REDUCING DISASTER RISK

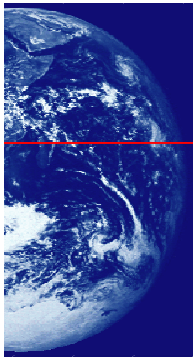
a challenge for development

A Global Report from :

United Nations Development Programme
Bureau for Crisis Prevention and Recovery

Why a global UNDP Report on Disaster Risk

- Economic losses and the numbers affected by disasters continue to increase.
- Disaster loss is challenging the achievement of the Millennium Development Goals in many countries.
- International community still focused on humanitarian actions to mitigate losses.
- No-one is addressing disaster risk through development

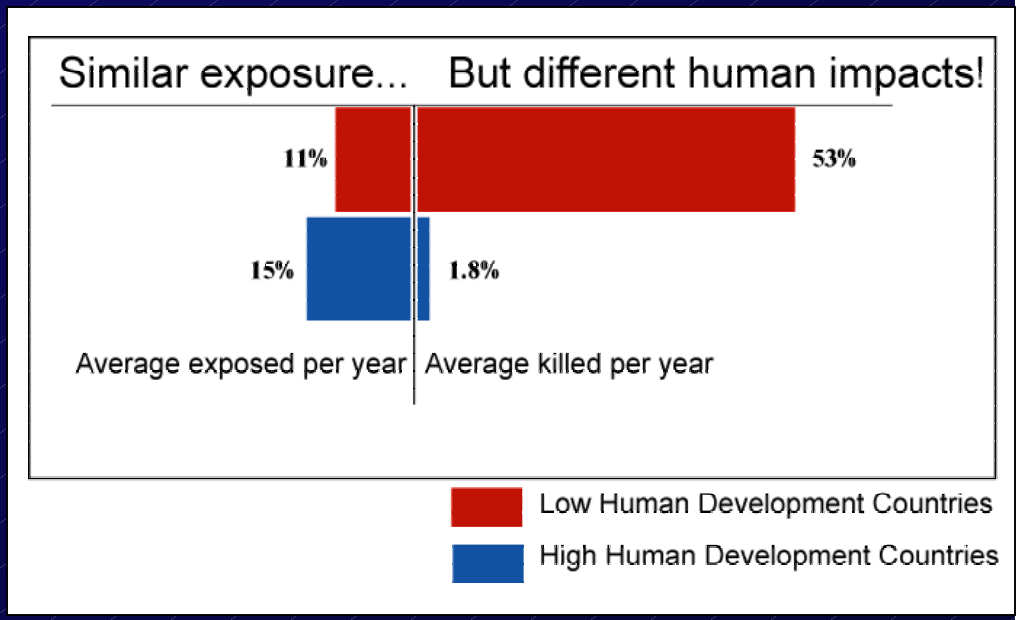


What are the objectives of the Report

- Demonstrate through quantitative analysis that disaster risk is *an unresolved problem of development*
- Identify and promote development policy alternatives that can reduce disaster risk and therefore facilitate the achievement of the MDGs
- Contribution by UNDP to the UN International Strategy for Disaster Reduction (ISDR)

How are development and disaster risk linked

- Disaster risk is lower in high development countries than in low development countries.
- Development processes intervene in the translation of physical exposure to hazards into disaster risk



