Disaster risk and poverty in a changing climate: the policy challenge

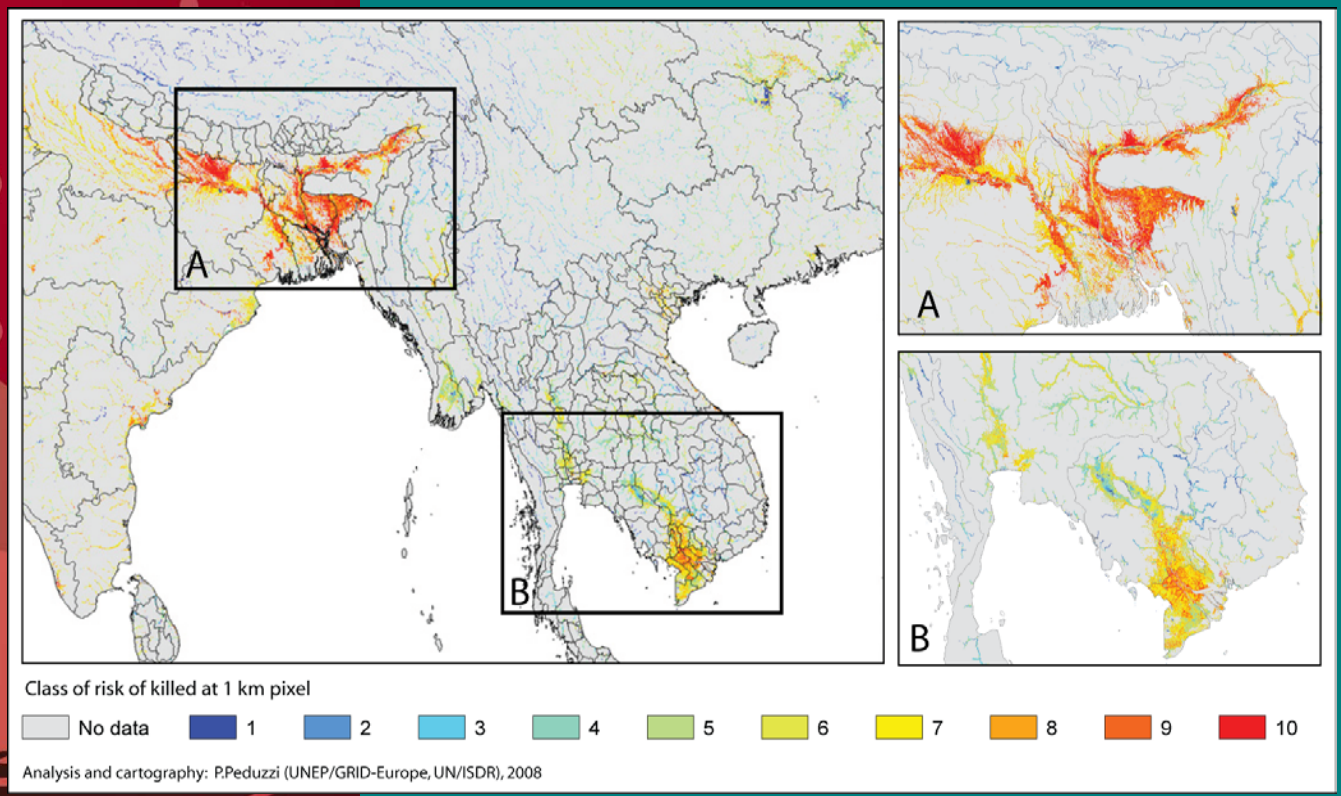
UNFCC workshop under the Nairobi work-programme

Havana, Cuba, 10 March 2009

ISDR Global Assessment Report on Disaster Risk Reduction

- Joint effort of UNISDR, UNDP, World Bank, UNEP, ProVention, WMO and many other partners. To be launched in Bahrain on May 11, 2009
- New model of global disaster risk for tropical cyclones, floods and landslides. Mortality risk and economic loss.
- Analysis of local level risk in 12 Asian and Latin American countries

disaster risk is intensively concentrated …….

