

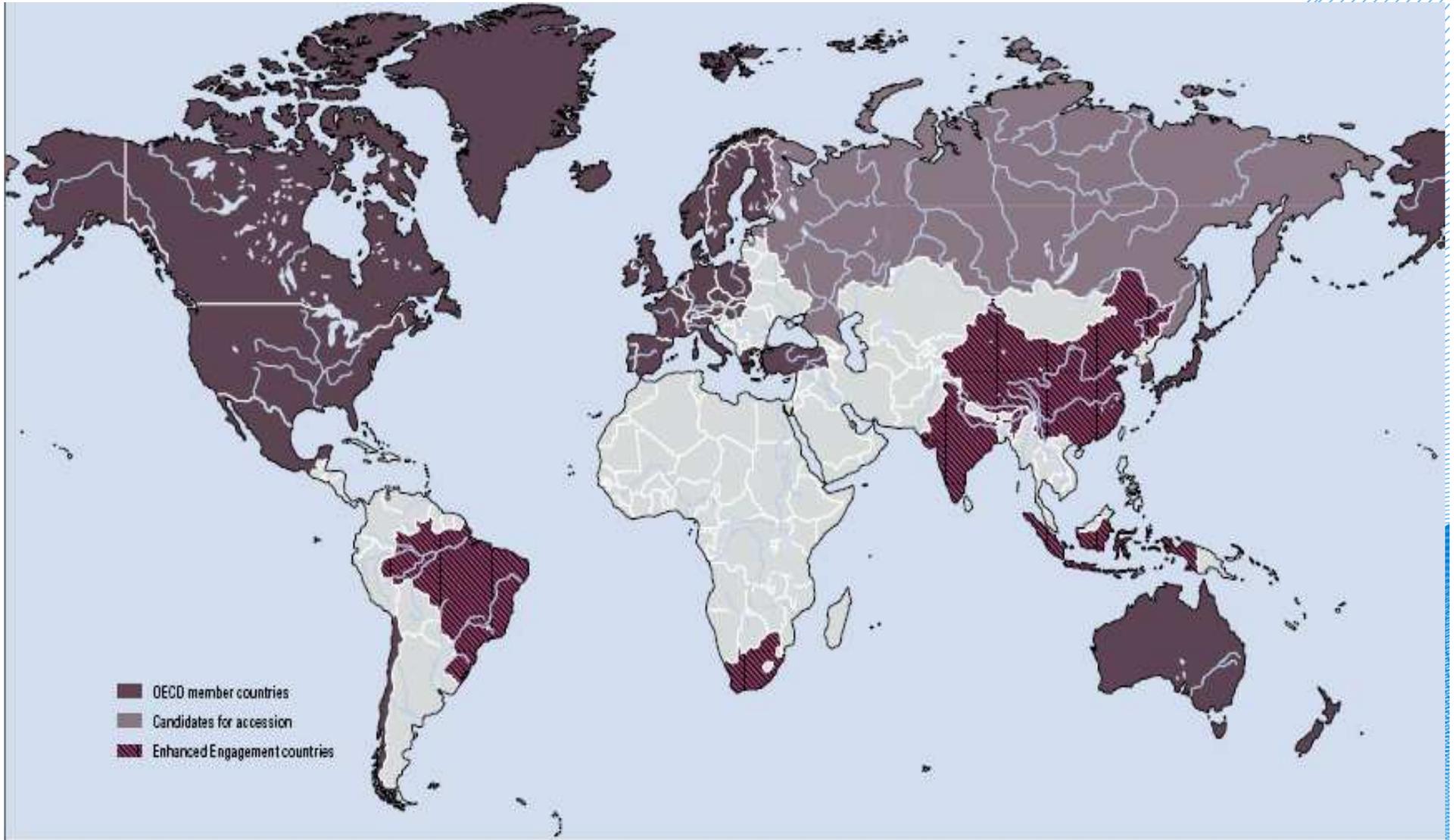


FUTURE GLOBAL SHOCKS: IMPROVING RISK GOVERNANCE

EFP Workshop, Brussels, 26th October 2011

Barrie Stevens, Head,
OECD International Futures Programme

OECD Member countries, Candidates for accession and Enhanced Engagement countries 2011