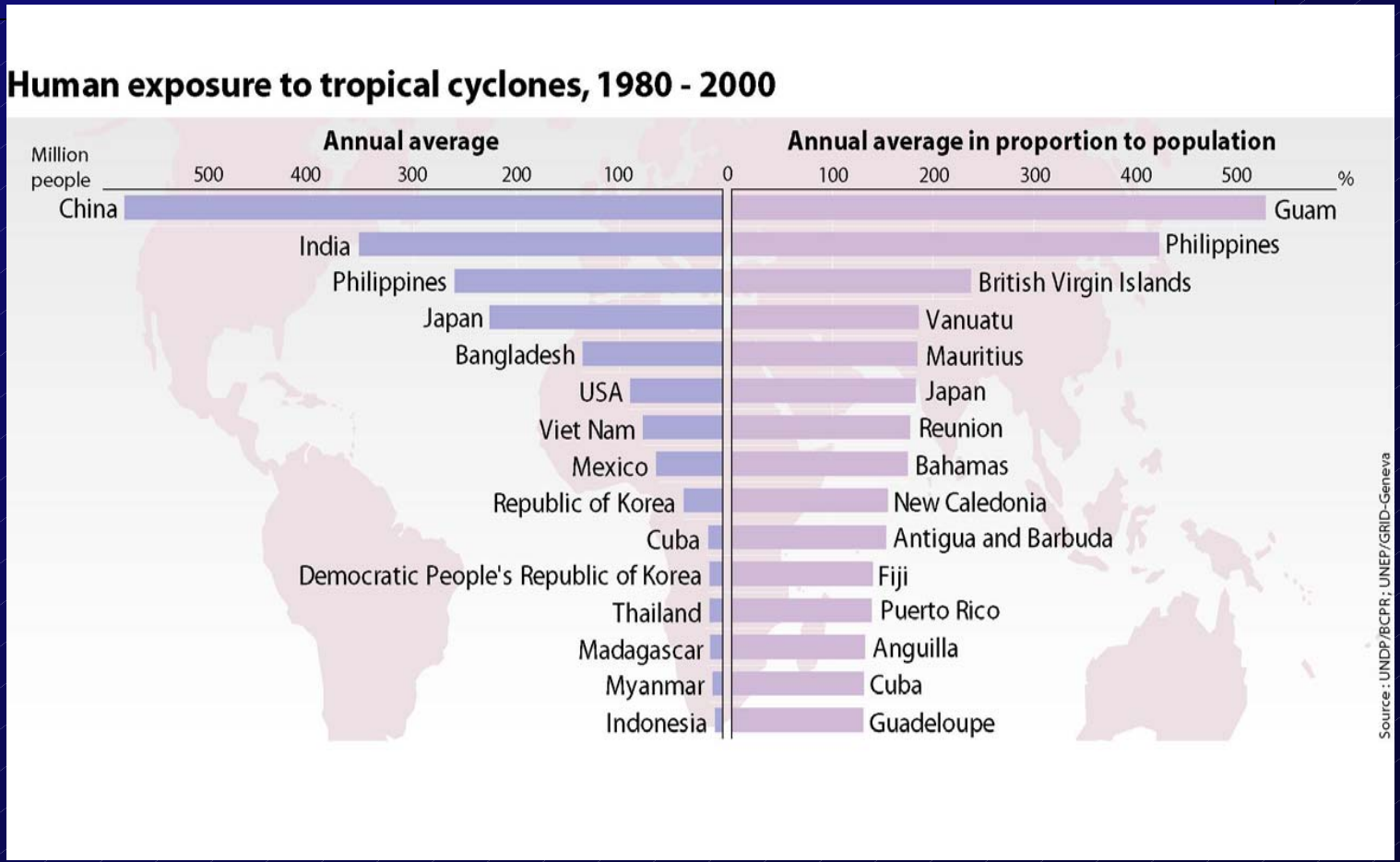
Disaster Risk Index (DRI)

- A global index that compares risk of mortality between countries
- Measures the population exposed to earthquakes, tropical cyclones and floods in each country
- Calculates the relative human vulnerability to each of the hazard types
- Identifies vulnerability indicators that correlate with risk

Physical Exposure

- Physical exposure = *Number of people located in areas where hazardous events occur combined with the frequency of hazard events.*
- Absolute exposure is larger in countries like India and China. Relative exposure is higher in small-island developing countries.

