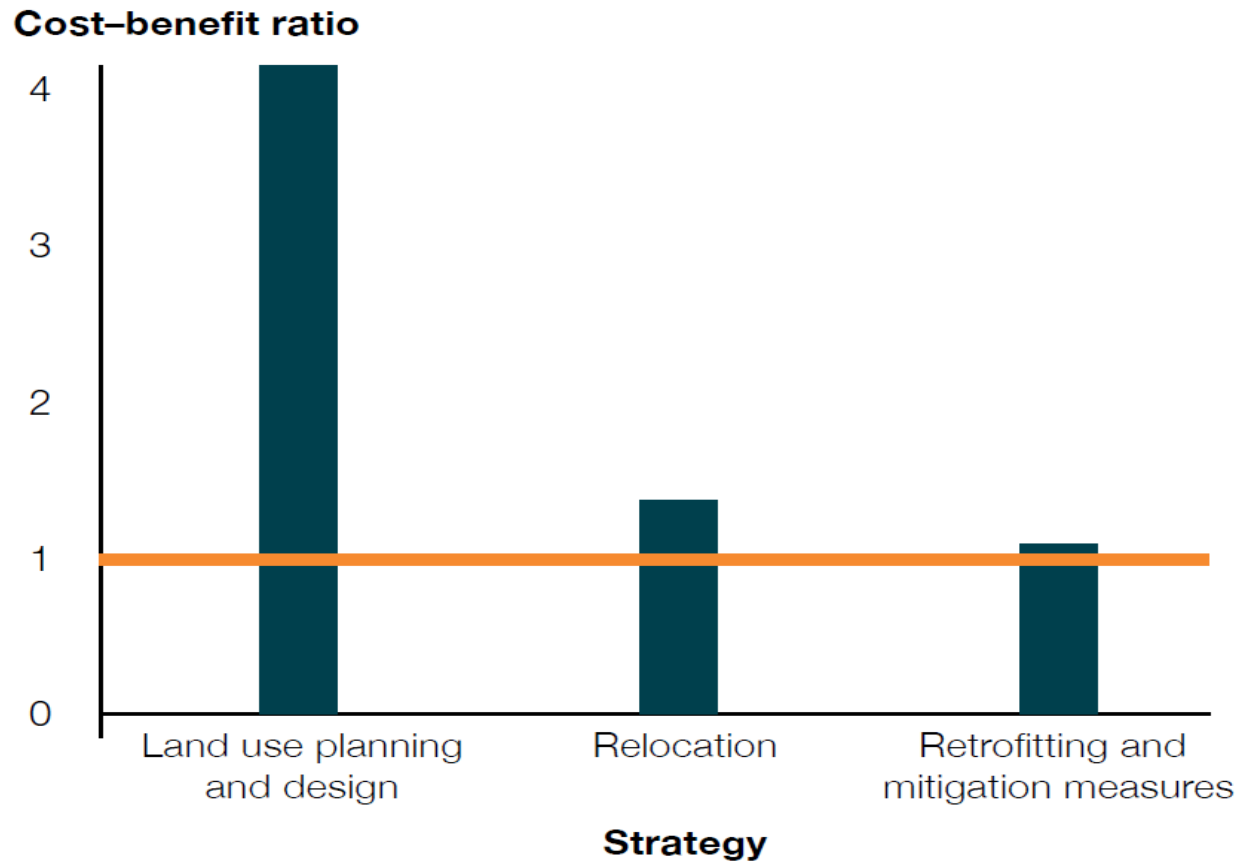


Transfer catastrophic risk

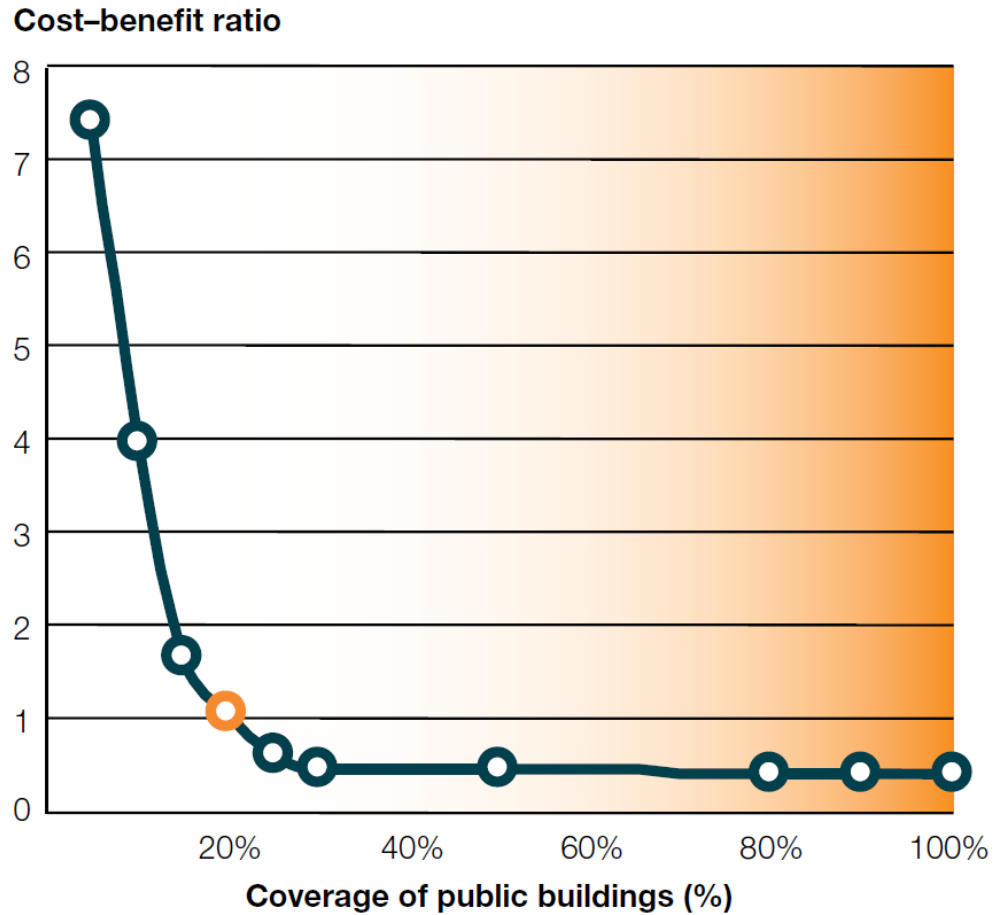
Cost of the instrument



