

Adaptation – preparing for the new conditions

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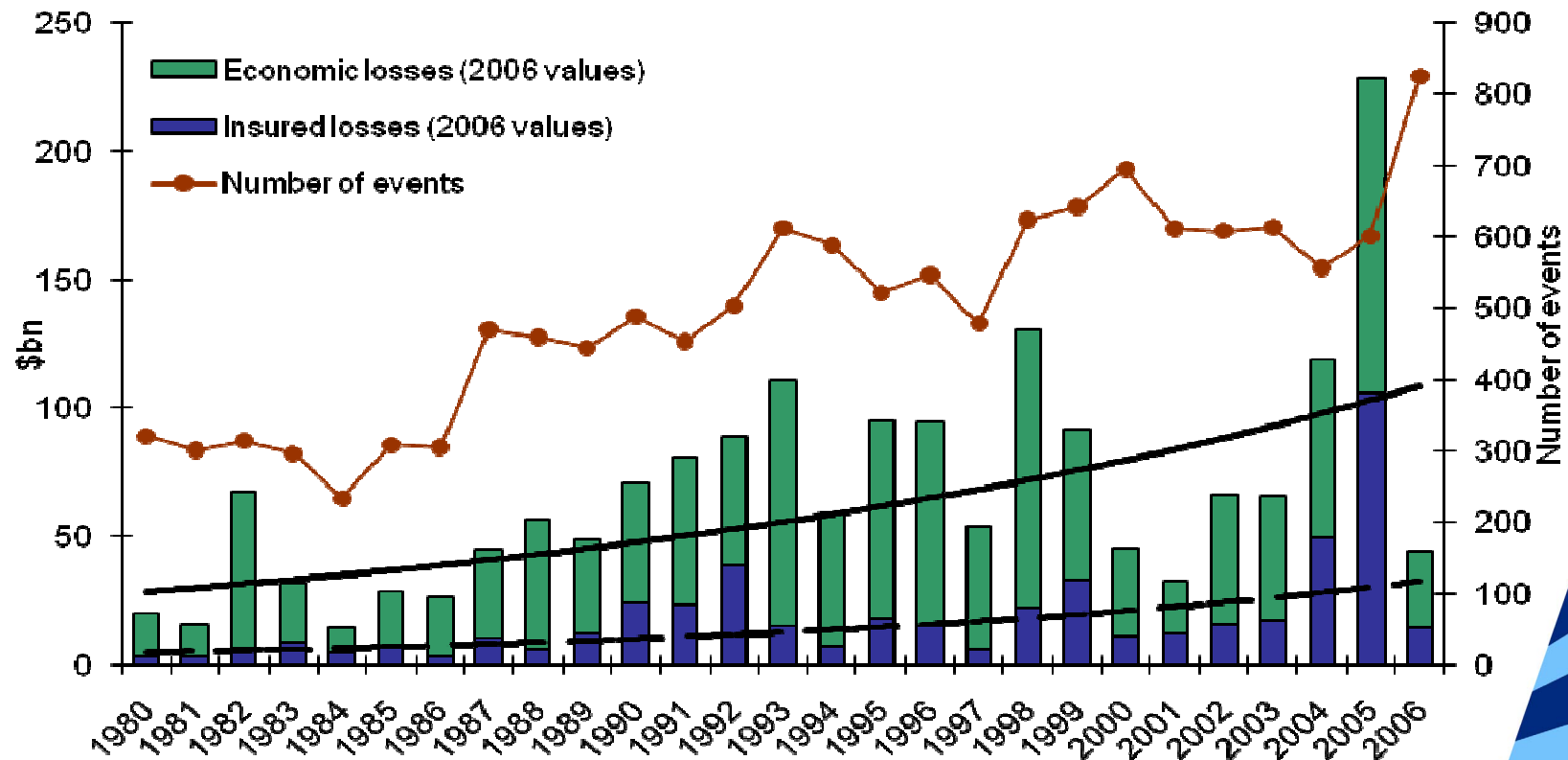
Madrid 2009-03-16

