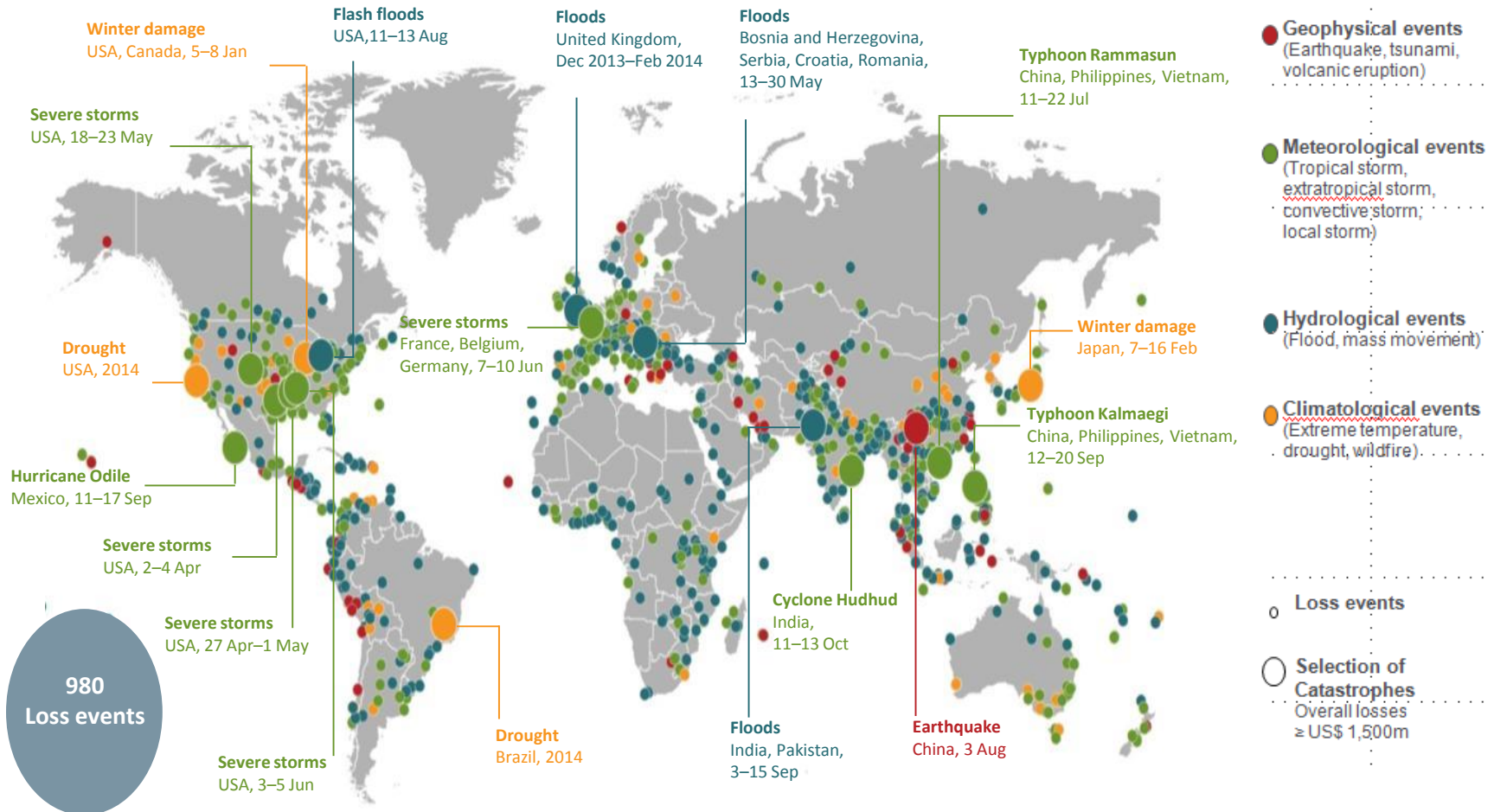


FINANCE NORWAY

