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

Trends in Urbanization

Urban Population (%)

No need to be fatalistic

- see traffic deaths

Fatalities in road accidents in Finland

- 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
  - insurance
  to 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 IPPC (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.