Shaping the Knowledge and Innovation Communities
(KICs) - Climate change mitigation and adaptation

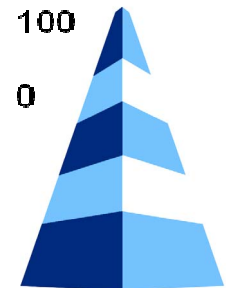


Climate change and insurance

- Number of global weather related disasters and the losses caused

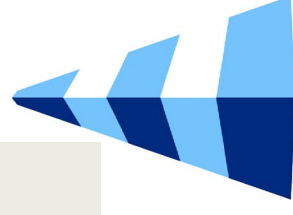
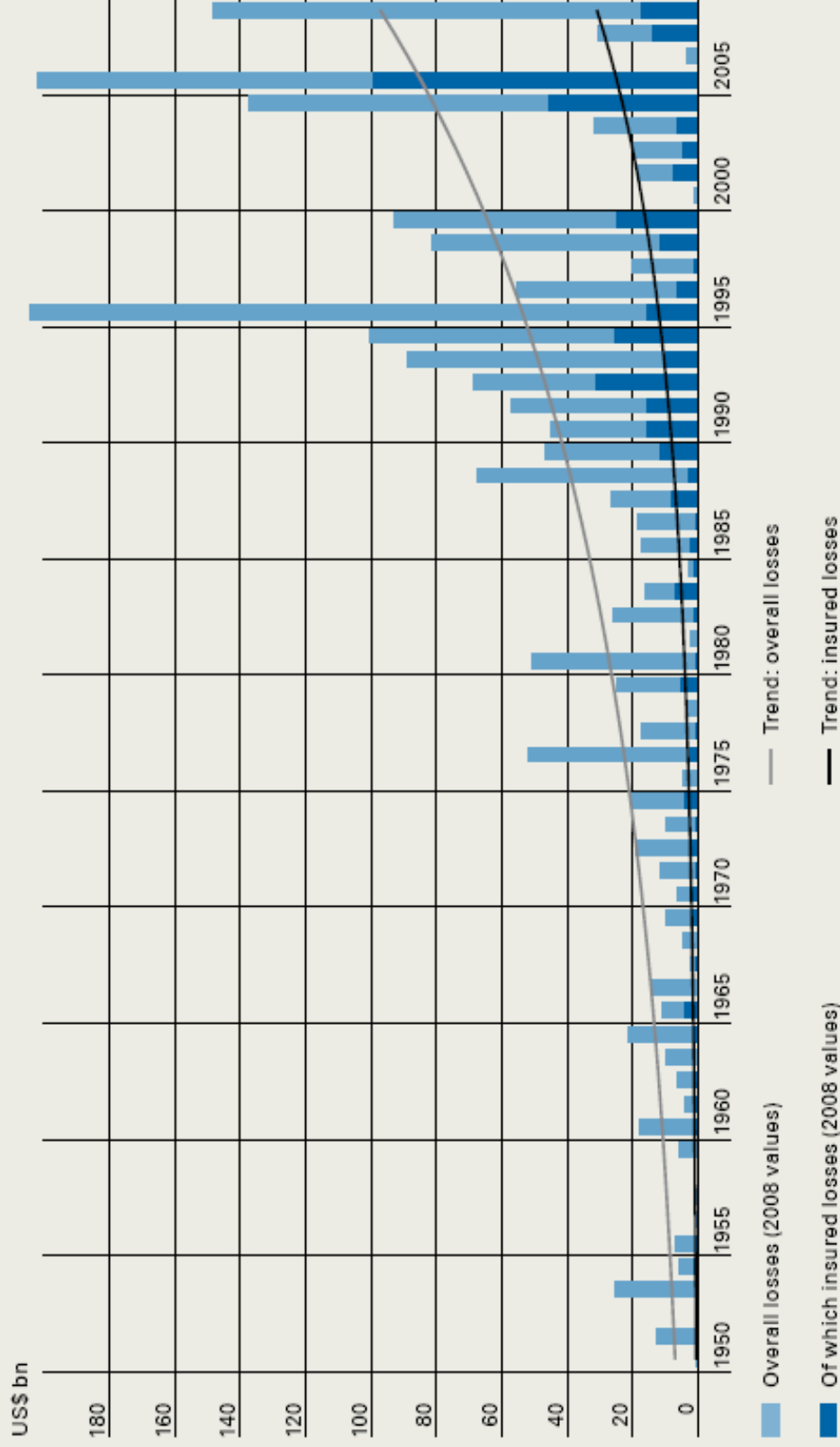


