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Risk Management Best Practice



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World Flooding Jan - Aug 2002

- Floods in 80 countries
 - affecting an area the size of the USA and 17m people, with 3,000 deaths, and US\$30bn damage (\$55bn by year end)
- Europe: up to 250 to 500 year return period
 - cost US\$ 18.5bn by year end, of which US\$ 3bn was insured.
- China: up to 1,000 year return period

Source: WMO briefing for WSSD, August 2002.
(Year end figures from Munich Re.)

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Big European Flooding events...

- 1993, Rhine, Tay
- 1994, Strathclyde
- 1995, Rhine
- 1997, Odra,
- 1998, England/Wales, Central Europe
- 1999, Danube, Denmark 5m storm surge
- 2000, England/Wales, Switzerland, Italy
- 2001, Wisla
- 2002, England, Central Europe

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Future Outlook

An analysis of output from 19 climate change models* shows that over the next 100 years, very wet winters will be five times more likely than today for much of central and northern Europe.

*Palmer and Raisanen. *Nature* **415** 512-514 (2002)

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Risk Management

- Transfer the risk?
 - State insurance or private insurance?
- Manage the risk?
 - The Risk Triangle
- Best practice
 - Insurance funded initiatives in Scotland.

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State -v- insurance...

- Benefits of private insurance
 - efficient administration
 - claims control reduces “leakage”
 - reinsurance spreads the risk globally
 - relieves burden on taxpayer
- Problems of private insurance
 - low income families or countries cannot afford it, but insurance subsidies may be cheaper than aid.

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“BASIC MUD”

- B ig enough book of business for statistics
- A diverse selection minimised
- S ustainable over time (Carpet bagging)
- I nformation available (Aarhus)
- C onsistent with law
- M oral and political hazard low (Harare)
- U ncertainty about loss
- D emand from customers

Source: Crichton 7

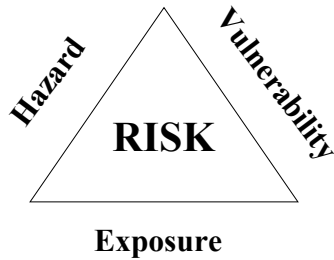
What can be done to manage the risks?

- Initiatives:
 - Council of Europe - EUR-OPA
 - European Union -ECHO
 - NATO - CCMS
 - United Nations - ISDR, OCHA
 - World Bank - “Provention”
- Insurance Industry - ?????

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The Risk Triangle

Insurers have an easy way to reduce risk...



Source: Crichton, 2001

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Is there a better way?

- Hazard
 - collect claims data and fund research
- Vulnerability
 - change building codes,
 - practice resilient reinstatement
- Exposure
 - influence land use planners
 - use high premiums to discourage floodplain development.

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Some examples...

- UK National Flood Claims Database
 - better cost benefit appraisals for flood defences
 - potential input into building codes
 - more accurate premiums/exposure models
- Practical Research at various universities
- CIRIA/EA web site advice to flood victims
- Influencing building code legislation
- Making alliances with WWF, RSPB etc
- Planning - persuading planners to change policies

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Flood Defences in Scotland

- Insurance claims data increase benefit cost ratio by a factor of 2.5,
- All new flood defence schemes since 1995 have incorporated attenuation systems to avoid high walls and help wildlife,
- More flood defences built in the four years since Devolution than the 40 years before it.

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Insurance funded research in UK

- New hydrology methods for hazard estimation
 - University of Dundee
- Impact of floods on buildings
 - Cambridge University
- Research into the condition of sea defences
 - identified which would breach in a 50 year storm and mapped areas at risk. Halcrow and Met Office.
 - First full unit postcode flood model in the UK
- “TSUNAMP” initiative
 - Middlesex Flood Hazard Research Centre
 - Southampton University
 - IIASA

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Building codes are crucial

“The experience that has been gathered over the years shows that buildings and infrastructure are usually not sufficiently designed to cope with the high strains of extreme weather events. The evidence points to critical extreme wind speeds and precipitation being exceeded with increasing frequency...”

Dr. Gerhard Berz,
Head of Munich Re’s Geo Risks Research Dept.
December 2002.

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Buildings (Scotland) Act 2003

- Building Standards Research Committee
- Lobbying using insurance data for three years. Now:
 - Powers to introduce tougher building codes in Scotland
 - Powers to force resilient reinstatement after a storm or flood

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Land Use Planning in Scotland

- Advice to local planners on flooding
 - funded by insurance industry since 1996
- Regular meetings with 26 councils
 - covering 98% of population at risk
- The “Insurance template”
 - adopted by all major local councils
 - recently endorsed by central government

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Possible discussion points

- Do people have a right to live in the floodplain if they wish?
 - State control or
 - insurance price mechanism?
 - Why not both?
- Instead of donor aid after a disaster, what about continuing aid to subsidise insurance?

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New Research Report

*“Flood risk & insurance in England & Wales:
- are there lessons to be learned from Scotland?”*

Includes global insurance solutions

Available free from
www.benfieldhrc.org

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