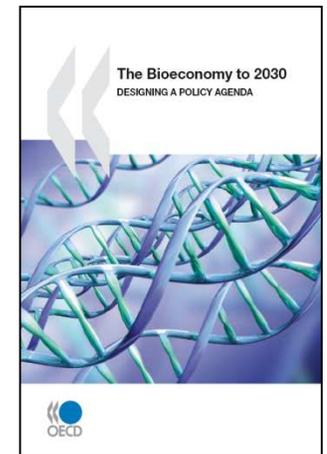
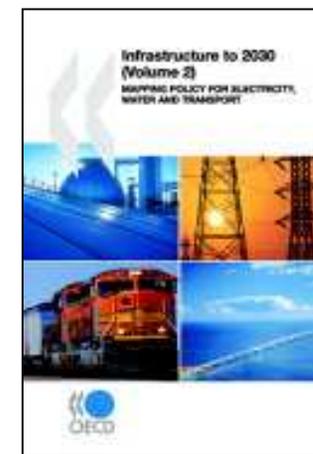
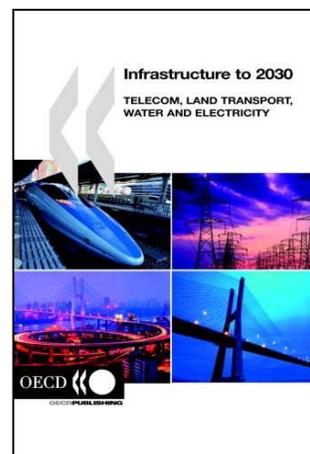
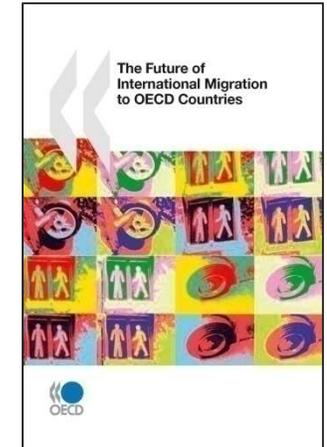
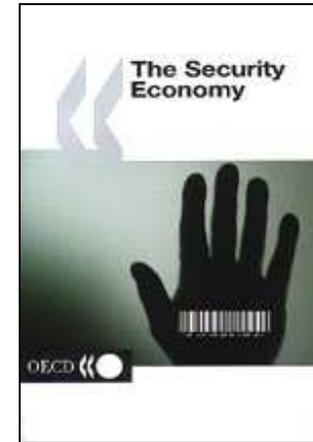
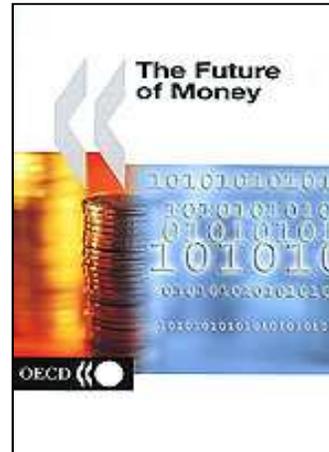
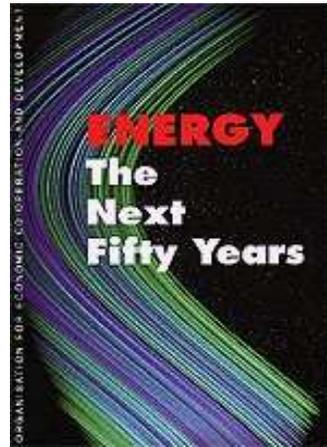
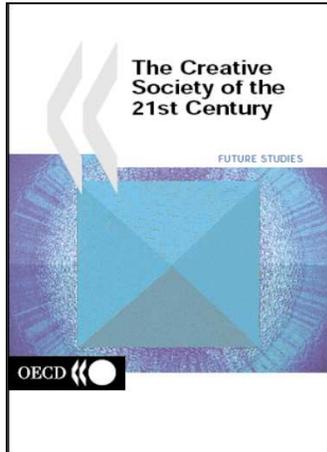


OECD International Futures Programme (IFP)

Sustaining the OECD's Pathfinder Role for Public Policy

- OECD's foresight group
- Advises OECD Secretariat and Member Countries
- Monitors future trends
- Identifies and explores new and emerging policy issues for OECD
- Promotes cross-directorate work within OECD
- Triggers new work in specialised parts of the Organisation

Examples of Past Work



IFP work on risk management – the foresight context

- Applying foresight to new issues or to policy domains where previously not well integrated
- *Emerging Risks in the 21st Century* (OECD, 2003)
- Country risk management reviews – France, Italy, Japan, Norway, Sweden.....
- *Innovation in Country Risk Management* (2009)
- Moving 2011 into more structured, committee-based OECD Directorate (GOV)
- Nurture in foresight environment....transplant into mainstream activity.

Future Global Shocks – the Project

- Grew out of risk management work
- Focus was on the need to map the propagation of global shocks and their secondary effects on economy and society with a view to improving resilience.
- Aimed to generate a set of policy options for OECD governments to enhance the capacity to identify, anticipate, control, contain or mitigate *large scale disasters or shocks* to economy and society.
- Project Steering Group – governments, business, research
- Based on results of wide-ranging consultation of experts and decision makers.
- Drew on inputs provided by initial sponsors in governments and the private sector.