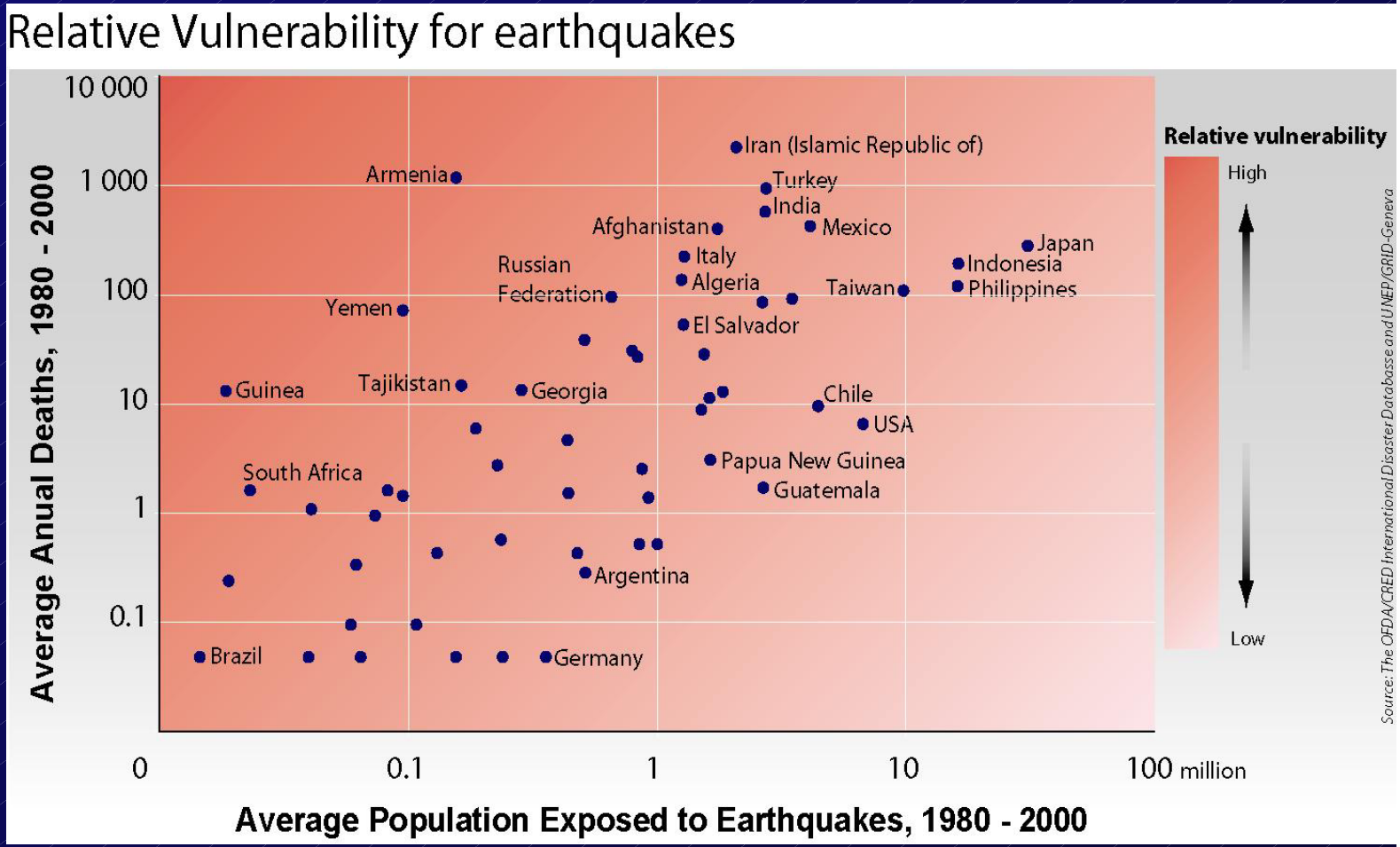
Physical Exposure to Cyclones



Relative Vulnerability

- The key indicator in the DRI
- Measures the number of people killed in a country due to a particular natural hazard with respect to the number of people exposed.
- Countries that suffer a far higher loss of life than others who are equally exposed have a higher relative vulnerability to the hazard in question

