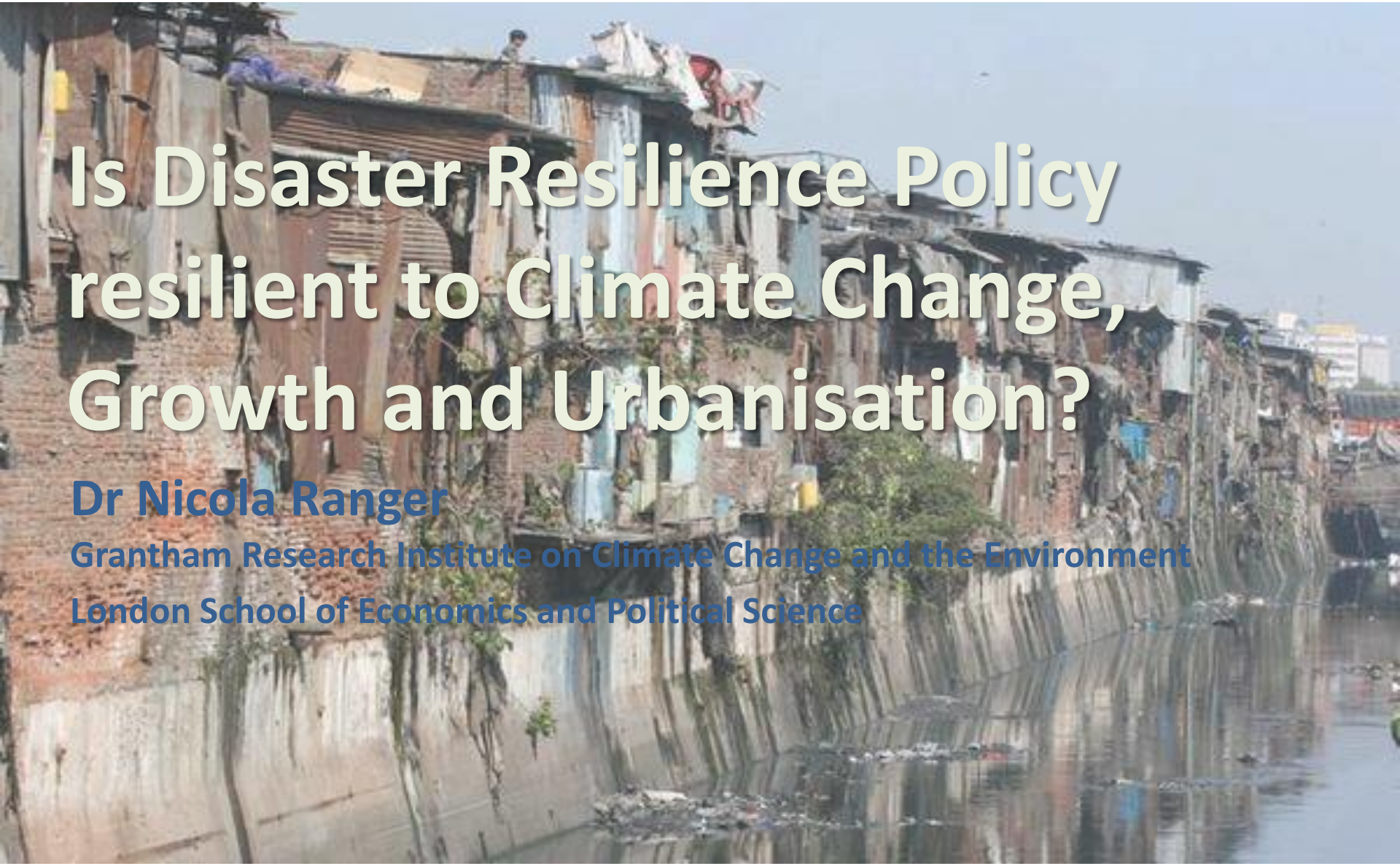

Is Disaster Resilience Policy resilient to Climate Change, Growth and Urbanisation?

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Contents

- Introduction to the policy framework
- How is risk changing?
- How resilient is the policy framework?
- Conclusion: how can we encourage greater resilience of our disaster resilience policy?