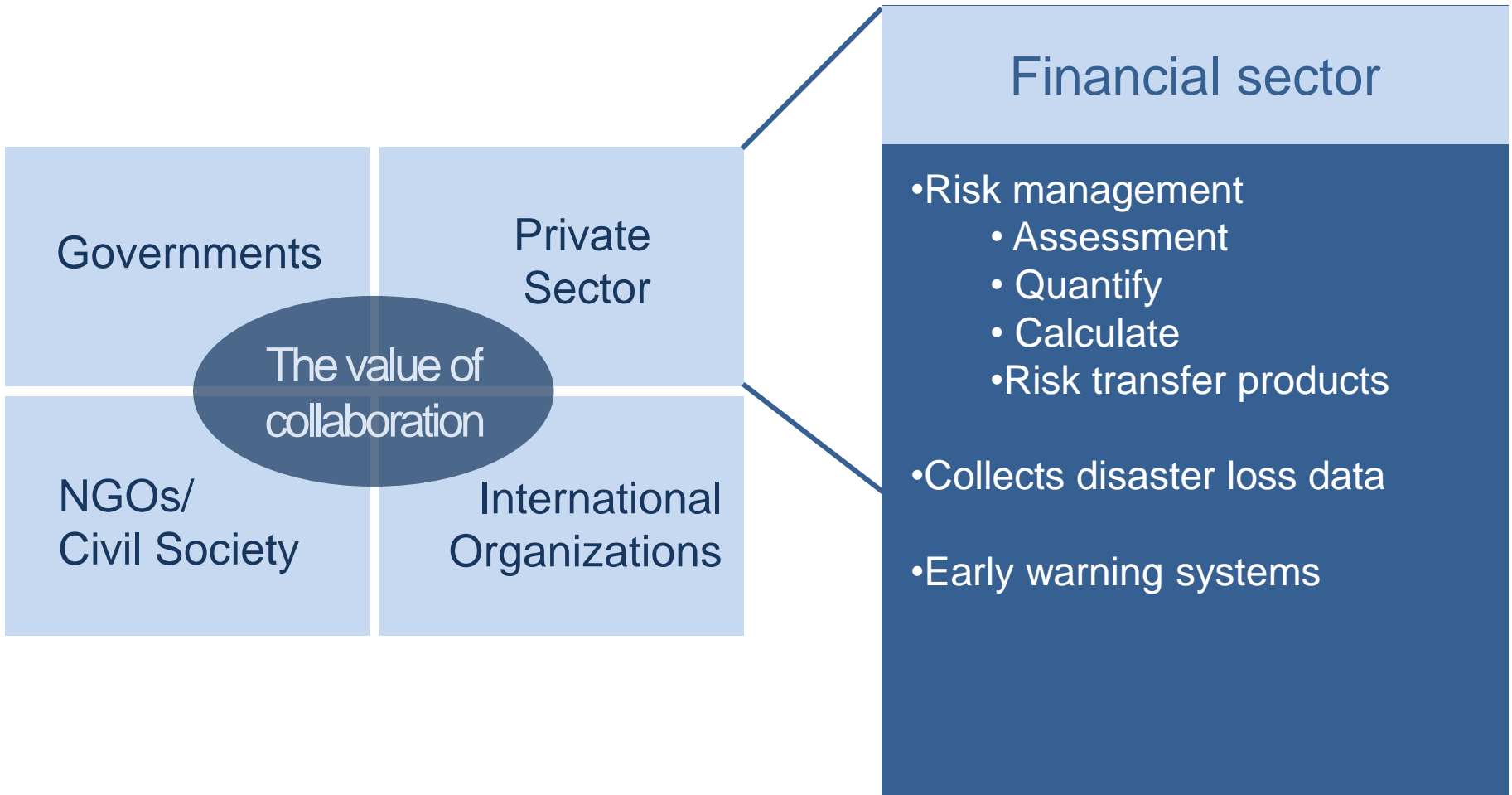
Climate challenge and the insurance industry in Norway