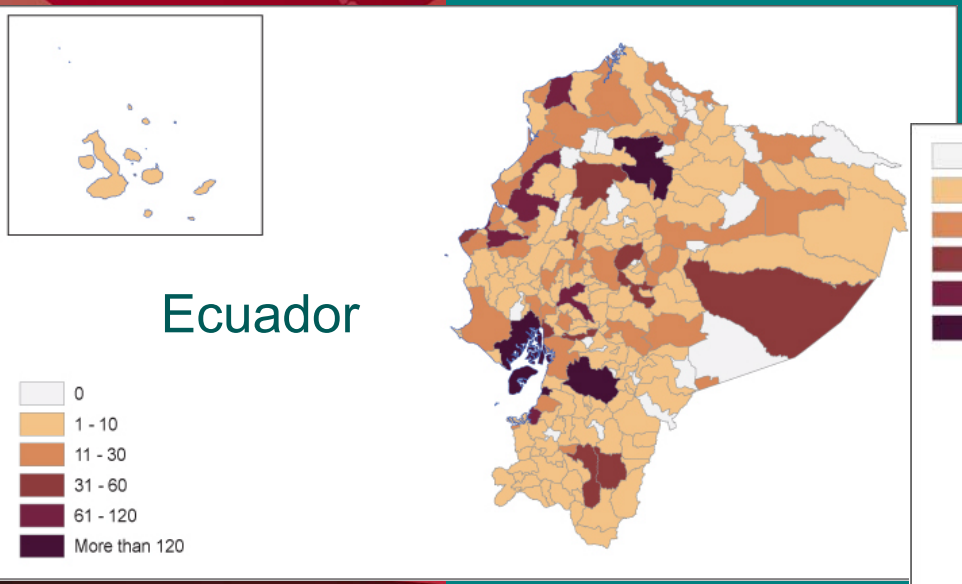


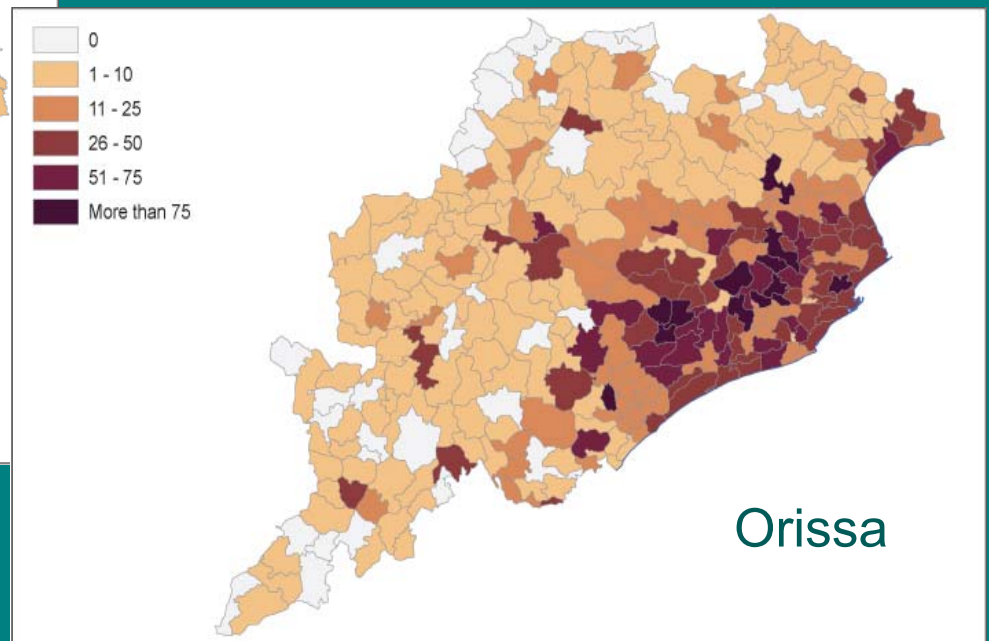
75% of the annual estimated mortality in floods is concentrated in Bangladesh, China and India

Highest relative mortality risk in small countries such as SIDS. Vanuatu has the highest mortality risk per million inhabitants to tropical cyclones, followed by St. Kitts and Nevis.