Use public investment planning

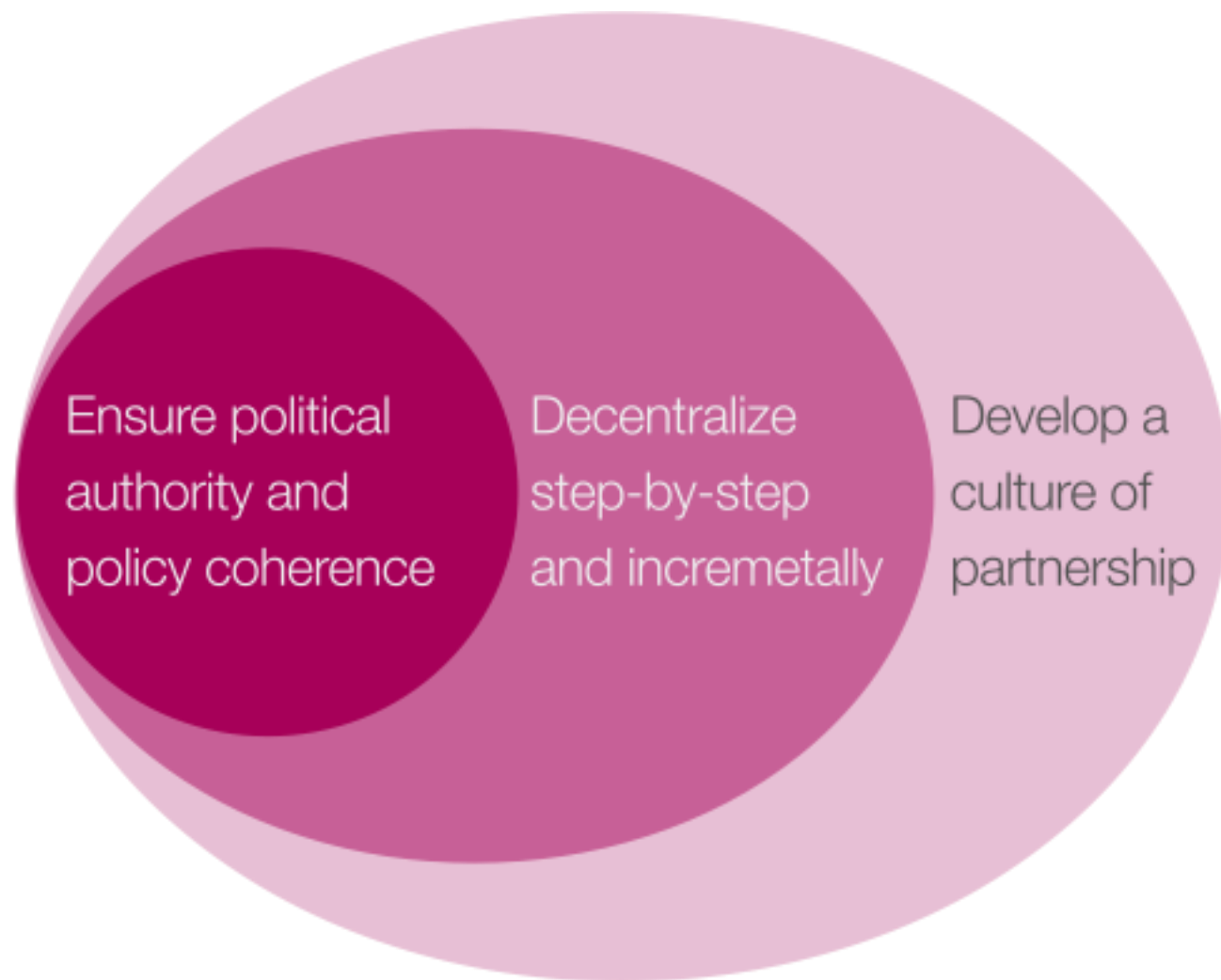


... be selective in corrective investments



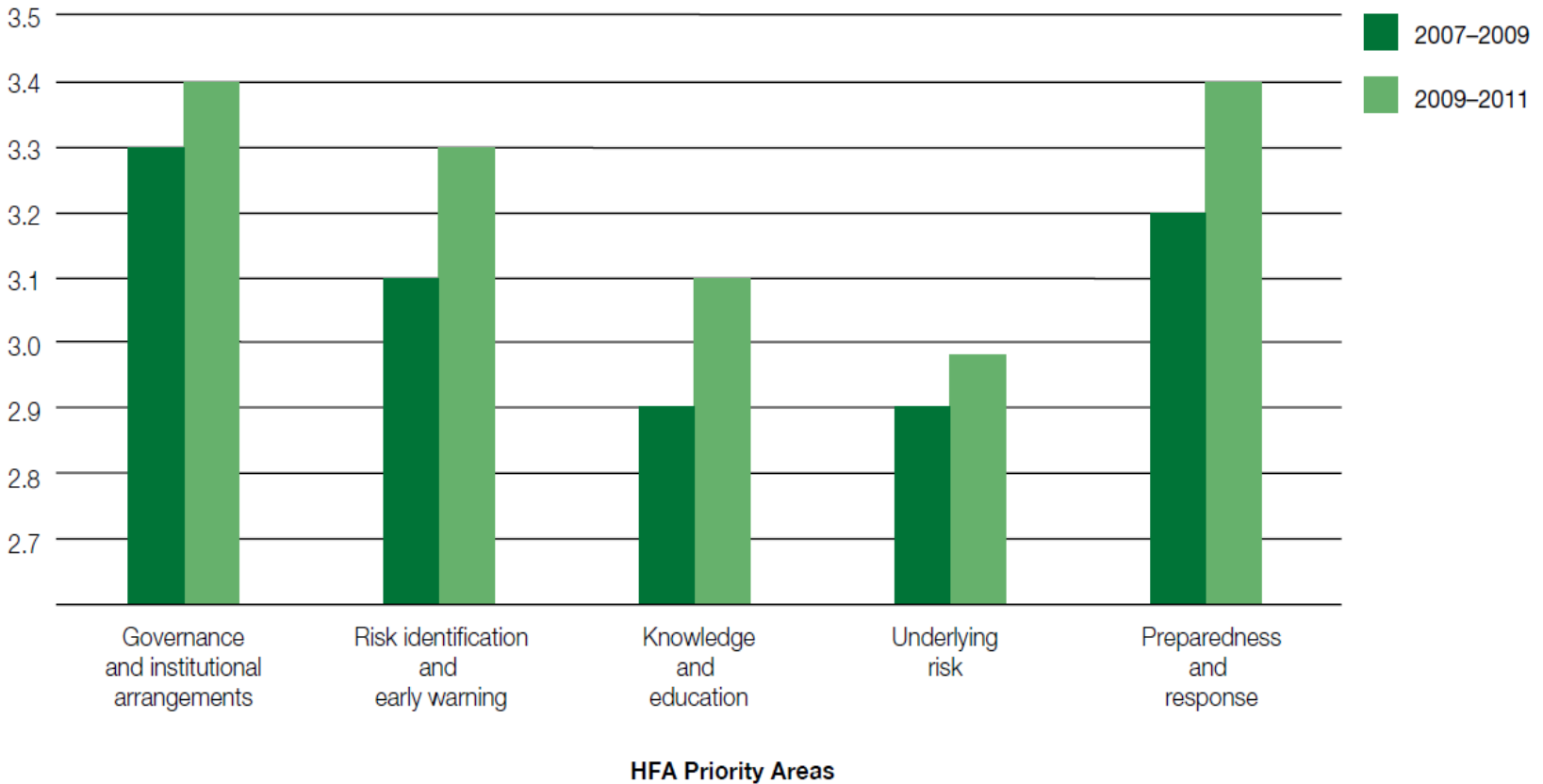