NatCat Service: Loss events worldwide 2014



Cross sector partnerships and the role of the private sector

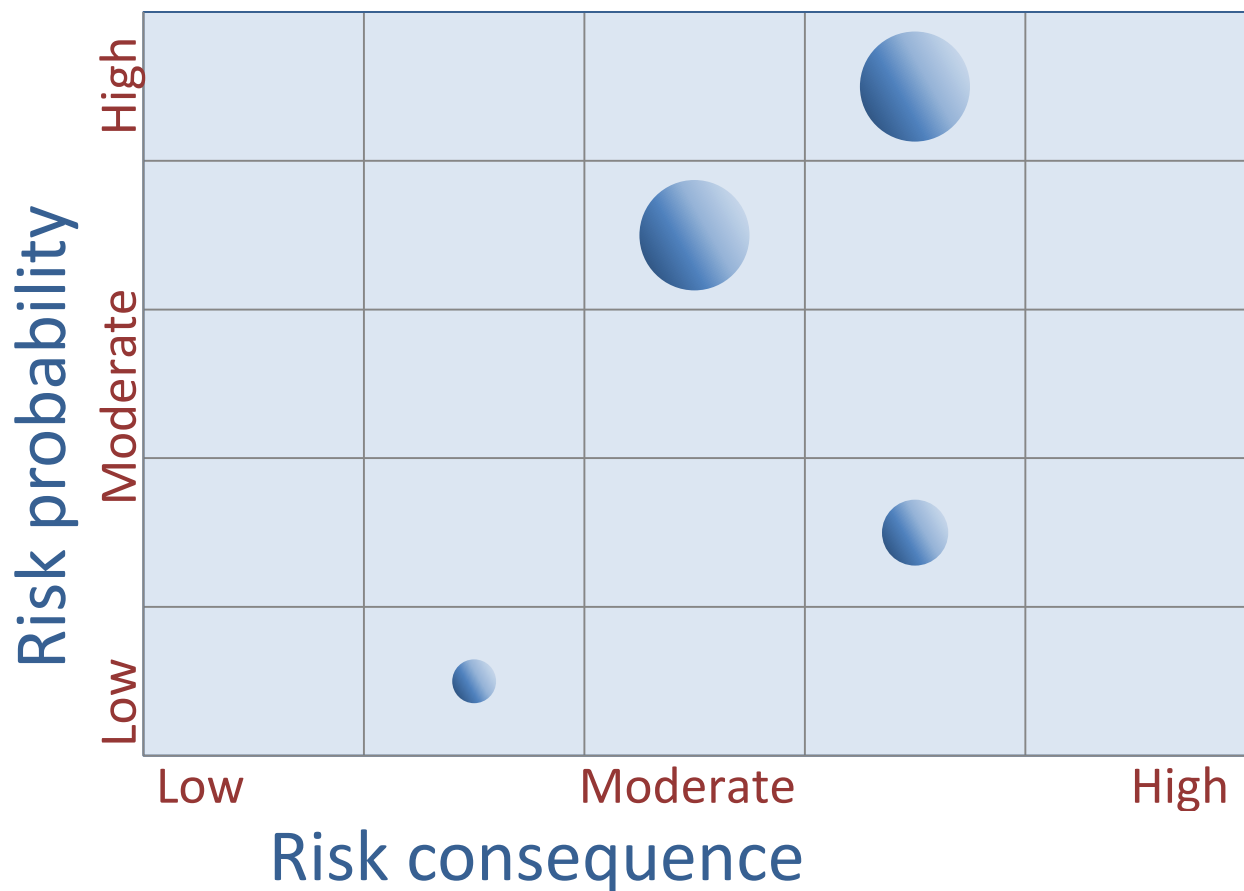


Reduce risk and increase resilience

- **Loss prevention**
 - Rational investment decisions to reduce risk and increase resilience
 - Correlation between low GDP and high human losses in disasters. Prevention failures cost myriad lives, usually among the poorest