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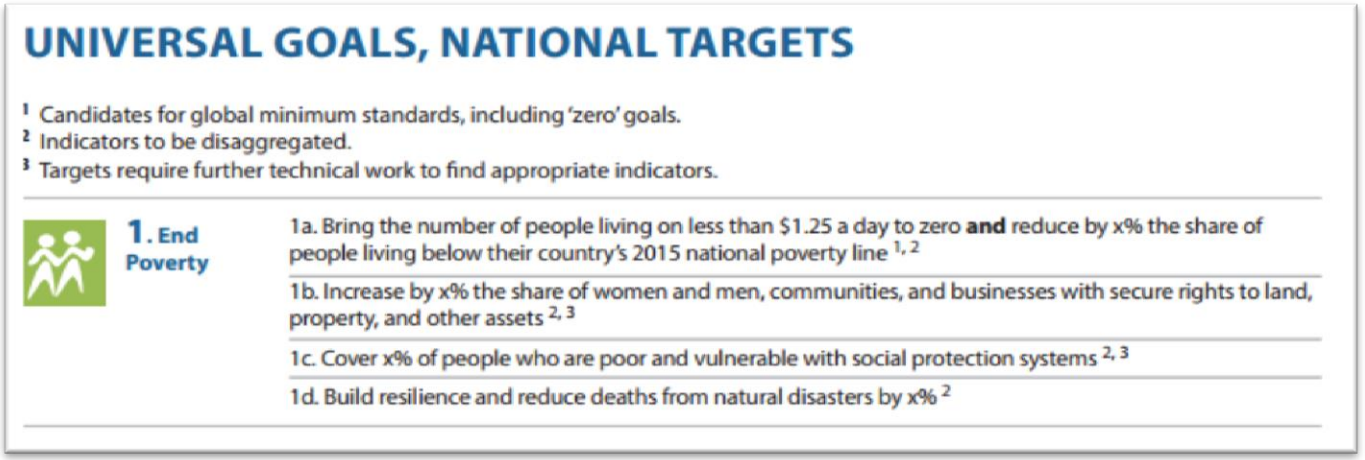
Policy Context: International Policy

Two upcoming major international policies agendas:

- **Post-2015 Framework for Disaster Risk Reduction** (successor to the Hyogo Framework for Action)
- **Post-2015 Framework Development Agenda** (successor to the Millennium Development Goals)

Disaster resilience features in both



UNIVERSAL GOALS, NATIONAL TARGETS

[1] Candidates for global minimum standards, including 'zero' goals.
[2] Indicators to be disaggregated.
[3] Targets require further technical work to find appropriate indicators.

1. End Poverty	1a. Bring the number of people living on less than $1.25 a day to zero **and** reduce by x% the share of people living below their country's 2015 national poverty line [1, 2]
	1b. Increase by x% the share of women and men, communities, and businesses with secure rights to land, property, and other assets [2, 3]
	1c. Cover x% of people who are poor and vulnerable with social protection systems [2, 3]
	1d. Build resilience and reduce deaths from natural disasters by x% [2]

Source: Exert from High Level Panel report on the Post-2015 Development Agenda

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Expected Outcome
The substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries

Strategic Goals

- The integration of disaster risk reduction into sustainable development policies and planning
- Development and strengthening of institutions, mechanisms and capacities to build resilience to hazards
- The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes

Priorities for Action

Key Activities

1. Ensure that disaster risk reduction (DRR) is a national and a local priority with a strong institutional basis for implementation	2. Identify, assess and monitor disaster risks and enhance early warning	3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels	4. Reduce the underlying risk factors	5. Strengthen disaster preparedness for effective response at all levels
• DRR institutional mechanisms (national platforms); designated responsibilities • DRR part of development policies and planning, sector wise and multisector • Legislation to support DRR • Decentralisation of responsibilities and resources • Assessment of human resources and capacities • Foster political commitment • Community participation	• Risk assessments and maps, multi-risk: elaboration and dissemination • Indicators on DRR and vulnerability • Data & statistical loss information • Early warning: people centered; information systems; public policy • Scientific and technological development; data sharing, space-based earth observation, climate modeling and forecasting; early warning • Regional and emerging risks	• Information sharing and cooperation; • Networks across disciplines and regions; dialogue • Use of standard DRR terminology • Inclusion of DRR into school curricula, formal and informal education • Training and learning on DRR: community level, local authorities, targeted sectors; equal access • Research capacity: multi-risk; socio-economic; application • Public awareness and media	• Sustainable ecosystems and environmental management • DRR strategies integrated with climate change adaptation • Food security for resilience • DRR integrated into health sector and safe hospitals • Protection of critical public facilities • Recovery schemes and social safety- nets • Vulnerability reduction with diversified income options • Financial risk-sharing mechanisms • Public-private partnership • Land use planning and building codes • Rural development plans and DRR	• Disaster management capacities: policy, technical and institutional capacities • Dialogue, coordination & information exchange between disaster managers and development sectors • Regional approaches to disaster response, with risk reduction focus • Review & and exercise preparedness and contingency plans • Emergency funds • Voluntarism & participation