What are global shocks?

- Rapid onset event
- Severely disruptive consequences
- Scaling up from local to global
- Affecting at least two continents

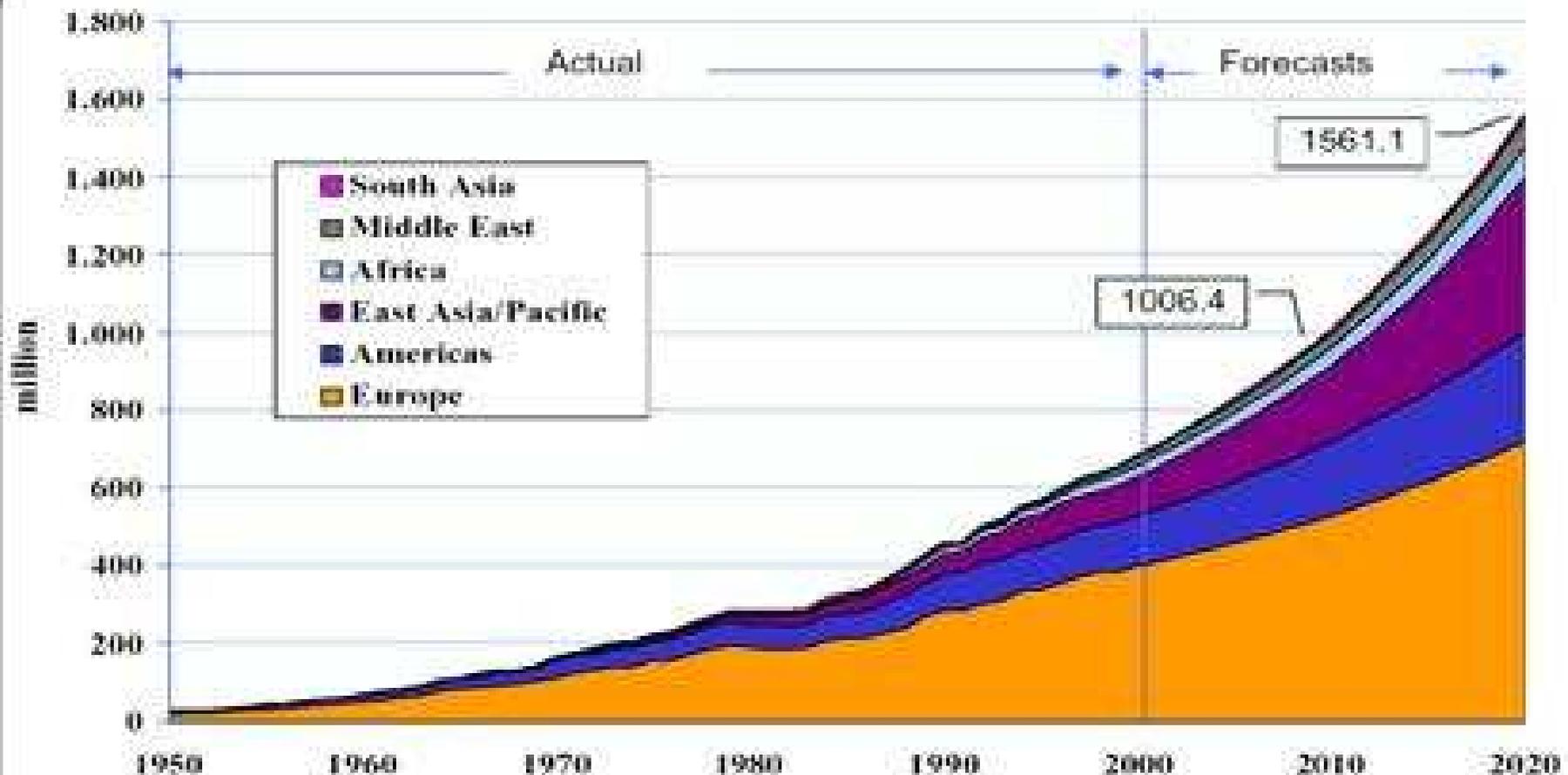
- Expectation: more frequent global shocks very likely in years ahead.