Risk: probability and consequence



Risk reduction

- Reduce probability (mitigation)
- Reduce consequence (adaptation)
- Prevention

The value of prevention



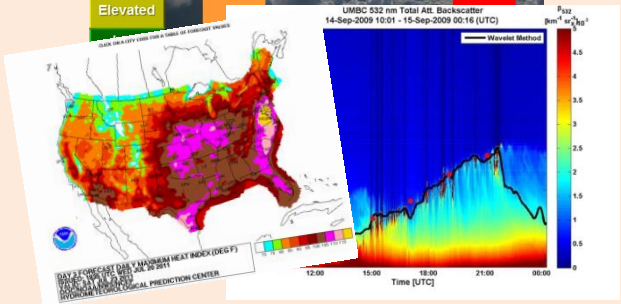
High returns on investment

World Bank 1:4

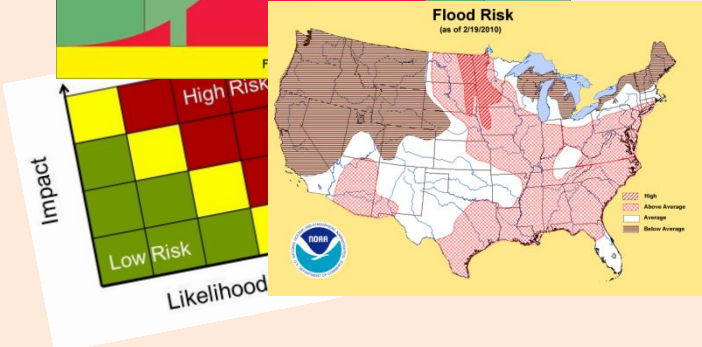
UN 1:7

Cost-benefit analysis:

- **Private sector:** Improved investments decisions
- **Public sector:** Better prioritizing
- Stimulates innovation and technological advances



MODERATE	LOW RISK AREAS	HIGH RISK AREAS	HIGH RISK COASTAL AREAS	UNDETERMINED RISK AREAS
C and X (unshaded)	B and X (shaded)	A, AE, A1-30, AH, AO, A99	V, VE, V1-30	D



Hazard Data and Forecasts

Coordination &

Risk Information

Communication and Dissemination Mechanisms

Collaboration

Preparedness and Early Response

Long term forecast

Tuesday 09 August	Wednesday 10 August	Thursday 11 August	Friday 12 August	Saturday 13 August	Sunday 14 August	Monday 15 August
15°	12°	13°	16°	18°	15°	13°
0 mm	32 mm	17 mm	12 mm	4.3 mm	5 mm	10 mm

