





Norwegian insurance system

Natural hazards:

- An "Act of God"; solidarity system; premium not based on the risk of damage

Urban flooding:

- Not considered at natural hazard; premium based on risk
- Included in property insurance, 100 % penetration
- All municipalities by property insurance

Property insurance

- Fire
- Theft
- Water&Urbanflooding

Natcat coverage automatic included (by law)

- premium based on fire insurance sum



Insurance "value" – incentives for change via *insurance contract*

- 1. Reduced pay-out after a claim if insured breaches the contract condition
- 2. Awarding customers who install preventive measures
- 3. Not offer the insurance cover at all

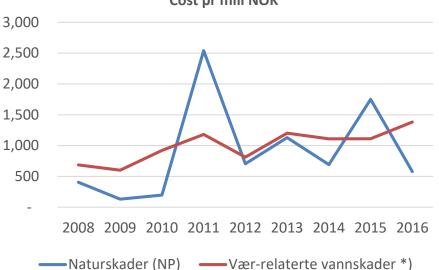




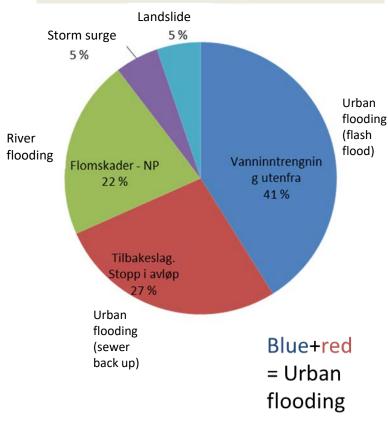
Insurance risk picture



NatCat vs Urban flooding 2008-2016
Cost pr mill NOK

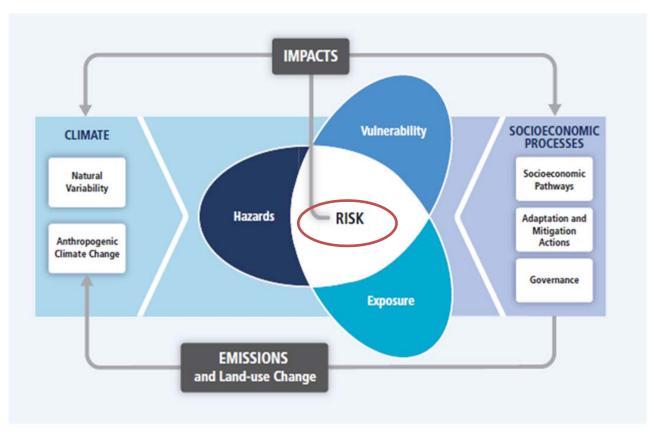


Insurance pay outs 2008 - 2016





Insurance loss data can help decicion-makres understand risk



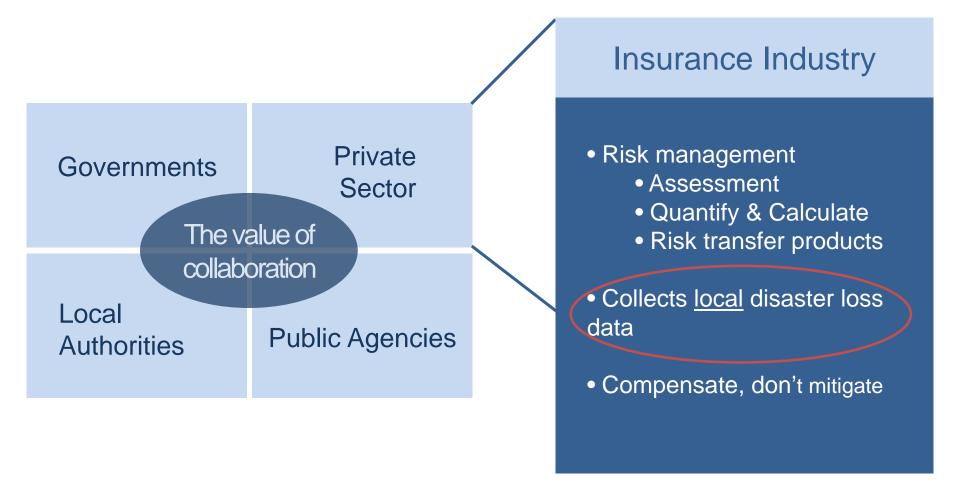
Source: IPCC

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Share the understanding of risk



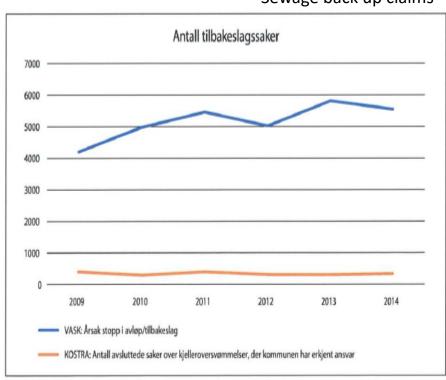


Need of cross over dialogue and private-public projects

Sewage back up claims

- Started dialogue with municipalities and national authorities
- Totally different risk picture/ mismatch of risk picture

 Municipalities lacked loss data = a tool for DRM

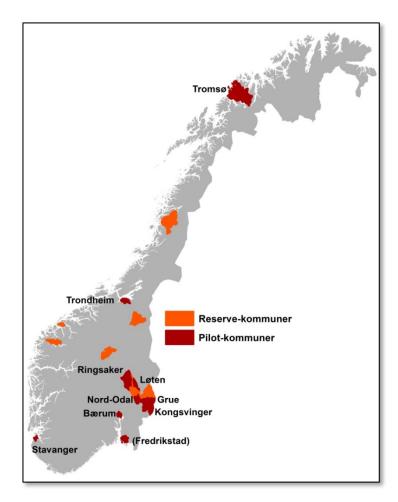


Figur 19.1 Antall tilbakeslag i perioden 2009 til 2014 Kilde: Utarbeidet av utvalgets medlemmer Hjelle, Riise og Stenersen.