… but also extensively spread

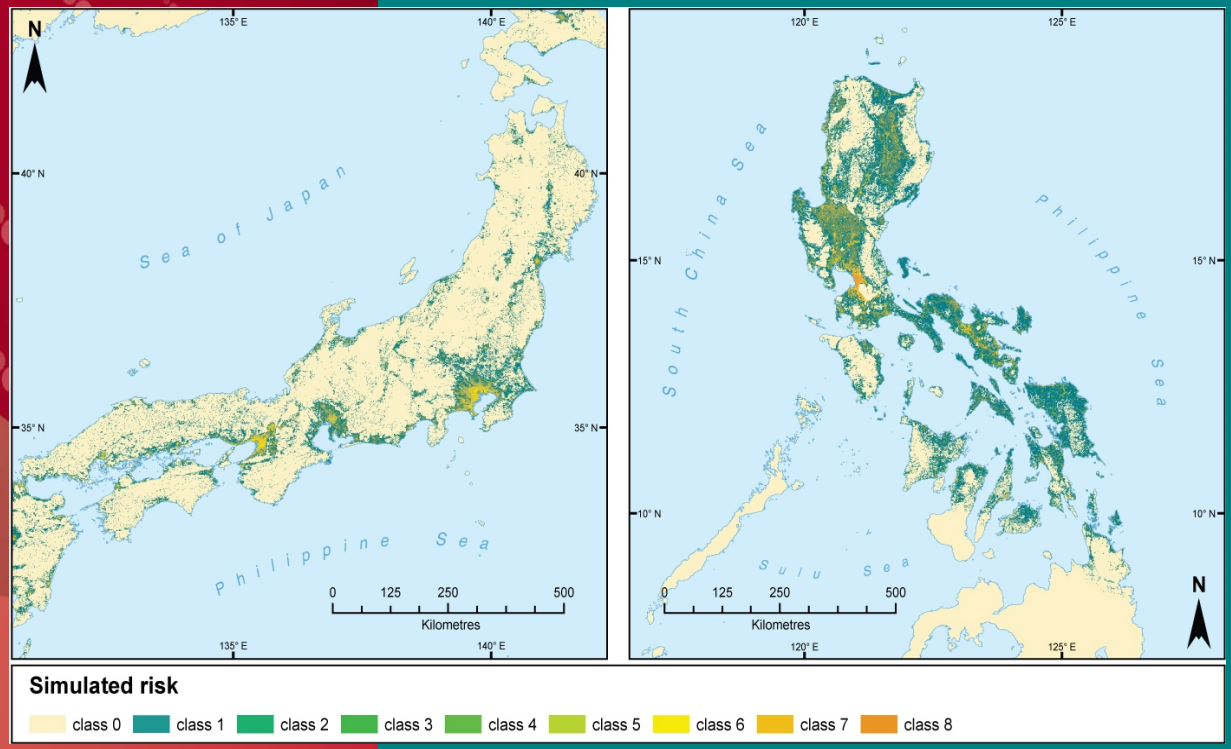
- Average 9 local disaster loss reports per day
- 80% of local areas affected at least once. 50% affected 6 times or more.
- 92% of loss-reports are weather related.
- 34% of economic losses in the housing sector, 57% of damage to schools, 65% to hospitals and 89% to roads.





Local government loss reports with less than 50 deaths or 500 destroyed houses 1970 - 2007

it's unevenly distributed…..



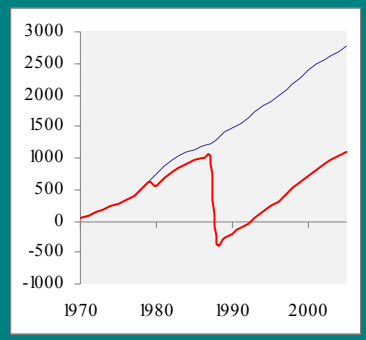
Japan 22.5 million people exposed annually.
Philippines 16 million are exposed annually.
Mortality risk in Philippines 17 times more than in Japan.