Key Drivers

- Growing interdependencies within economic, social, environmental spheres;
- Increasingly seamless interconnectedness;
- Increasing complexity of systems; and
- Increased concentration of assets and population...
- ...creating a context conducive to (global) large scale shocks

Growing interdependencies

Projections of international tourist arrivals to 2020



Source: World Tourism Organization ¹⁰

Supply chains have become complex causing challenges for risk management

Supplier

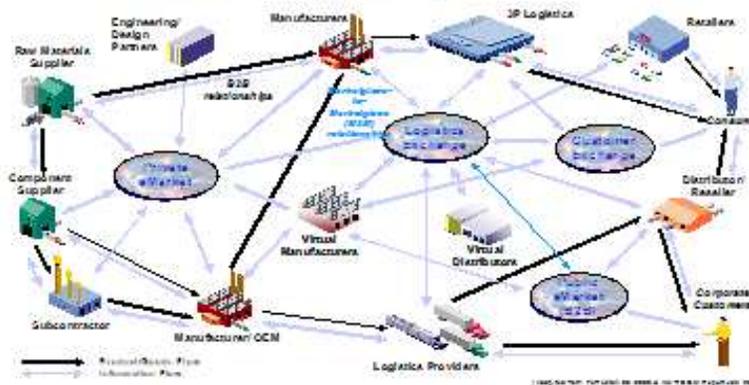
- Global sourcing
- Suppliers with 50% to 100% revenue from same OEM*
- Move to outsourced manufacturing

Environment

- Geopolitical instability
- Natural disasters
- Technology security

Customer

- Changing customer tastes
- Volatile demand patterns
- Customers pricing power



Manufacturer

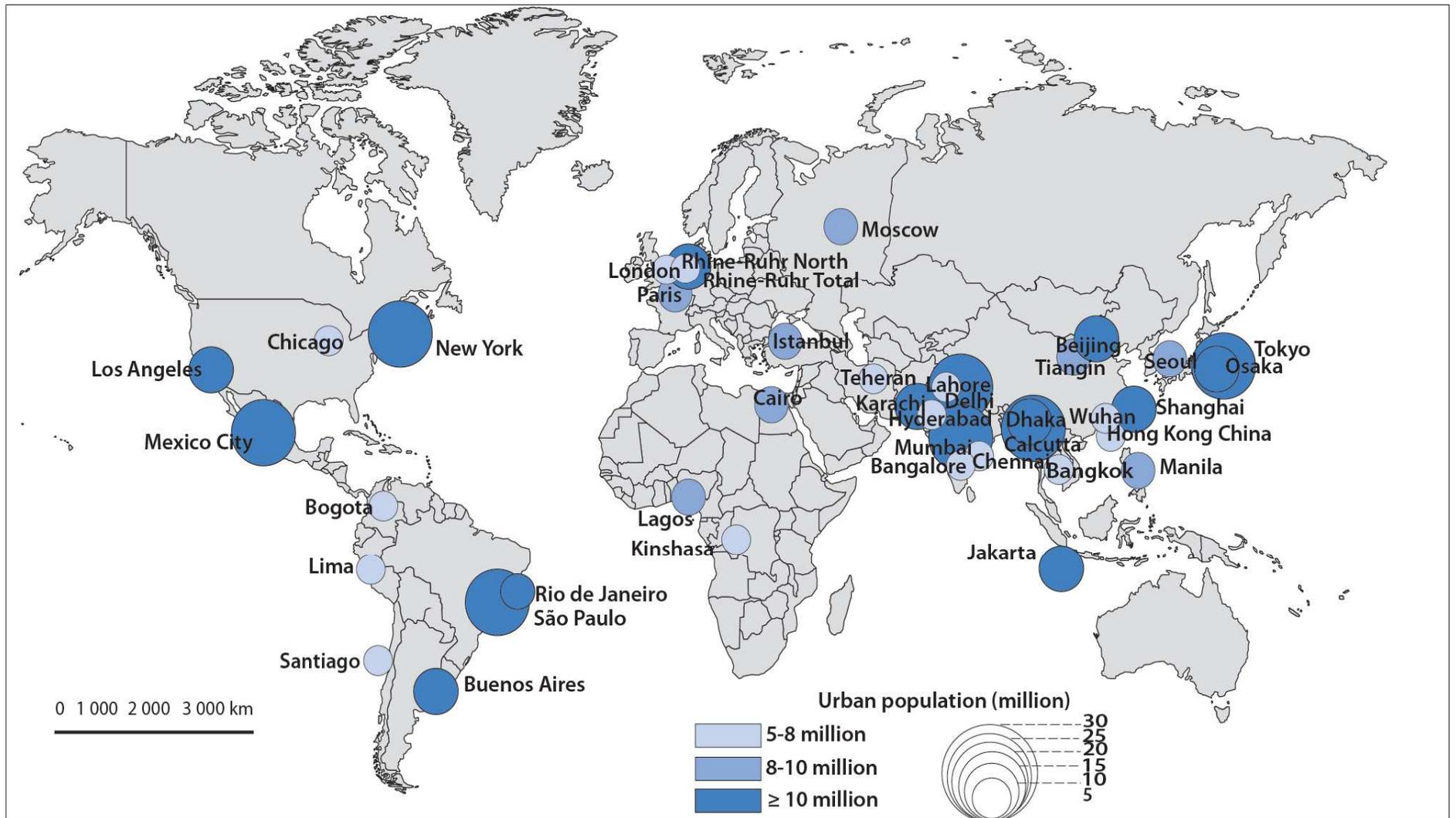
- Global manufacturing and capacity constraints
- Distributed information
- Increased Product Complexity