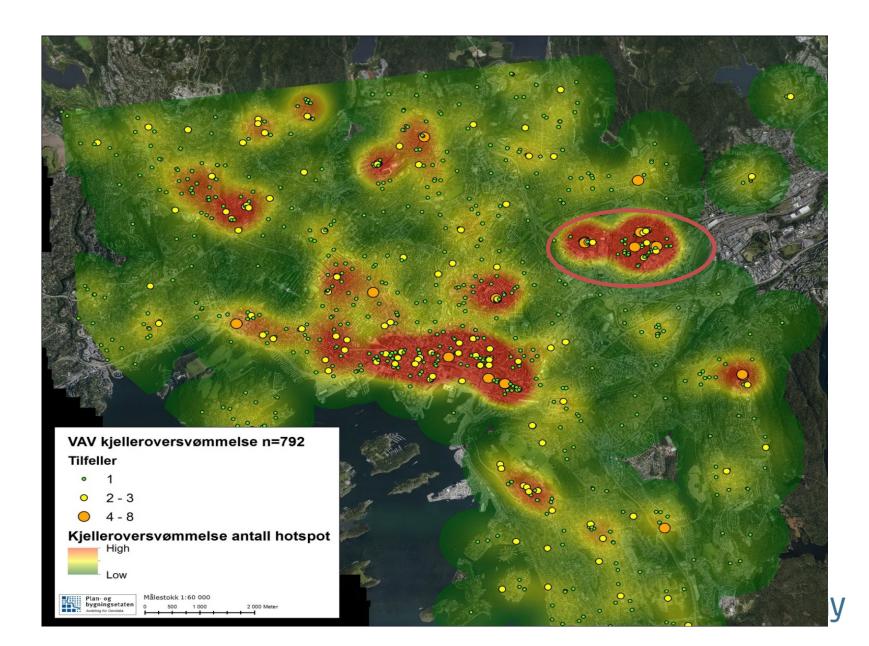
Public- private pilot: Using insurance loss data to strengthen resilience

- Built on dialog and feed-back from municipalities
- Stakeholders: Finance Norway, ten pilot municipalities and researchers
- Reference group: all relevant national agencies
- Period: 2013 2015

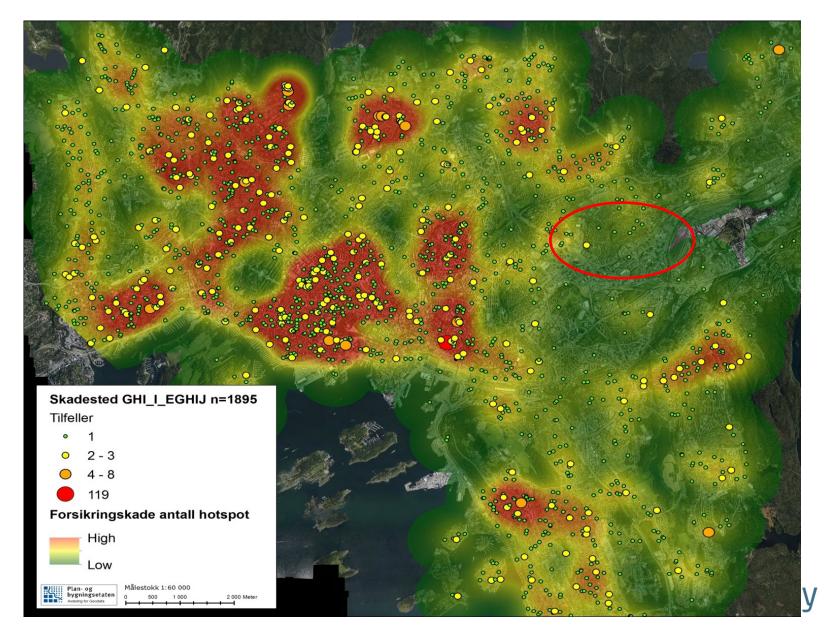




Risk picture: Oslo city's own loss data



After receiving 10 years of insurance loss data



Main conclusion – tool for more effective decision making

- New insights into risks previously unknown
- Improved understanding of how climate change affects society
- Improved knowledge base for localization of future development areas
- Improved knowledge base for
 - Risk and vulnerability analyses and disaster risk management / DRM
 - Prioritizing maintenance and rehabilitation and (re)investments
- Better collaboration between land use planning and technical sector/water & sewage
 - Meaning: a more integrated approaches to address water-related challenges
- ...thereby sustaining the economy and human well-being