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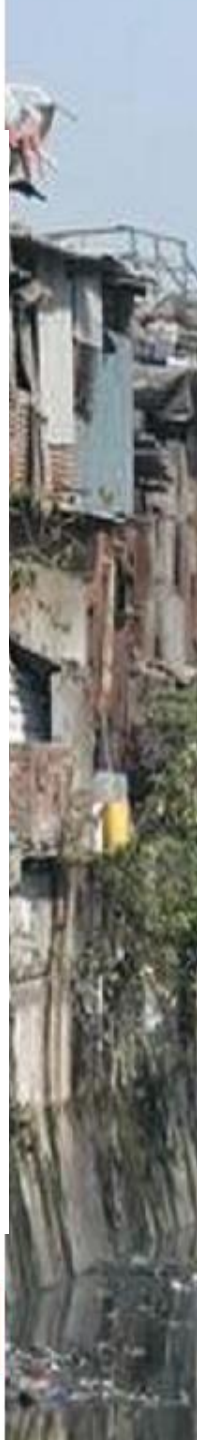
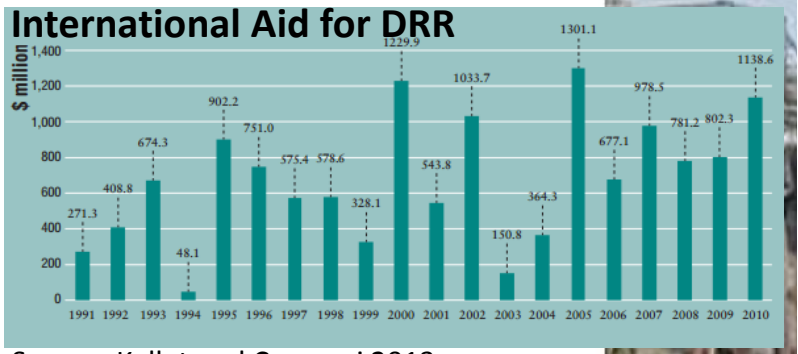


Policy Context: International Development Aid

For a long time, disaster risk reduction (DRR) has been the poor brother of development.

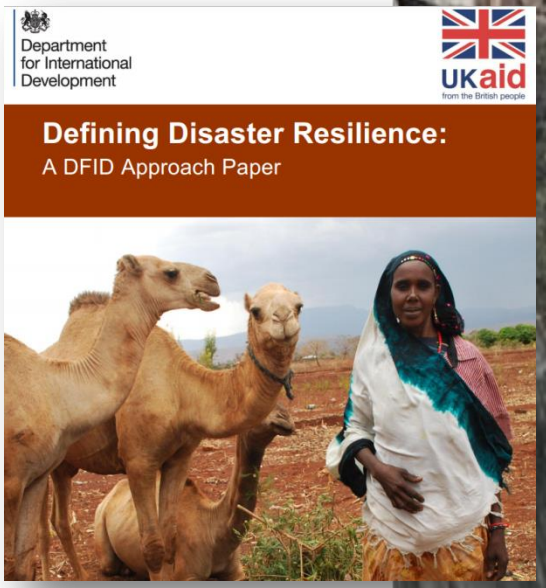
- Recent ODI analysis found that of the **$3 trillion in aid committed by the international community, just over $13.5 billion was for DRR**, compared to $23.3 billion spent on reconstruction and rehabilitation and $69.9 billion spent on disaster response.



Source: Kellet and Caravani 2013

Recent seen a growing focus on disaster risk reduction.