Tropical cyclone mortality risk is 200 times greater in low-income countries than in OECD for the same hazard exposure

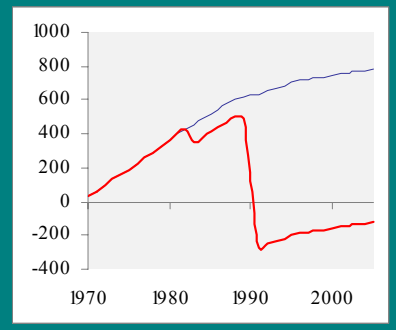
South Asia, experiences approximately 15 times more economic losses with respect to the size of its GDP, than OECD countries

….. hits small countries hardest

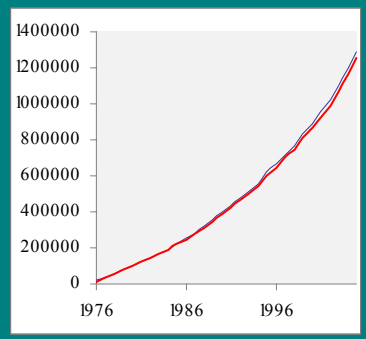
- High economic vulnerability is associated with low national savings and extreme trade limitations
- 59% of SIDS and 67% of LLDCs have high or very high vulnerability to economic loss



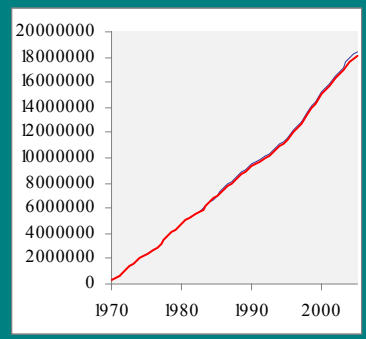
St. Lucia



Samoa



India



USA

Cumulative net capital formation (NKF) from 1970 to 2006, in Millions of Constant 2000 USD, with and without the effect of economic losses in disasters

….. feeds back into poverty

areas with the highest deprivation suffer disproportionately

measurable decreases in income and consumption for all households but skewed towards the poorest households

longer term impacts on health, education and other human development indicators

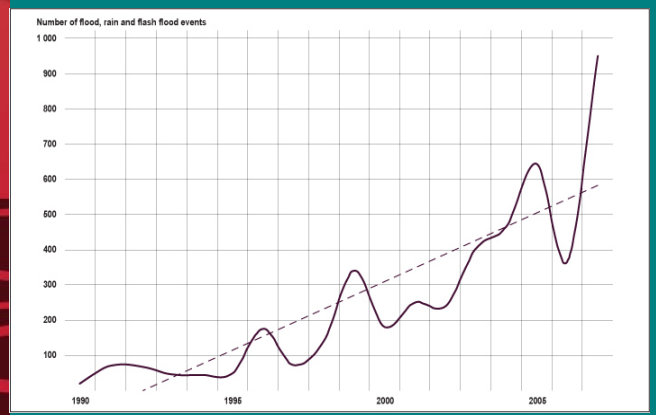
difficulties in recovery particularly in rural areas suffering repeated disasters

.....and is increasing

Globally

1990 – 2008 Annual average exposure of population to floods +28%	1990 – 2008 Annual average exposure of GDP to floods +98%
Flood mortality risk + 13% (assuming constant hazard)	Economic loss risk + 33% (assuming constant hazard)

Locally



Flood and rain loss reports in Costa Rica 1990-2007

1980-2007 (12 countries)

Weather-related local loss reports X 2.5

Houses damaged X 5

Local areas affected X 2

globally driven by …….