EVACUATION ROUTE

Emergency Preparedness Checklist

EVACUATE TO SAFETY

Norwegian Natural Perils Pool

Other initiatives



Climate and insurance



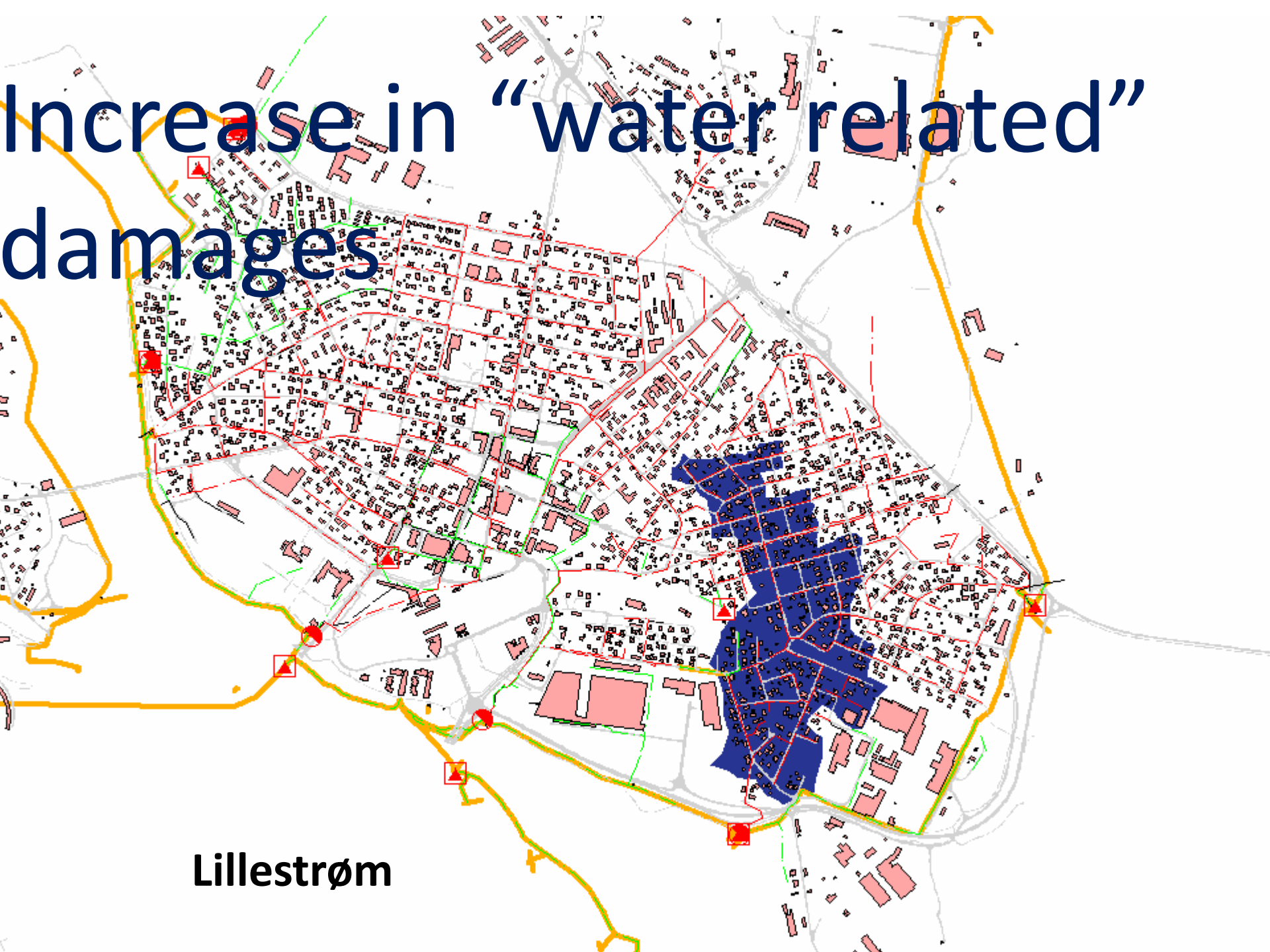
The role of insurance?

- Risk assessment
- Prevention
- Common initiatives
- Cooperation with authorities
- Collect data

Using claims data

- Heavy increase in “water related” damages and insurance claims
 - Old pipes and more heavy rain (increasing problem all over Europe)
- Frustrated customers – repetitive damage (same locations)
- Insurance companies pick up the bill
 - Increase in law suit and conflict between municipalities and insurance
- The Municipalities (Water & sewage services) don't have these loss data, = little/low knowledge about “vulnerable” areas
- Municipalities have tried to get insurance loss data, but insurance companies have said no - needed exemption from data protection law

Increase in “water related” damages



Lillestrøm

What "kicked off" the project?