- In 2012, DFID committed to making disaster resilience a core part of its working all its country programmes
- Undertaking systematic reviews of all country programmes, including conducting multi-hazard risk assessments



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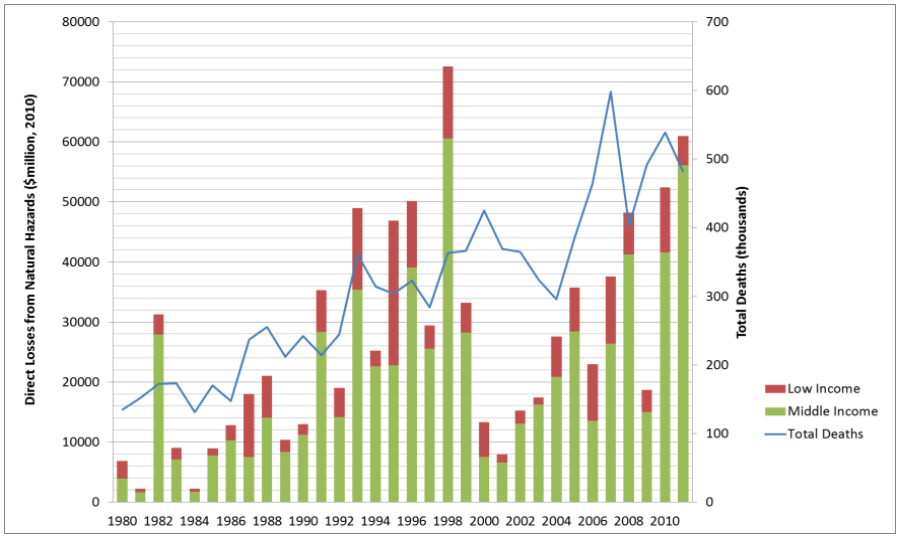
Economic and human costs of disasters are rising rapidly

- In real terms, **total economic losses are increasing by $34 billion per decade** (Neumayer and Barthel, 2011), from about $50 billion per year in the 1980s to more than $100 billion today.



Direct economic losses and fatalities in low and middle income countries.
Source: Munich Re

- **Since 1980, weather catastrophes have caused almost 1,200,000 fatalities and led to direct damages amounting to US$610 billion in low and lower middle income countries.**
- **This has long-run impacts on development.** For this reason, resilience is an important enabler of broader development goals.

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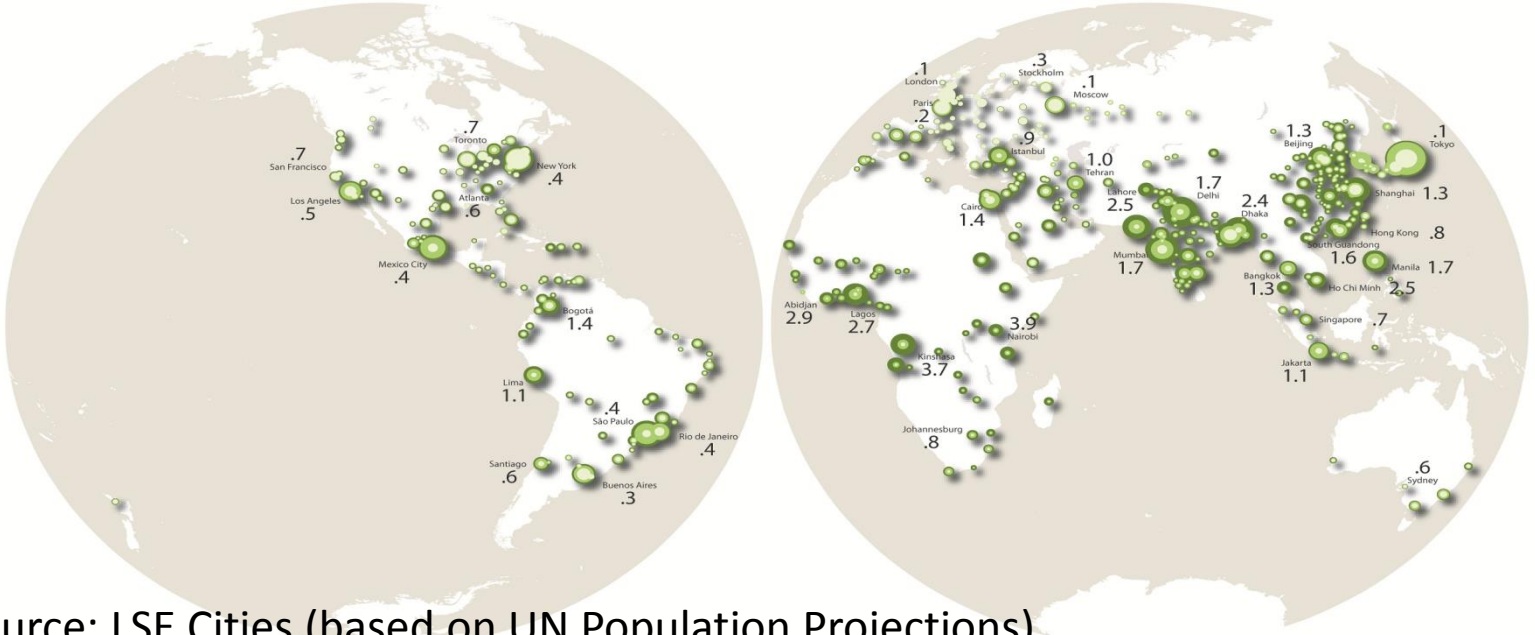
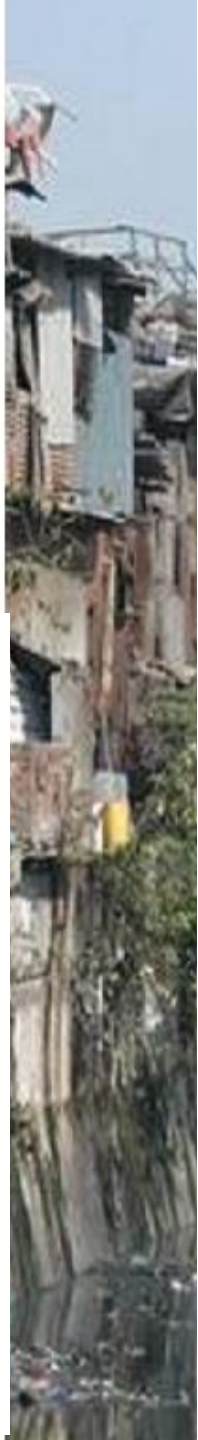
How is risk changing? Exposure