Source: NatCatSERVICE, Geo Risks Research, Munich Re (July 2007)

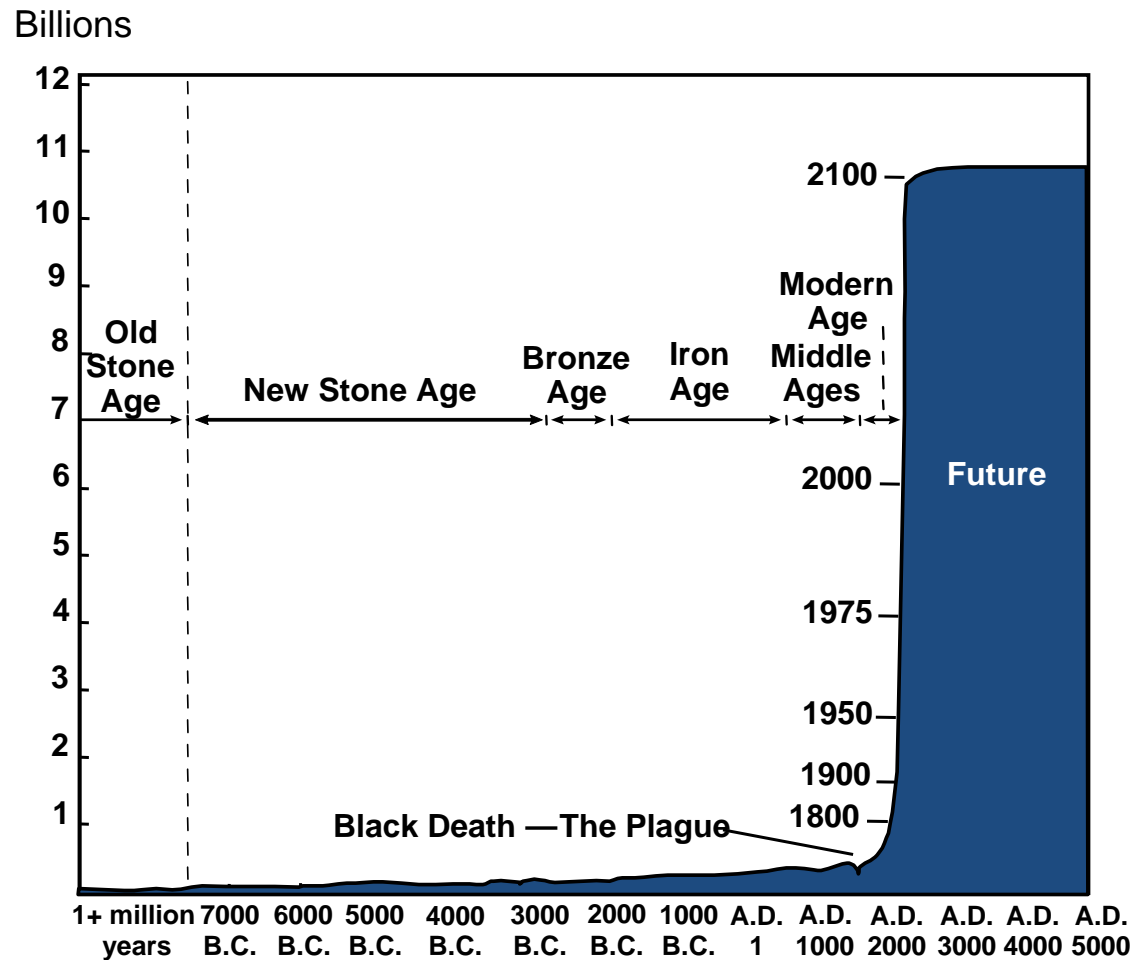


Overall losses and insured losses from great natural catastrophes, 1950–2008

The chart presents the overall losses and insured losses – adjusted to present values. The trend curves verify the increase in Category 6 catastrophe losses since 1950.