© Zurich American Company

* Original Equipment Manufacturer

Source: Zurich Financial Services

Population concentrations

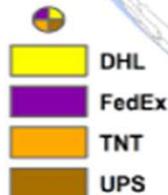
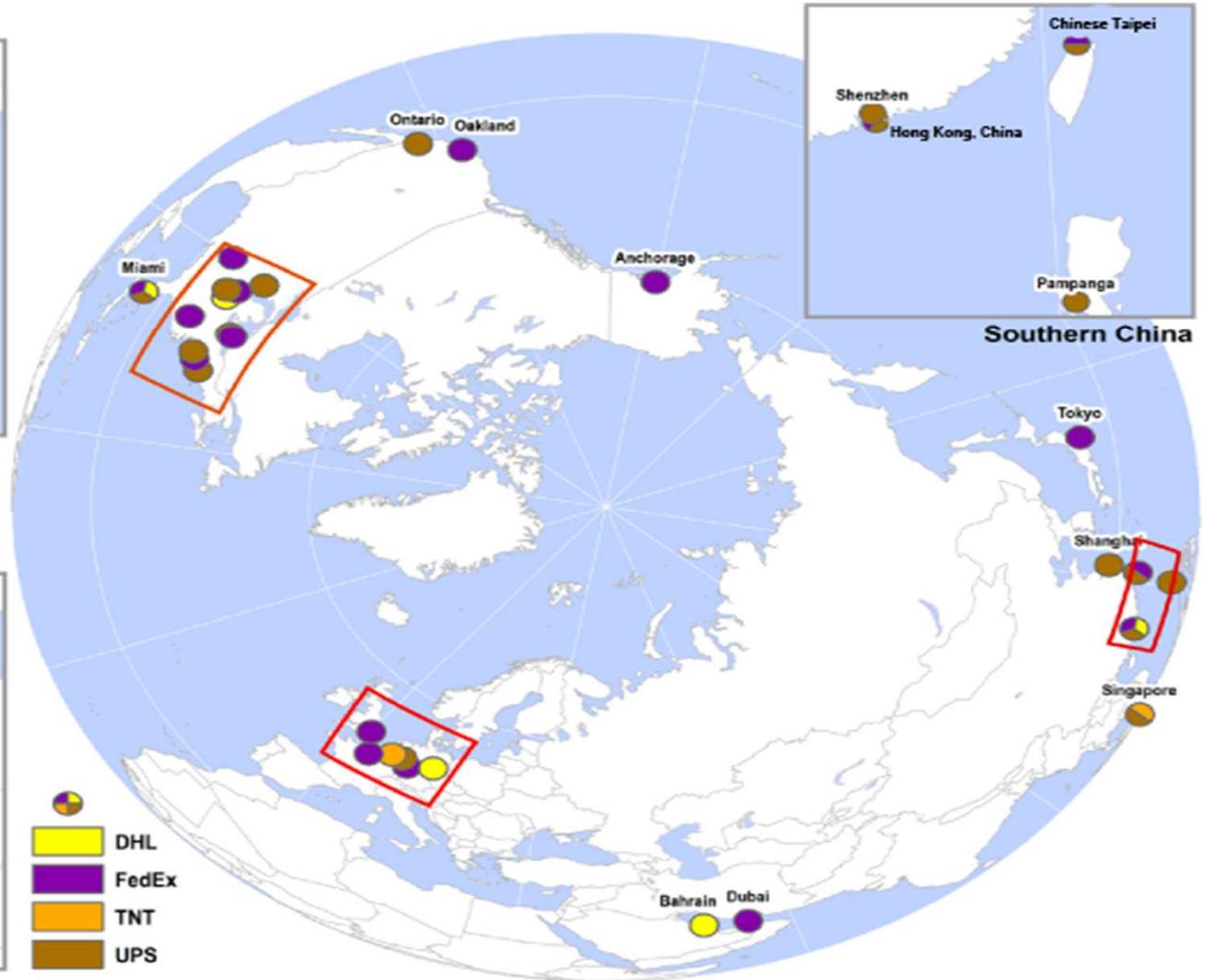
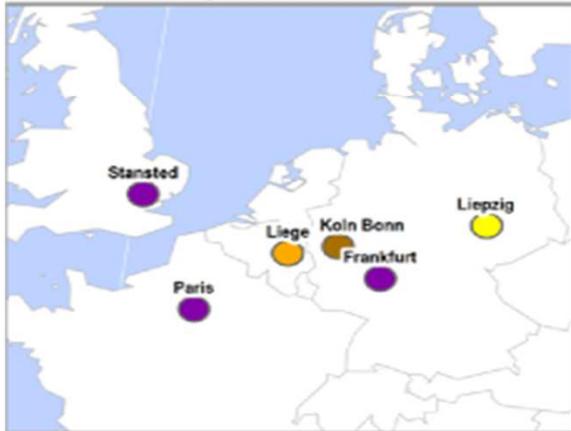