- Population growth and economic development are and will continue to increase exposure to natural disasters.
- Urbanisation is **concentrating exposure into urban areas**
  - Today more than 50% population (3.6 billion people) live in cities.
  - By 2040, around 65% will live in cities (5.6 billion people)
- The most rapid rates of urban growth are happening in developing cities and in second-tier cities



Source: LSE Cities (based on UN Population Projections)



How is risk changing? Vulnerability

- Globally, the number of people killed by natural disasters (as %) is falling, indicating that **vulnerability is, on average, declining.** But, this is failing to keep pace with growing exposure and hazard.
- There are signs that **economic vulnerability may be rising in many regions**.
- **Urban informal settlements are an area of increasing vulnerability** due to weak urban governance, poor living conditions and lack of infrastructure investment – particularly in **second-tier cities** - almost 1 billion people live in urban settlements as this is rising by 25 million per year (UNISDR, 2009).

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How is risk changing? Hazard

Source: IPCC AR5

Phenomenon and direction of trend	Assessment that changes occurred (typically since 1950 unless otherwise indicated)	Assessment of a human contribution to observed changes	Likelihood of further changes	
			Early 21st century	Late 21st century
Warmer and/or fewer cold days and nights over most land areas	*Very likely* {2.6} *Very likely* *Very likely*	***Very likely*** {10.6} *Likely* *Likely*	*Likely* {11.3}	*Virtually certain* {12.4} *Virtually certain* *Virtually certain*
Warmer and/or more frequent hot days and nights over most land areas	*Very likely* {2.6} *Very likely* *Very likely*	***Very likely*** {10.6} *Likely* *Likely* (nights only)	*Likely* {11.3}	*Virtually certain* {12.4} *Virtually certain* *Virtually certain*
Warm spells/heat waves. Frequency and/or duration increases over most land areas	***Medium confidence*** on a global scale *Likely* in large parts of Europe, Asia and Australia {2.6} *Medium confidence* in many (but not all) regions *Likely*	***Likely***[a] {10.6} Not formally assessed *More likely than not*	Not formally assessed[b] {11.3}	*Very likely* {12.4} *Very likely* *Very likely*
Heavy precipitation events. Increase in the frequency, intensity, and/or amount of heavy precipitation	*Likely* more land areas with increases than decreases[c] {2.6} *Likely* more land areas with increases than decreases *Likely* over most land areas	***Medium confidence*** {7.6, 10.6} *Medium confidence* *More likely than not*	*Likely* over many land areas {11.3}	***Very likely*** over most of the mid-latitude land masses and over wet tropical regions {12.4} *Likely* over many areas *Very likely* over most land areas
Increases in intensity and/or duration of drought	***Low confidence*** on a global scale *Likely* changes in some regions[d] {2.6} *Medium confidence* in some regions *Likely* in many regions, since 1970[e]	***Low confidence*** {10.6} *Medium confidence*[f] *More likely than not*	*Low confidence*[d] {11.3}	***Likely*** *(medium confidence)* on a regional to global scale[h] {12.4} *Medium confidence* in some regions *Likely*[e]
Increases in intense tropical cyclone activity	***Low confidence*** in long term (centennial) changes *Virtually certain* in North Atlantic since 1970 {2.6} *Low confidence* *Likely* in some regions, since 1970	***Low confidence***[i] {10.6} *Low confidence* *More likely than not*	*Low confidence* {11.3}	***More likely than not*** in the Western North Pacific and North Atlantic[i] {14.6} *More likely than not* in some basins *Likely*
Increased incidence and/or magnitude of extreme high sea level	*Likely* (since 1970) {3.7} *Likely* (late 20th century) *Likely*	***Likely***[k] {3.7} *Likely*[k] *More likely than not*[k]	*Likely*[l] {13.7}	***Very likely***[l] {13.7} *Very likely*[m] *Likely*