World Population Growth

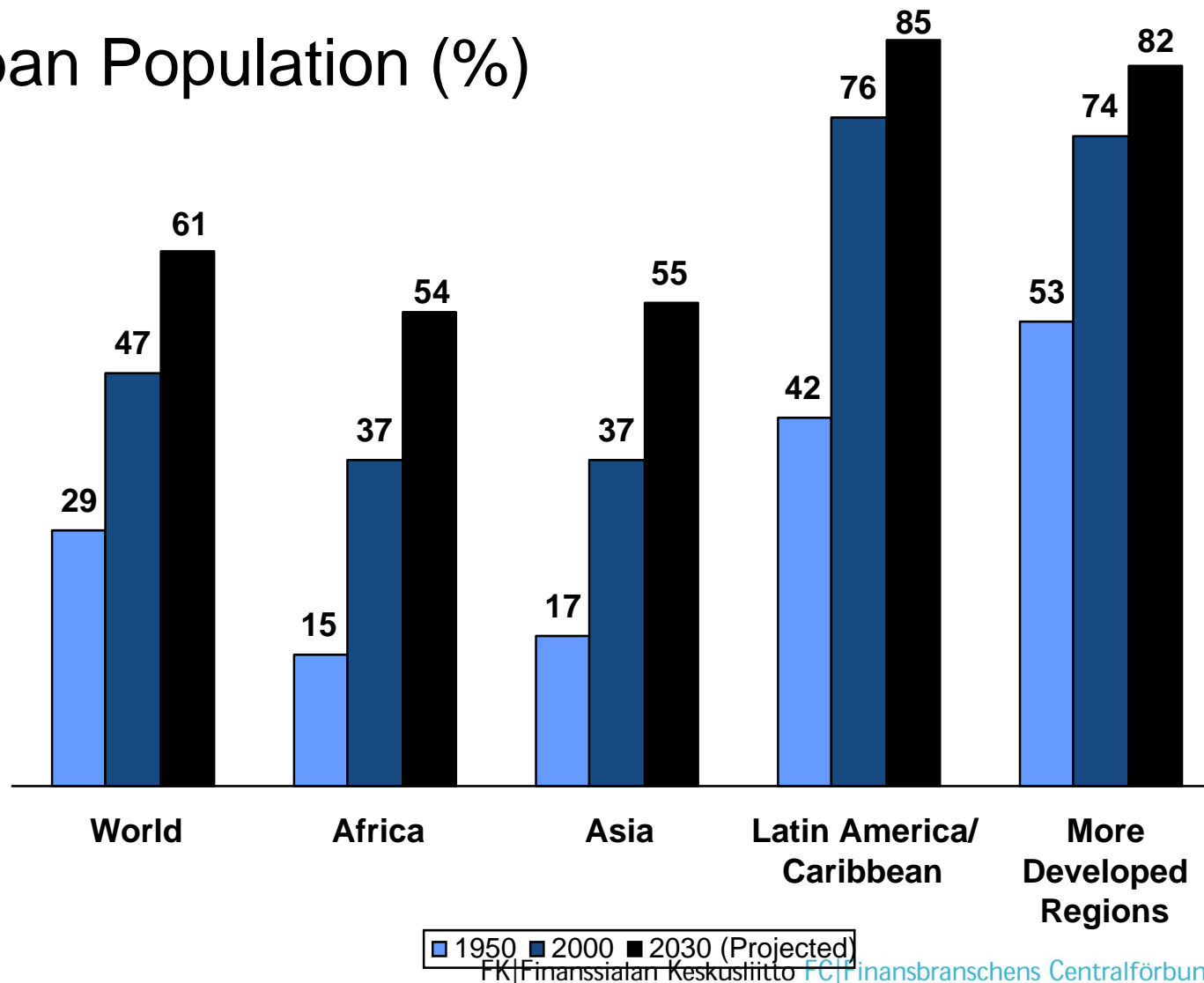


Source: Population Reference Bureau; and United Nations, *World Population Projections to 2100* (1998).