Earthquakes

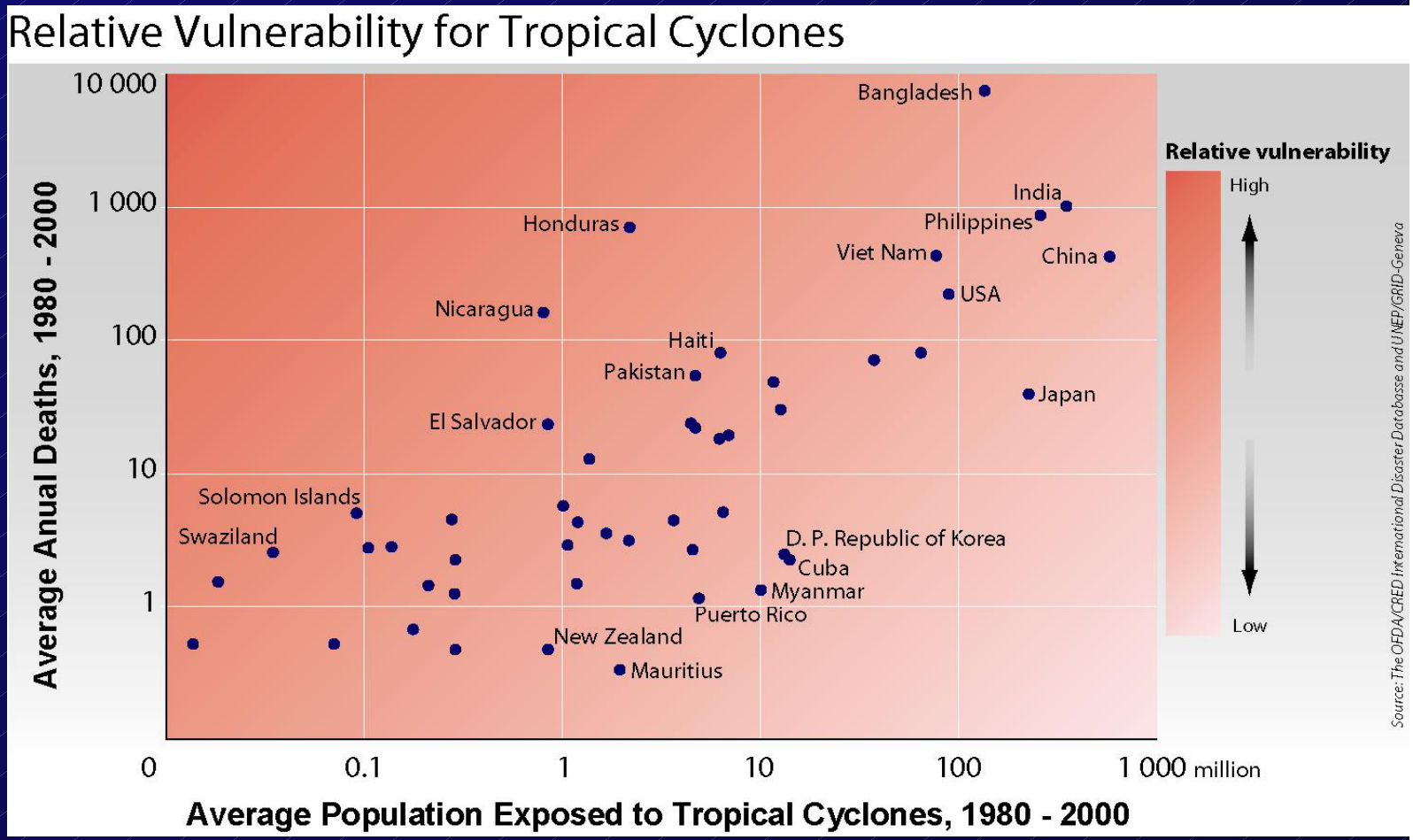


Relative Vulnerability Indicators for Earthquakes