Growth and urbanisation is also driving growing hazards…

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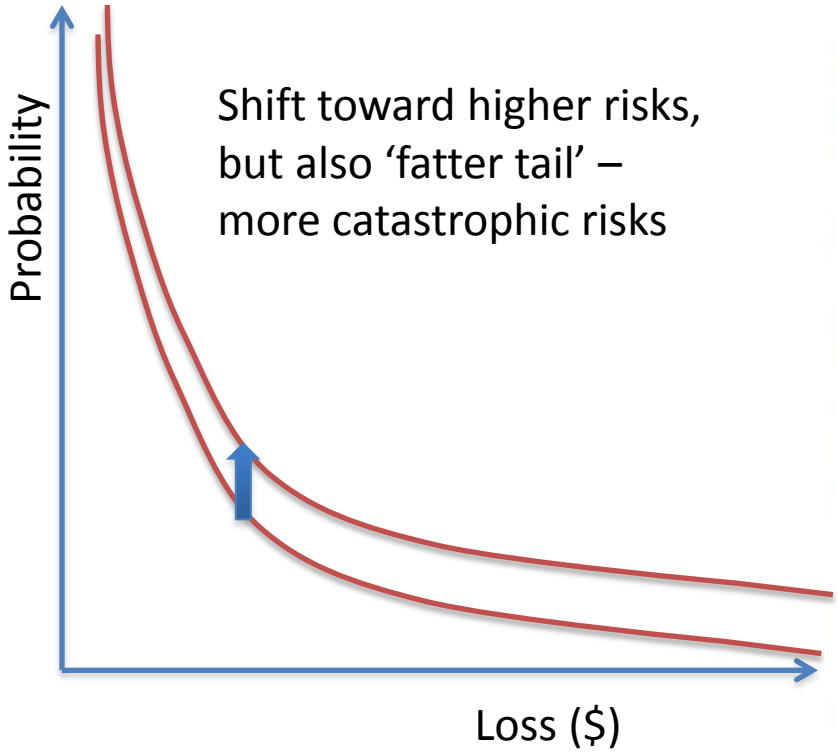
The Future: Higher, more concentrated, more uncertain and more volatile risk

- Reducing vulnerability in many areas combined with growing 'hot spots' of risk will lead to **greater % losses from more catastrophic events**
- **Climate change will similarly drive more intensive losses.**
- **Concentration of risk in countries with low GDP and weak governance, and second-tier cities**
- Considerable uncertainty over the scale of long-term changes