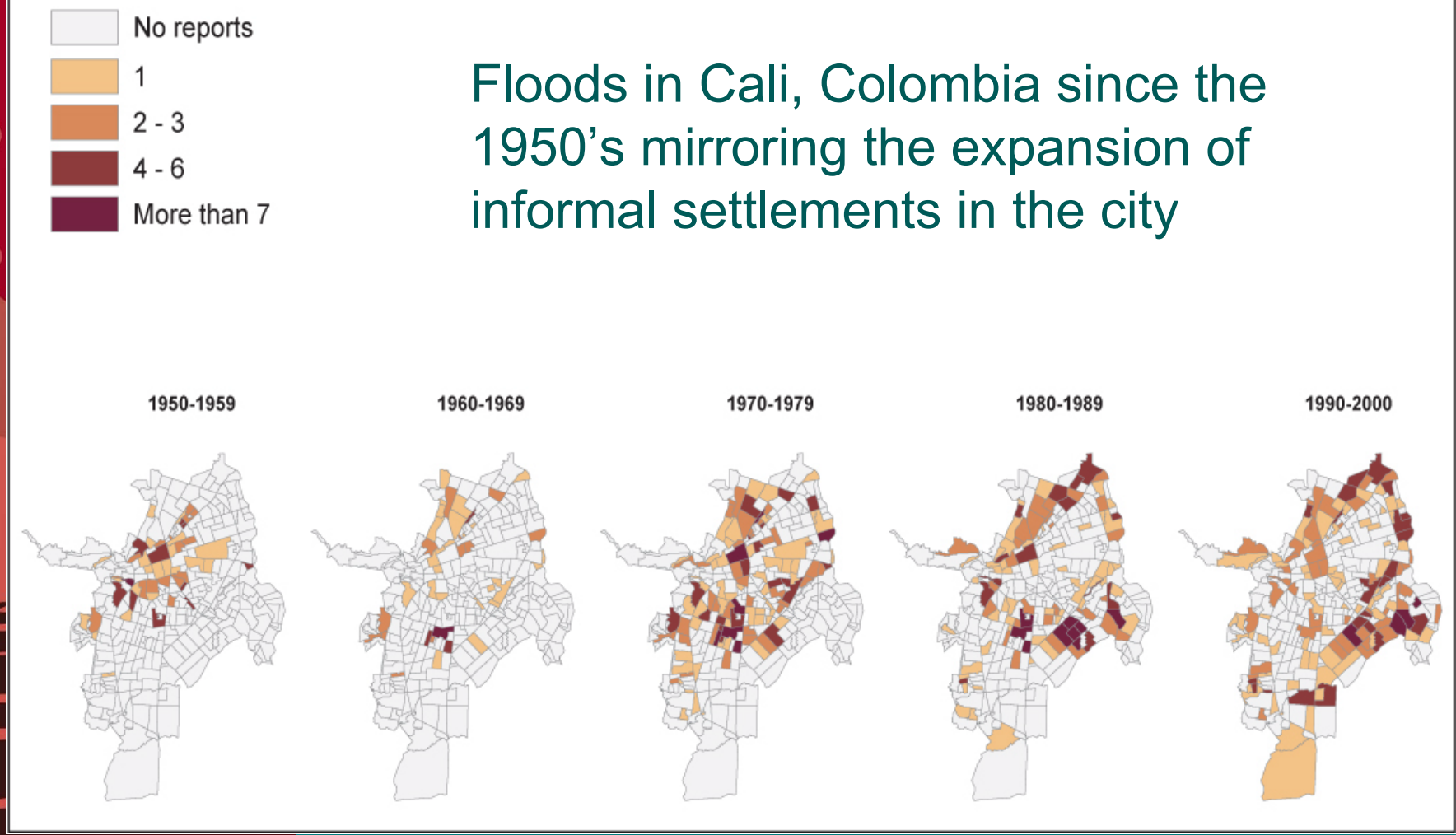
Negative GDP cap + weak governance

As countries develop: exposure increases faster than vulnerability can be reduced