Cargo Transport Hubs

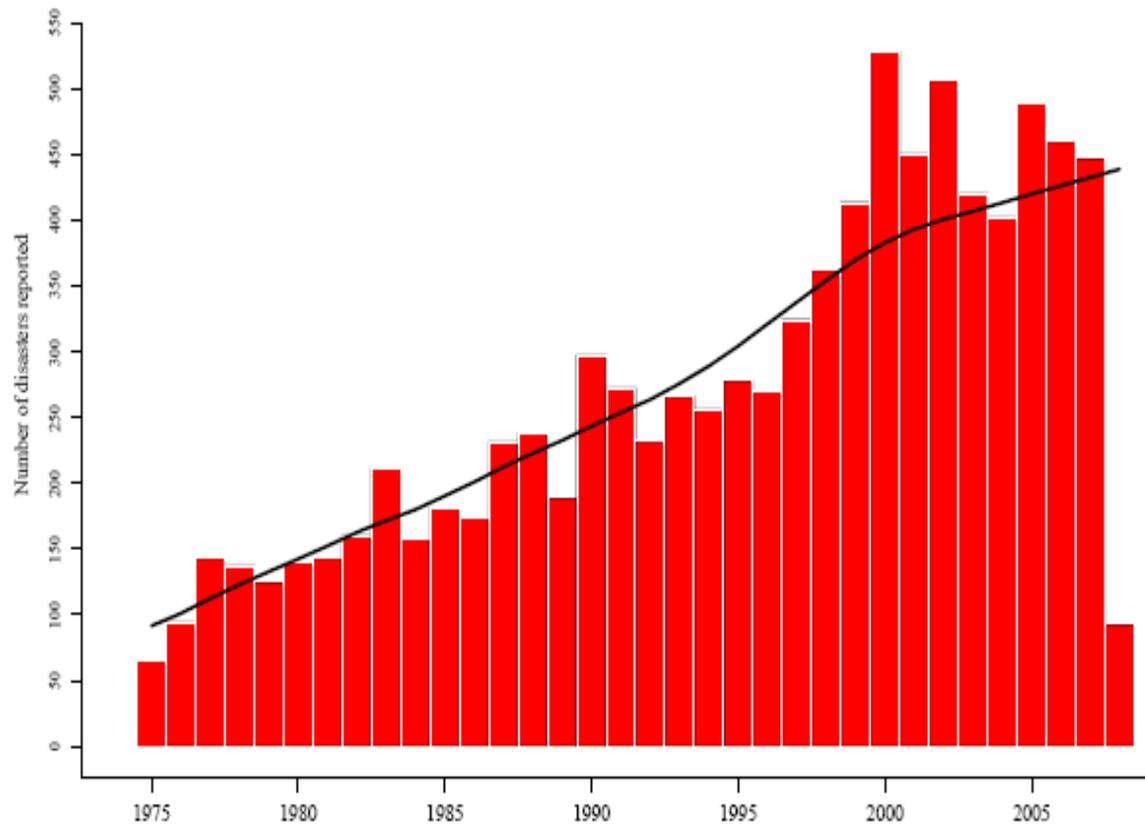


Eastern North America

Western Europe

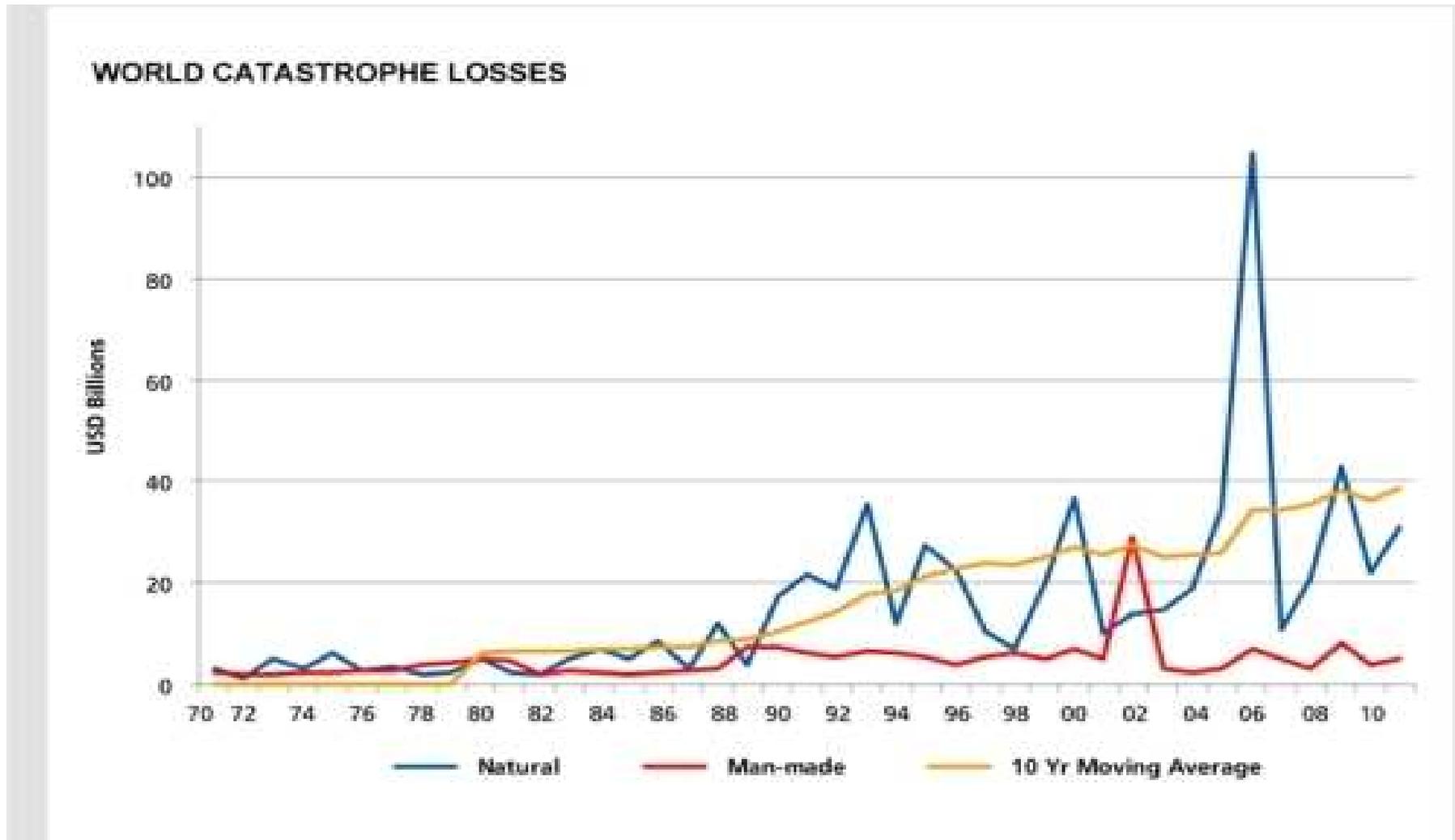


Natural Disasters Frequency



Source: Centre for Research on the Epidemiology of Disasters

Disaster Costs Rising