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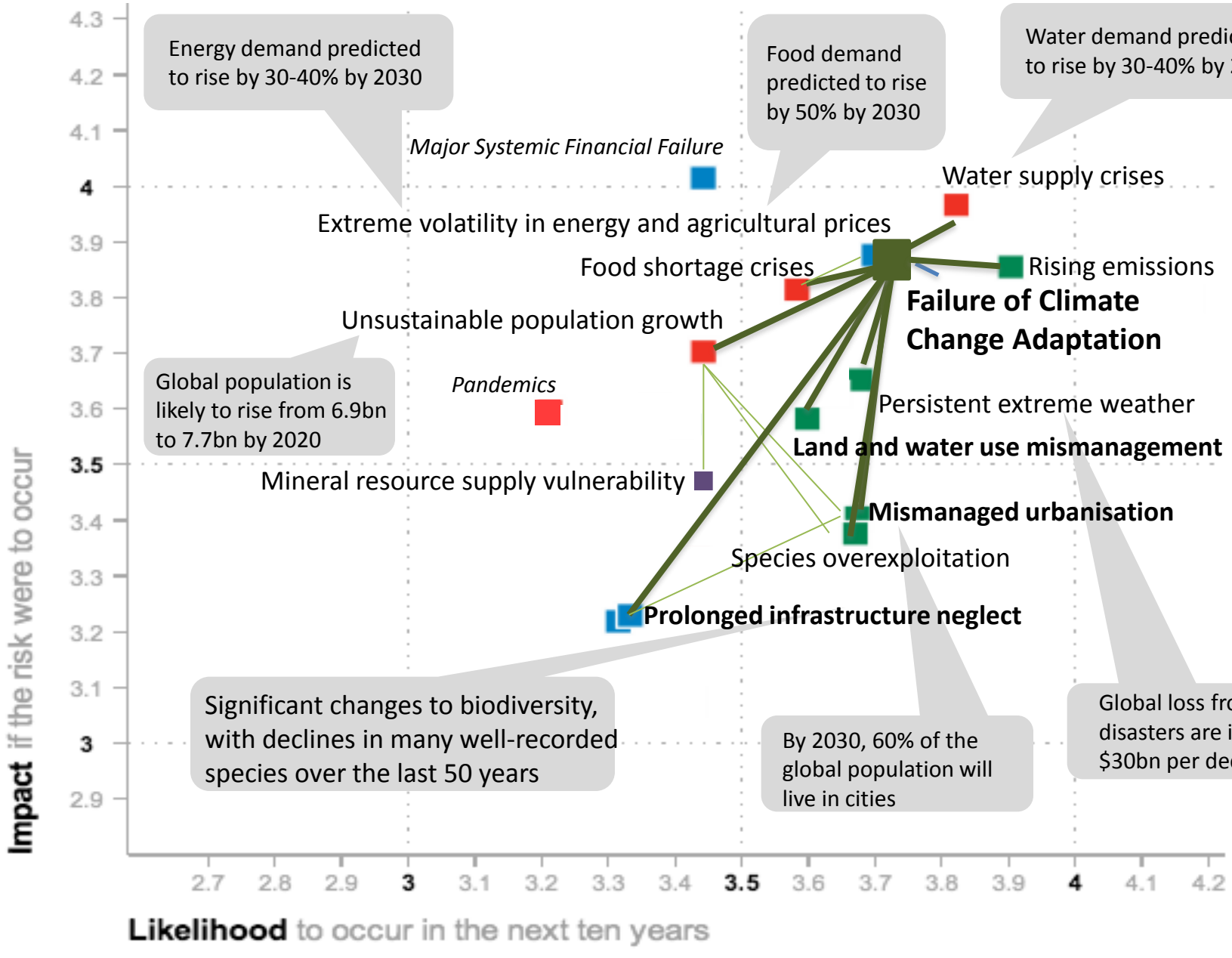
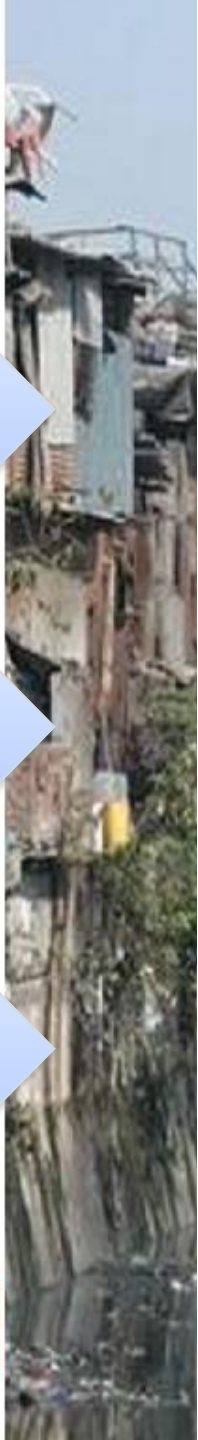
Other long-term risk factors…



New Paradigm in Risk Management

Climate Risk is Changing	Forward-looking, long-term risk management
Significant, Rapid and/or Irreversible Change	Greater focus on ex-ante risk reduction and anticipatory adaptation
Future Risk is Deeply Uncertain	Flexible, learning, progressive action



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Analysis of Hyogo 'Priorities for Action' – what's different?