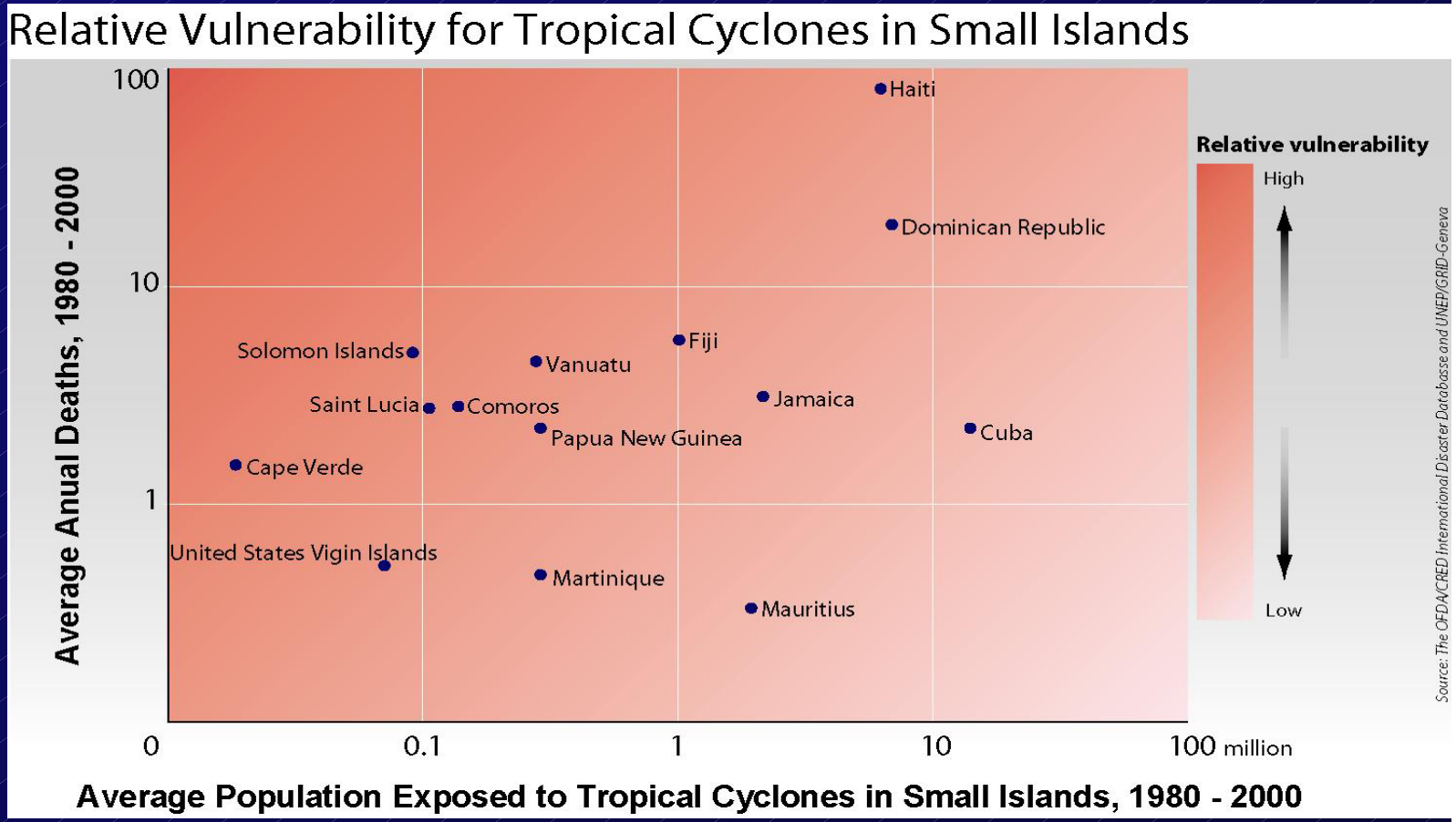
Islamic Republic of Iran 1,074
Turkey 345
India 211
Italy 175
Algeria 109
Mexico 103