Source: Swiss Re, Guy Carpenter & Company, LLC

Process:

A sample of 5 case studies (chosen by Steering group) out of 25-35 potential threats:

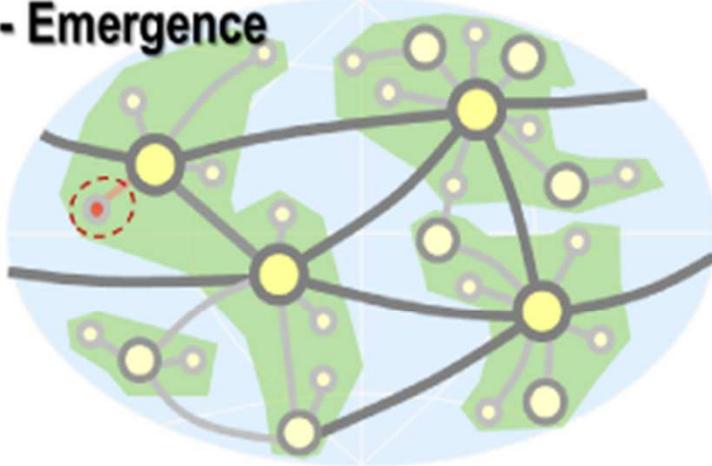
- Pandemics
- Financial crisis
- Cybersecurity
- Solar storms
- Social unrest

Special focus of interest:

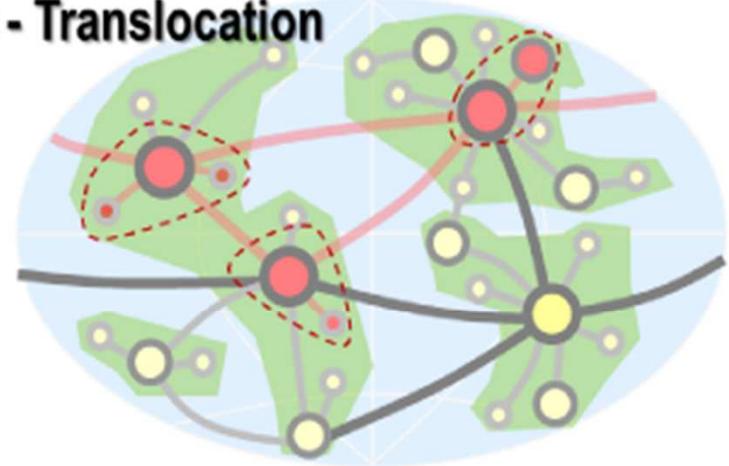
- Rapid onset
- Propagation from local to global level
- Secondary effects

Pandemic propagation

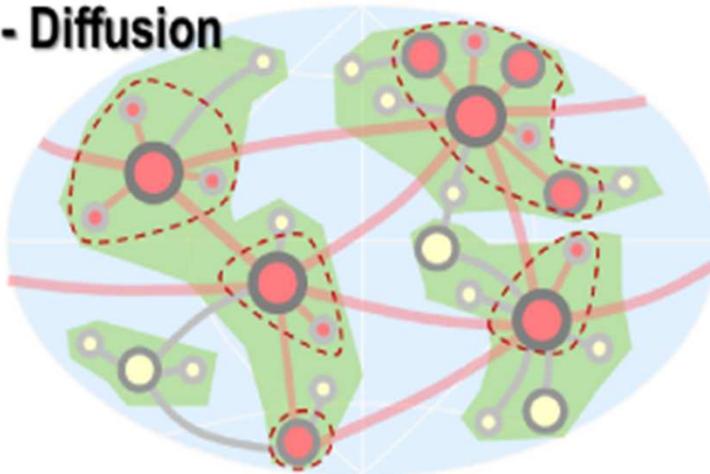
A - Emergence



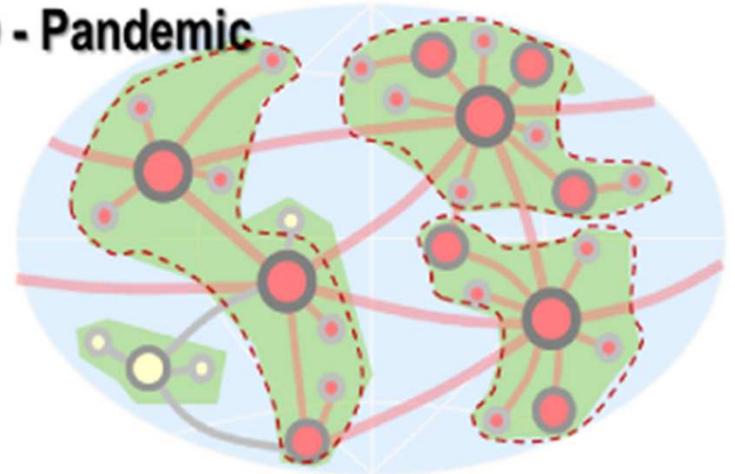
B - Translocation



C - Diffusion



D - Pandemic



Examples of lessons learned (headline level)

1. Global shocks are of a different nature to large scale disasters...
2. Likelihood of more frequent global shocks in 21st century but to occur you need a set of unusual circumstances (propagation is not so easy, robustness can be better than you think..)
3. Maps and models of complex systems rarely available - more investment in and maintenance of databases and models needed, as well as variety in models (no “one-size-fits all”).

Lessons learned (2)

4. Diversity and system redundancy key watchwords
5. High premium on improving international cooperation:
 - Improved national and international surveillance and situational awareness are crucial
 - Greater harmony in risk assessment and....
 -and better co-ordination of policy actions

Volcanic ash cloud over European air space

Key:  All flights canceled  Some flights operating  Open; only flights to or from affected areas canceled



Source: Jørgen Brandt, Senior Scientist, National Environmental Research Institute at Aarhus University, Denmark

Lessons learned (3)

6. A premium could be put on the building of « reserves », buffer inventories of parts, additional peak capacity (of course at a cost):
 - Private sector and financial analysts might be ready to accept some extra cost
 - Public sector, regulators, safety agencies might be willing to « incentivize »
 - Transfer of risks: insurance mechanisms
7. Supplies of rare or unavailable resources (drugs for orphan diseases, vaccines, surveillance agencies, models.. ..) need special attention



Thank you.

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<http://www.oecd.org/futures/risk>