Official Norwegian Reports NOU 2010:10

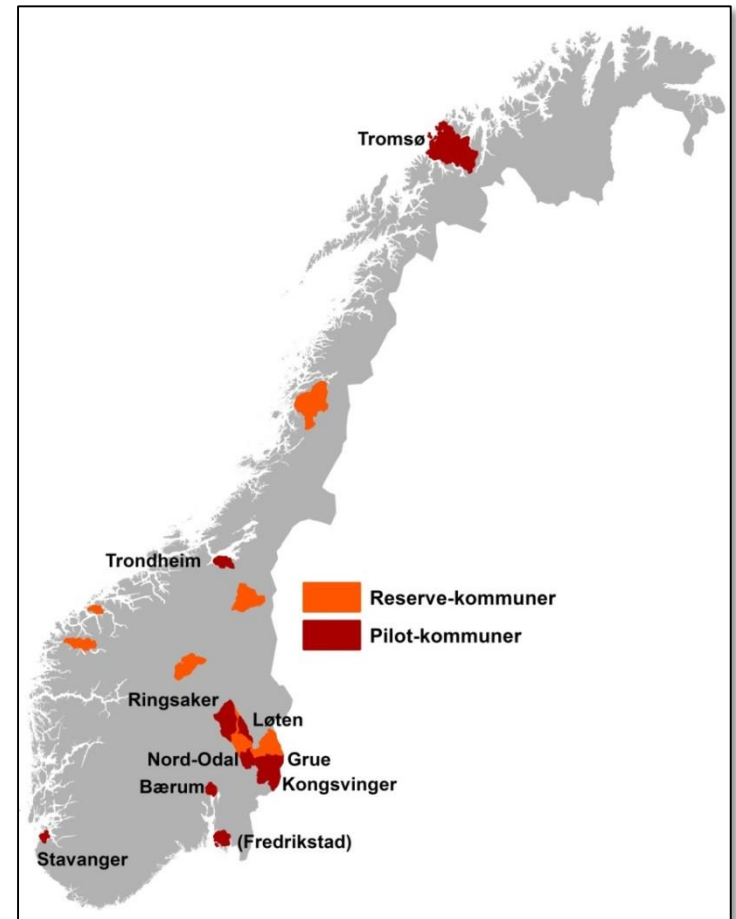
Adapting to a changing climate

Norway's vulnerability and the need to adapt to the impacts
of climate change

- In order to improve adaptation, and to be able to prioritize, and to take the right, optimal decisions, you need to understand what is at risk and where are the "risk zones" (vulnerable areas).
- The report NOU2010:10 recommended to (and by that challenges the insurance industry):
 - "Establish a database for **public use and research** using aggregate, anonymised data on climate-related damage from the insurance companies and the Norwegian Natural Perils Pool"».

First public - private - partnership pilot project

- Financed by Finance Norway and the Ministry of Climate and Environment (through the “Cities of the Future” program)
- **Red:** Ten pilot municipalities (M)
- **Orange:** “Extra/reserve- municipalities” in case some of the ten pilot M pulled out (= collected insurance data also for these M)
- Research partners:
 - Western Norway Research Institute, and the Norwegian University of Science and Technology (NTNU)
- Project period: Sept 2013 to Febr 2015





Findings from a pilot project: Using insurance claims data to strengthen municipalities' efforts to prevent climate-related natural hazards

Collaboration project between Finance Norway
Western Norway Research Institute
Norwegian University of Science and Technology



Norwegian Natural Perils Pool



Norwegian Natural Perils Pool

- Compulsory
- Fixed premium
- Cover 3 events pr year
- One event covers losses up to 1,1 billion euro.
- Reinsured



Norwegian Natural Perils Pool

Replaces loss or damage caused directly by the natural disaster:

- Landslides
- Flooding
- Storm surges
- Earthquake
- Volcanic eruptions



Landslides



Storm surges

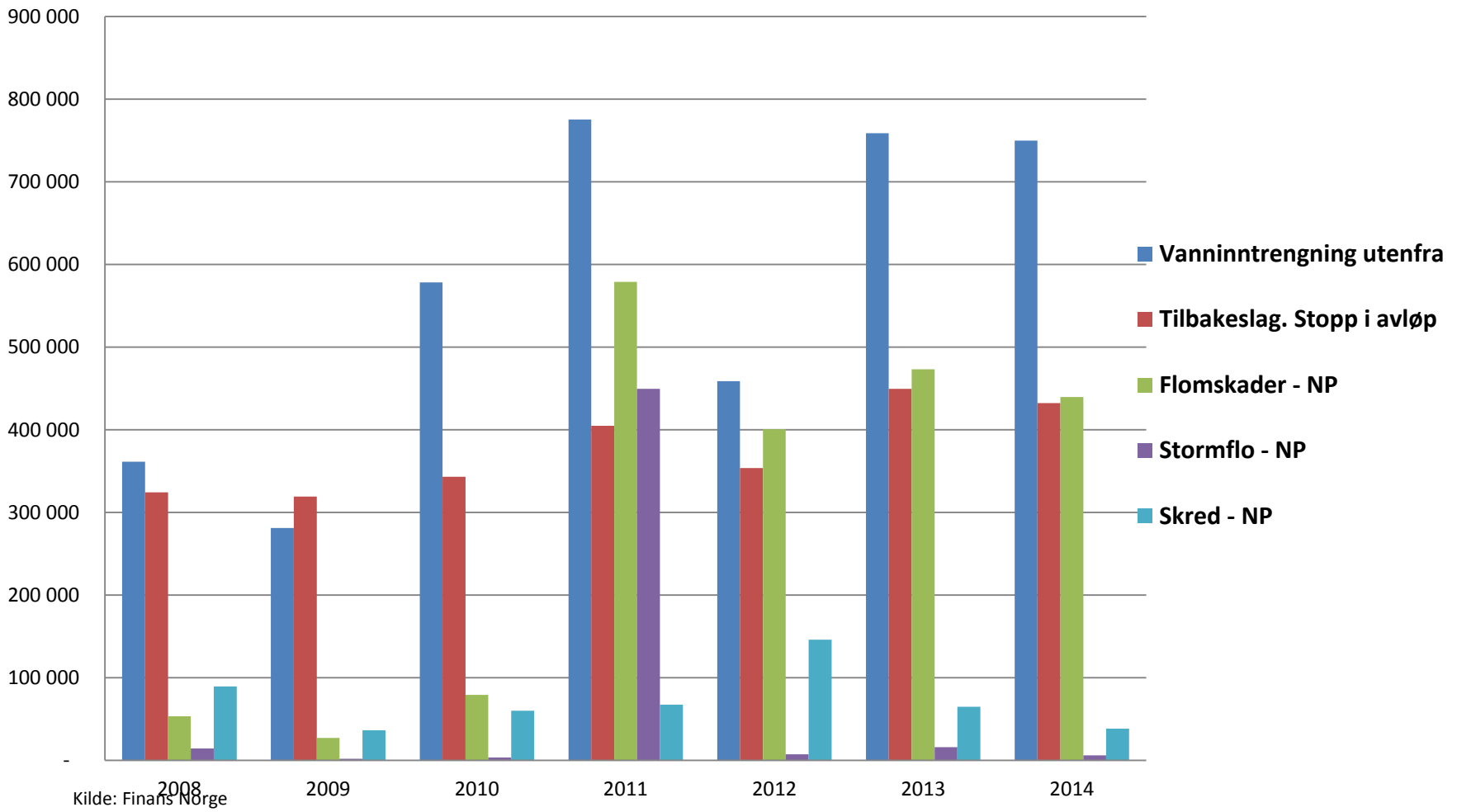


Norwegian Natural Perils Pool

- "Clearing central" of losses against 108 members
- Numbers of committees
- Contact with the governmental system
- Coordinator under big events