Trends in Urbanization

Urban Population (%)

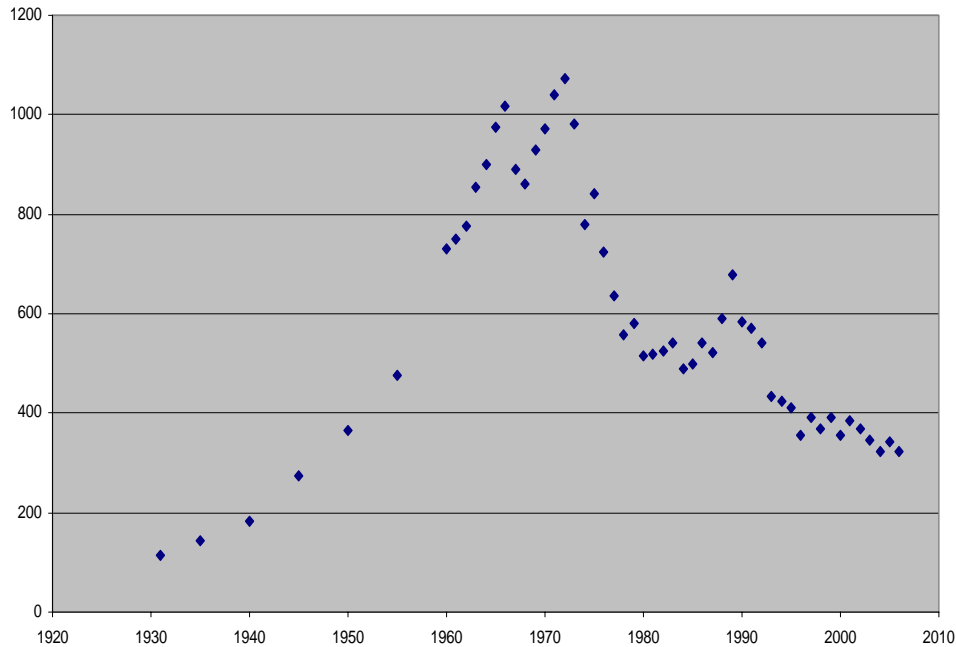


Source: United Nations, *World Urbanization Prospects: The 2003 Revision* (medium scenario), 2004.