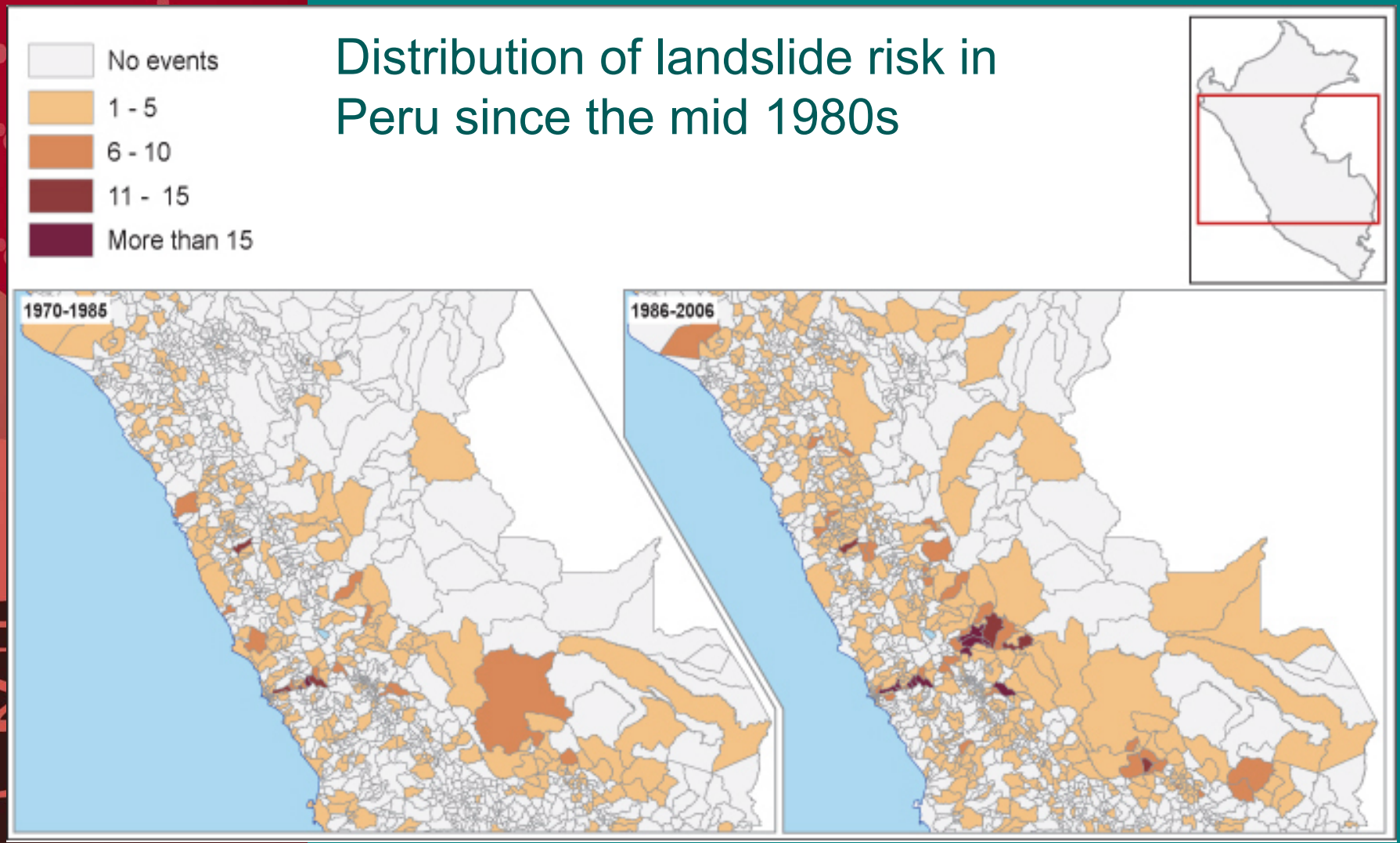
Increasing risk in low and low-middle income countries with rapid economic and urban development and weaker governance

Example: If Bangladesh had similar levels of institutional quality and equality as Japan, its economic losses in cyclones would be 60% less, all being equal

and locally by…….. poor urban governance



and ... environmental change



……magnified by climate change

Increases in weather-related hazard will magnify the unevenness of risk distribution.

1.9% of the GDP of Madagascar is at risk annually from Category 3 cyclones and 0.09% of the GDP of Japan.

If these cyclones were to increase to Category 4 storms, 3.2% of the GDP of Madagascar would be at risk but only 0.16% of the GDP of Japan.

the key message

Addressing the underlying risk drivers such as:

- poor urban governance;
- ecosystem decline;
- vulnerable rural livelihoods

Is key to:

- Reducing disaster risk and achieving the Hyogo Framework of Action
- Adapting to climate change
- Achieving the Millennium Development Goals

so……raise the game !

National policy frameworks that:

- link disaster risk reduction strategies under the HFA, climate change adaptation strategies and poverty reduction strategies.
- focused on addressing the underlying risk drivers
- are actionable and support local initiative