Japan 9
Costa Rica 2.91
United States of America 0.97

Tropical Cyclones



Tropical Cyclones in SIDS



Relative Vulnerability Indicators for Tropical Cyclones

Honduras 321
Nicaragua 202
Bangladesh 54
Haiti 13

United States of America 2.49
Australia 1.21
Japan 0.17
Cuba 0.16

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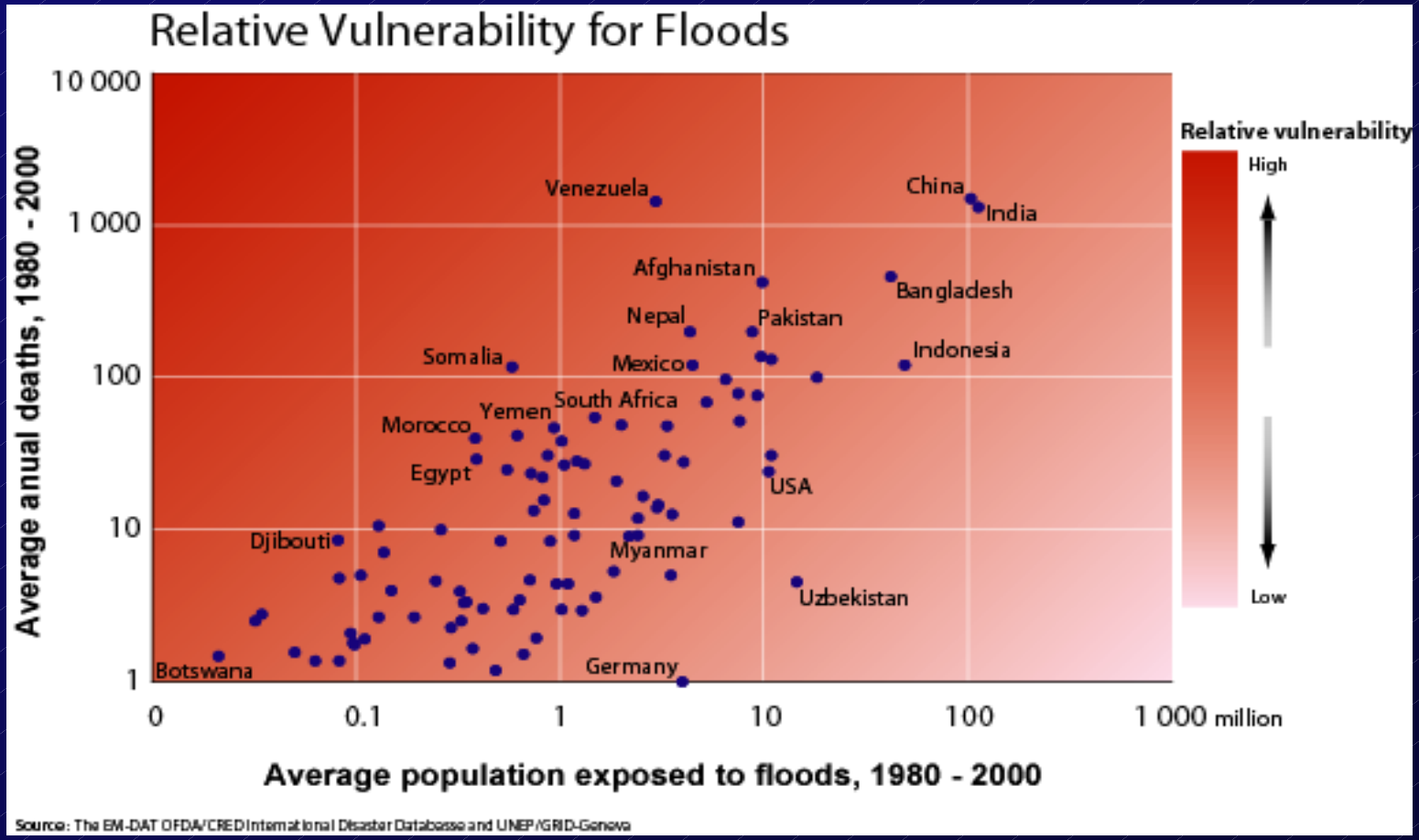
Floods



Relative Vulnerability Indicators for Floods

Venezuela 491

Morocco 103

Botswana 70

Mozambique 67

United States of America 2.3

Argentina 1.5

Germany 0.25

Vulnerability Indicators that correlate with Risk

- Earthquakes: countries with rapid urban growth
- Tropical cyclones: countries with large rural populations and a low rank on the Human Development Index (HDI).
- Floods: countries with low GDP per capita and low local population densities

Limitations of the DRI

- Mortality calibrated
- 20 year reporting period
- Large and medium scale disasters
- Only three natural hazards
- Limited bundle of social, economic and ecological indicators.

How does Development Configure Risk ?

- DRI identified urbanisation and rural livelihoods as key development processes configuring risk
- Urbanisation analysed in the context of economic globalization.
- Rural livelihoods analysed in the context of global climate change.
- Cross-cutting themes: governance, violence and armed conflict; social capital; HIV/AIDS and disease.

Conclusions and recommendations

- Governance for risk management
- Mainstreaming disaster risk into development planning
- Factoring risk into disaster recovery and reconstruction
- Integrated climate risk management

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- Managing the multifaceted nature of risk
- Compensatory risk management (disaster preparedness and response)
- Addressing gaps in knowledge for disaster risk assessment

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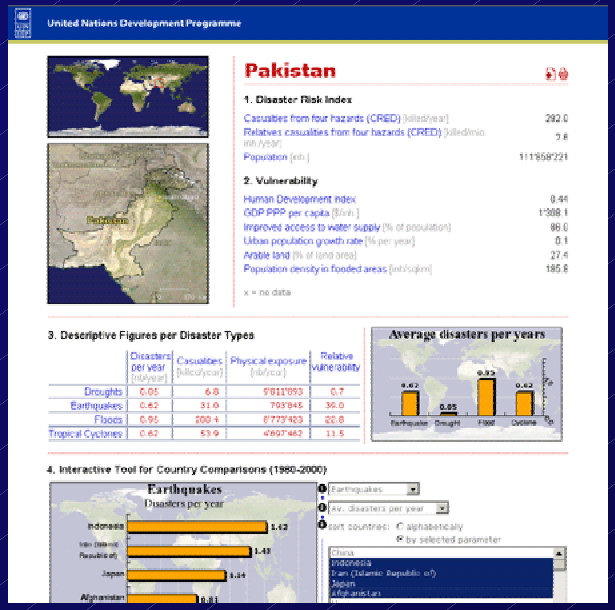
Interactive maps on relative vulnerability