Priority for Action	Forward-looking, long-term approach	Greater focus on ex-ante and anticipatory action	Flexible, learning and progressive action
1: DRR priority with a strong institutional basis	Right institutional mandate – DRR, growth & adaptation	-	Right structures and skills to manage uncertainties
2: Identify and monitor risks and enhance EWSs	Include long-term risks	-	Regularly review risk assessments
3: Use knowledge and education to build culture	Educate on long-term risks	-	-
4: Reduce underlying risk factors	Consider long-term risk factors in decisions	Greater focus on ex-ante and anticipatory action	Measures designed to promote flexibility and progression
5: Strengthen disaster preparedness and response.	Institute resilient repair and recovery	Greater benefits of acting earlier; link DRR and insurance	-

Priority 4: Reduce underlying risk factors

>> Greater focus on managing the underlying drivers of long-term risks

>> Anticipatory DRR as well as ex-ante DRR

Greater focus on ex-ante DRR: reducing risk today

Focus on urban poor

Reduce vulnerability of the urban poor and support their economic development

- Providing basic services (water, sanitation, energy, health)
- Governance (property rights, voting rights)
- Safer, more resilient housing
- Flood protection, access to insurance

Greater focus on anticipatory DRR: Reducing risk for tomorrow

- Spatial planning (incentives for resilient development – regulation, service provision)
- Investing in resilient infrastructure (flexible, progressive interventions)
- Ensuring services meet growing population

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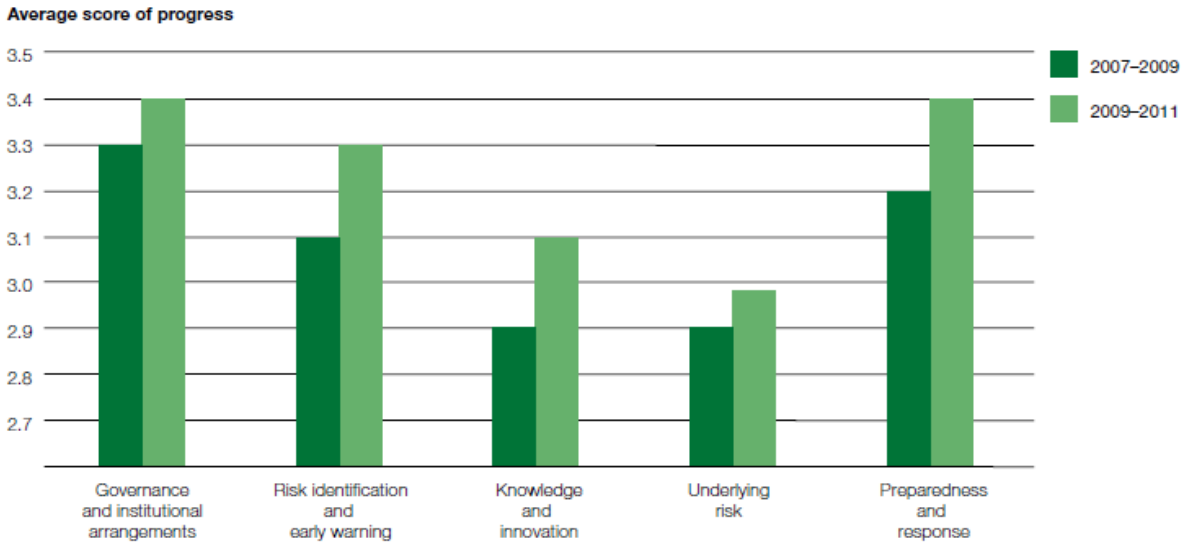
Priority 4: Reduce underlying risk factors

Climate change, growth and urbanisation bring <u>additional challenges</u> to an already challenging area:

- Difficulties with ex-ante action are exacerbated: investments are more long-term and have more uncertain outcomes
- Some higher costs of 'climate-resilient' investments (ODI: 5 – 20%)
- Adaptation and DRR institutions rarely linked and have limited mandate
- Lack of technical capacity and institutional structures for dealing with long-term, uncertain risks



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Conclusions

- Urbanisation, growth and climate change are and will create higher, more volatile, more concentrated and more uncertain risks.
- Coping with this will require a new paradigm in risk management.
- The Hyogo Framework provided a good general framework for Action, but misses an opportunity to build a culture around managing long-term risks. In a worst case, this could lead to greater risks and costs.
- Similar principles apply to disaster resilience frameworks applied by governments, donors, NGOs and the private sector

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