*Invest today for a safer
tomorrow*

Reform risk governance

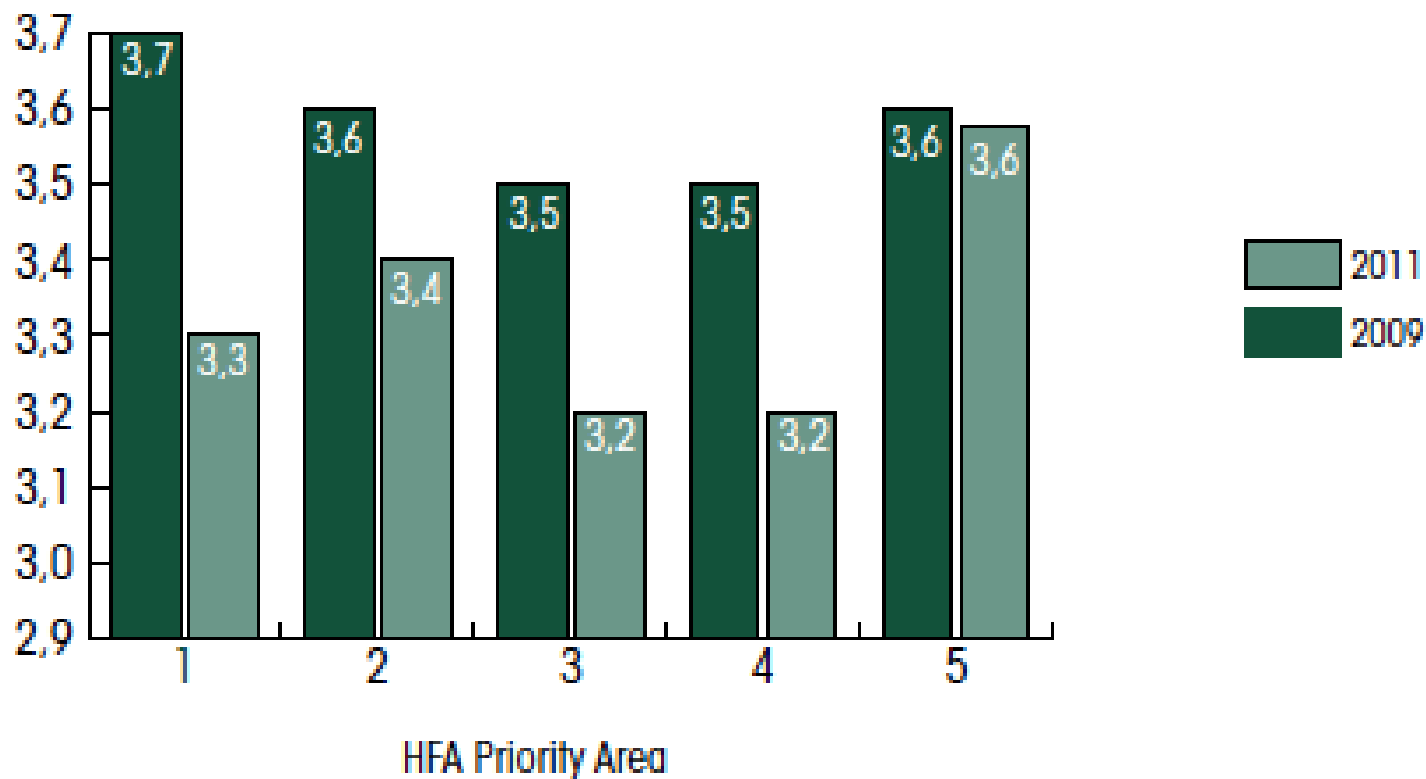


Mixed progress towards achieving the HFA

Average score of progress



Europe: Average progress in each Priority Area



Thank you

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