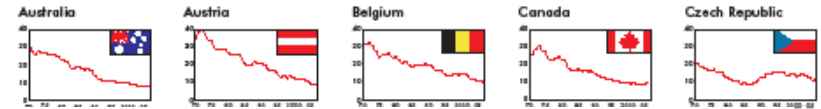
■ No need to be fatalistic

■ see traffic deaths

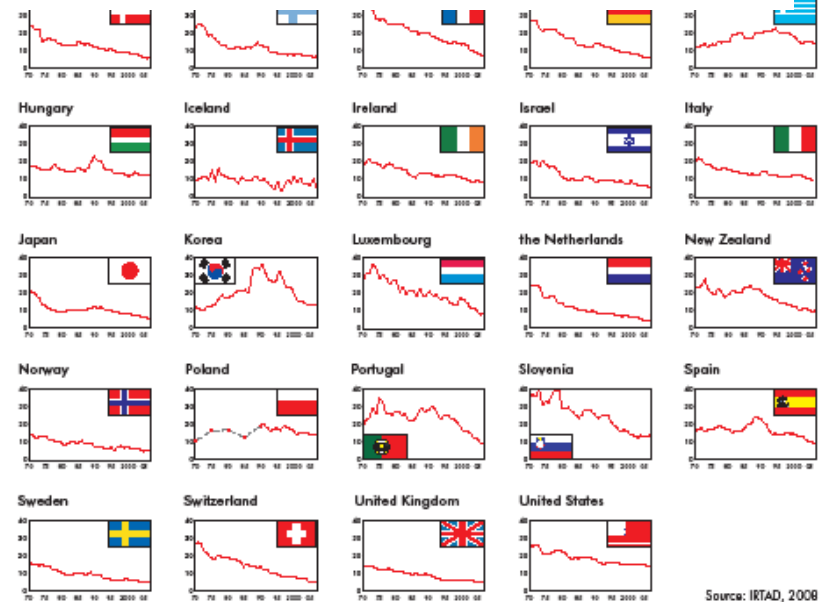
Fatalities in road accidents in Finland



Traffic deaths per 100 000 population since 1970



Traffic deaths / 100 000 population since 1970



Source: IKTAD, 2008

■ insurers have much experience in loss protection



Climate change and insurance

- At each stage of the process
 - Risk assessment: FW-looking & multi-dimensional models
 - Risk awareness: communication, mapping/zoning, pricing,...
 - Risk reduction: prevention, underwriting policy
 - Risk mitigation
 - Re/insurance policies (eg micro-insurance)
 - Financial markets (eg ART)
- In public/private partnership (PPP)



Climate change and insurance

- **Several initiatives** such as:
 - **Munich Climate Insurance Initiative**
 - Launched by Munich Re in 2005
 - Aim: finding solutions to the risks posed by climate change (loss reduction, insurance,...)
 - **Climate Adaptation Development Program**
 - Launched by Swiss Re in 2007
 - Aim: developing financial risk transfer market for the effects of adverse weather in emerging countries
 - **Climate Wise**
 - Launched by the Association of British Insurers (ABI) in 2007
 - Aim: encouraging customers to change their habits and influencing policy



Climate change and insurance

- **Challenges**

- Statistics
- Insurance capacity
 - do transfers to capital markets via securitisation help?
- Correlation
- Anti-selection
- Moral hazard



Priorities for technology cooperation

- New technology such as renewable energy production needs
 - financing and
 - insuranceto become commercially viable.
- Lack of experience (no statistics) in this area means higher risk margins both in financing and in insurance
- research, not only by industry, is needed



Priorities for technology cooperation

- **Knowledge building and sharing**
 - gathering and sharing of data, models and analyses
 - forward-looking impact assessment
 - Impact on both adaptation and mitigation
- **Platform for the exchange of best practices on**
 - Research
 - Education
 - Tools such as risk zoning/hazard mapping



Financial sources and mechanisms

- **Ex-ante financed schemes**
 - more efficient
 - more effective
 - Increased awareness and
 - stronger involvement of stakeholders
- **Conditionality / penalty clause**
- **Liquid and stable financial markets**
 - Alternative Risk Transfer instruments



Institutional architecture and enabling environment

- **long-term, strong and effective framework**
 - stable legal and political environment
 - For businesses to adapt their strategies (business plan)
 - Strong involvement of the authorities
 - national adaptation plans, policy measures such as land use planning, public-private partnerships
 - high standard of risk management rules (building codes, land use planning, etc)
 - Flexibility
 - Principle-based
 - Adaptable to the local conditions
 - Market-led initiatives



How much is much?

- According to the IPCC (Intergovernmental Panel of Climate Change) the cost of **mitigation is 0.13 %** of the global GDP until 2030
- The Federation of Finnish Financial Services has used Capgemini forecasts saying that in payment systems (**SEPA**) the potential savings for the economy as a whole are **0,12-0,22** of the GDP (EU-16) – and this is just the SEPA part of e-services