http://gridca.grid.unep.ch/undp/analysis/result.php

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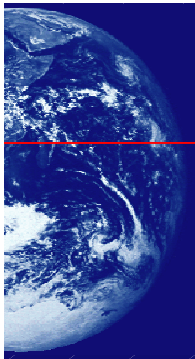
Interactive maps on relative vulnerability

ANNEX



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Casualties (1980-2000) as recorded in CRED

Disaster types	Deaths	% of total	
Drought	**563'701**	**46.54 %**	94.4%
Wind storm	**251'384**	**20.76 %**	
Flood	**170'010**	**14.04 %**	
Earthquake	**158'551**	**13.09 %**	
Volcano	25'050	2.07 %	
Extreme temp	19'249	1.59 %	
Slide	18'200	1.50 %	
Wave/surge	3'968	0.32 %	
Wild fire	1'046	0.06 %	
Insect infestation	0	0.00 %	
Total	**1'211'159**	**100%**	

Papua New Guinea and Ecuador, which are affected by tsunamis (respectively 67.8 and 14.3% of national casualties); landslides are also causing significant impact in Indonesia (13,88%), Peru (33%) and Ecuador (10.2%).

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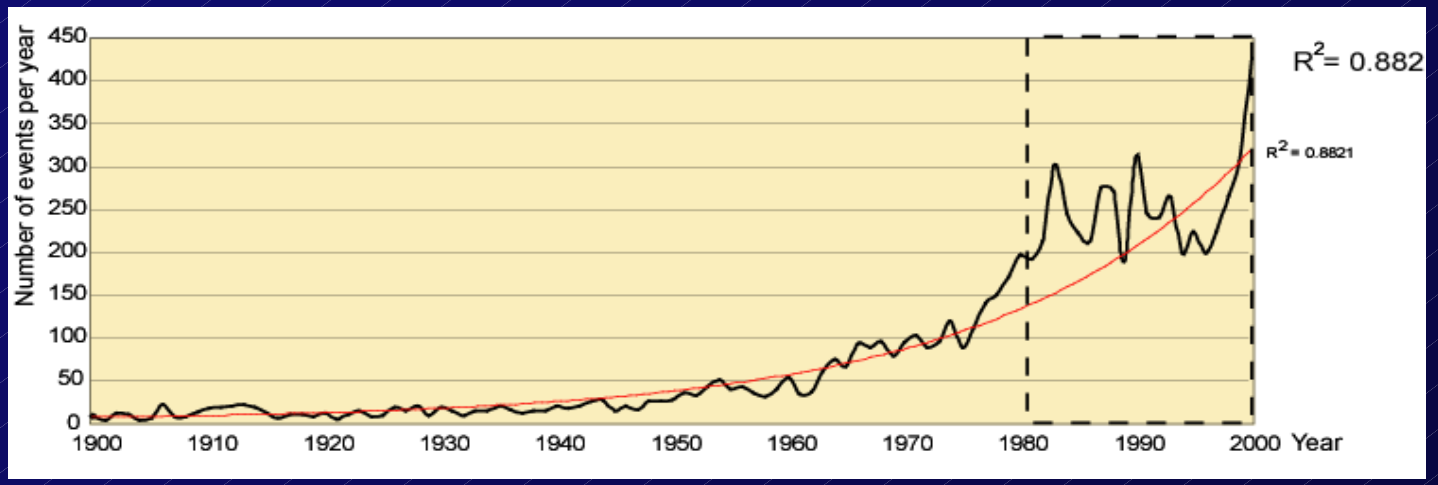
Why a time span of 1980-2000



Due to significant improvement in access to information (telecommunications, media coverage, internet, satellites coverage,…) the number of reported disasters is much better covered since 1980 than previously.