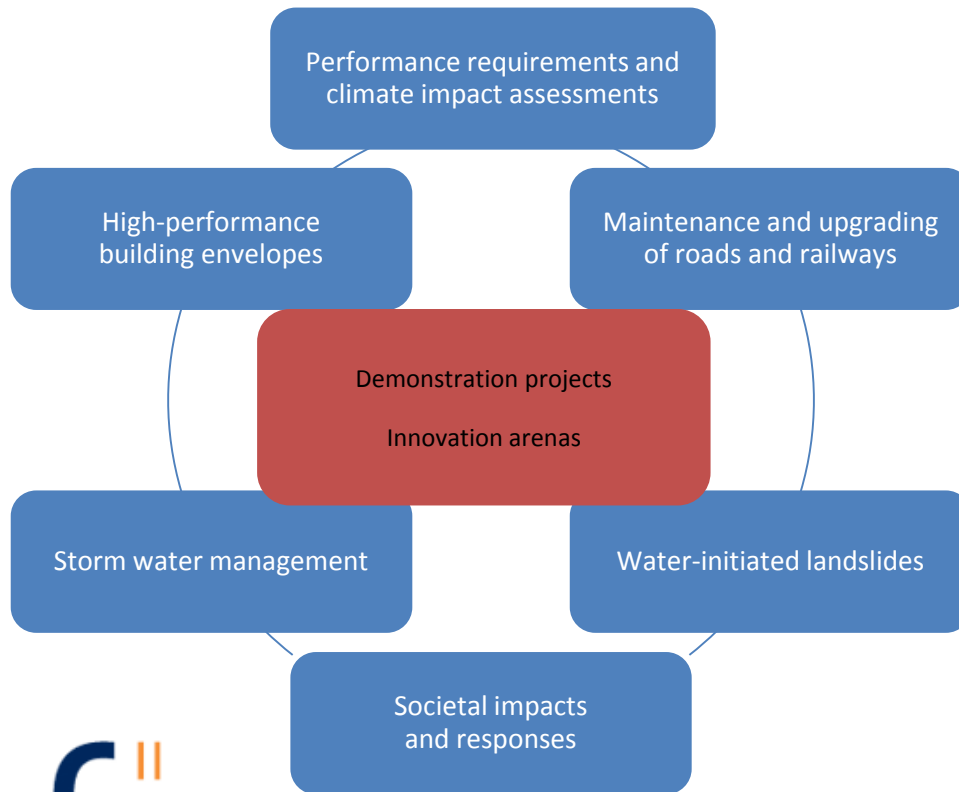


Indemnity payments 2008 - 2014



Climate Adaptation of Buildings and Infrastructure

Klima 2050 | Risk reduction through climate adaptation of buildings and infrastructure

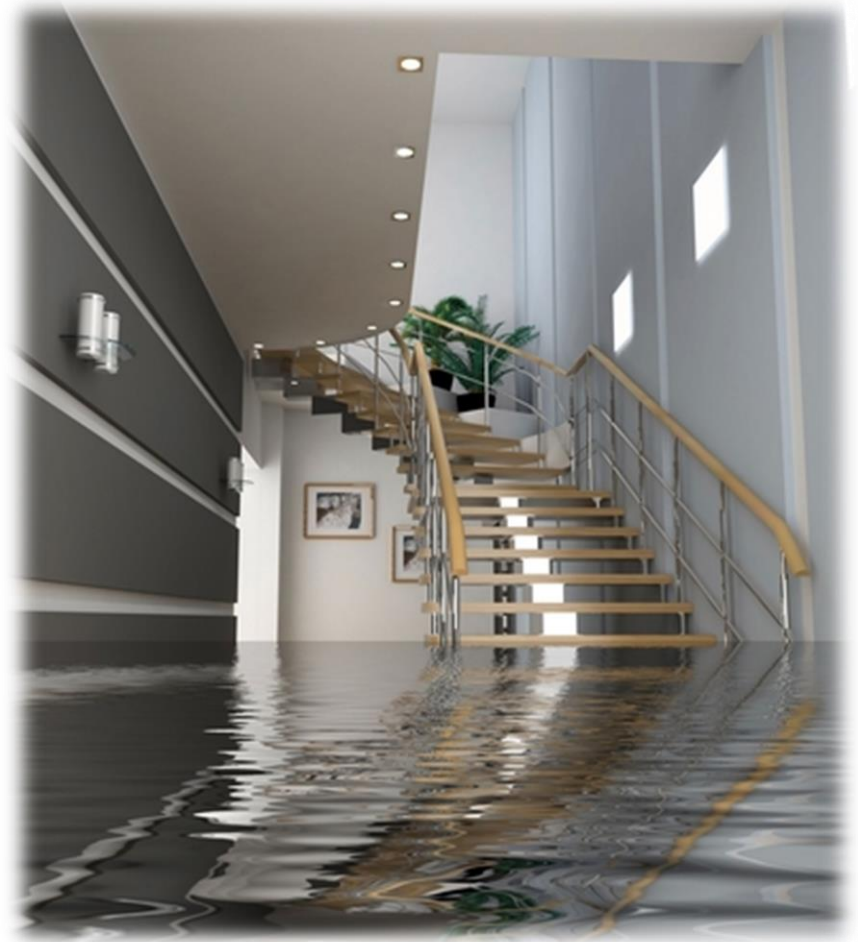


- Norwegian University of Science and Technology
- BI Norwegian Business School
- Norwegian Meteorological Institute
- Norwegian Water Resources and Energy Directorate
- Norwegian Geotechnical Institute
- Governmental bodies
- Construction companies
- Suppliers to construction markets
- Finance Norway
- Hosted by: SINTEF



The role of insurance ?

- Price relative to risk
- Prevention reducing the price
- Recourse claims against municipalities
- Deny insurance



Prevention ?

Without preventive measures will the cost of damage to buildings, infrastructure, health and the environment will continue to increase.

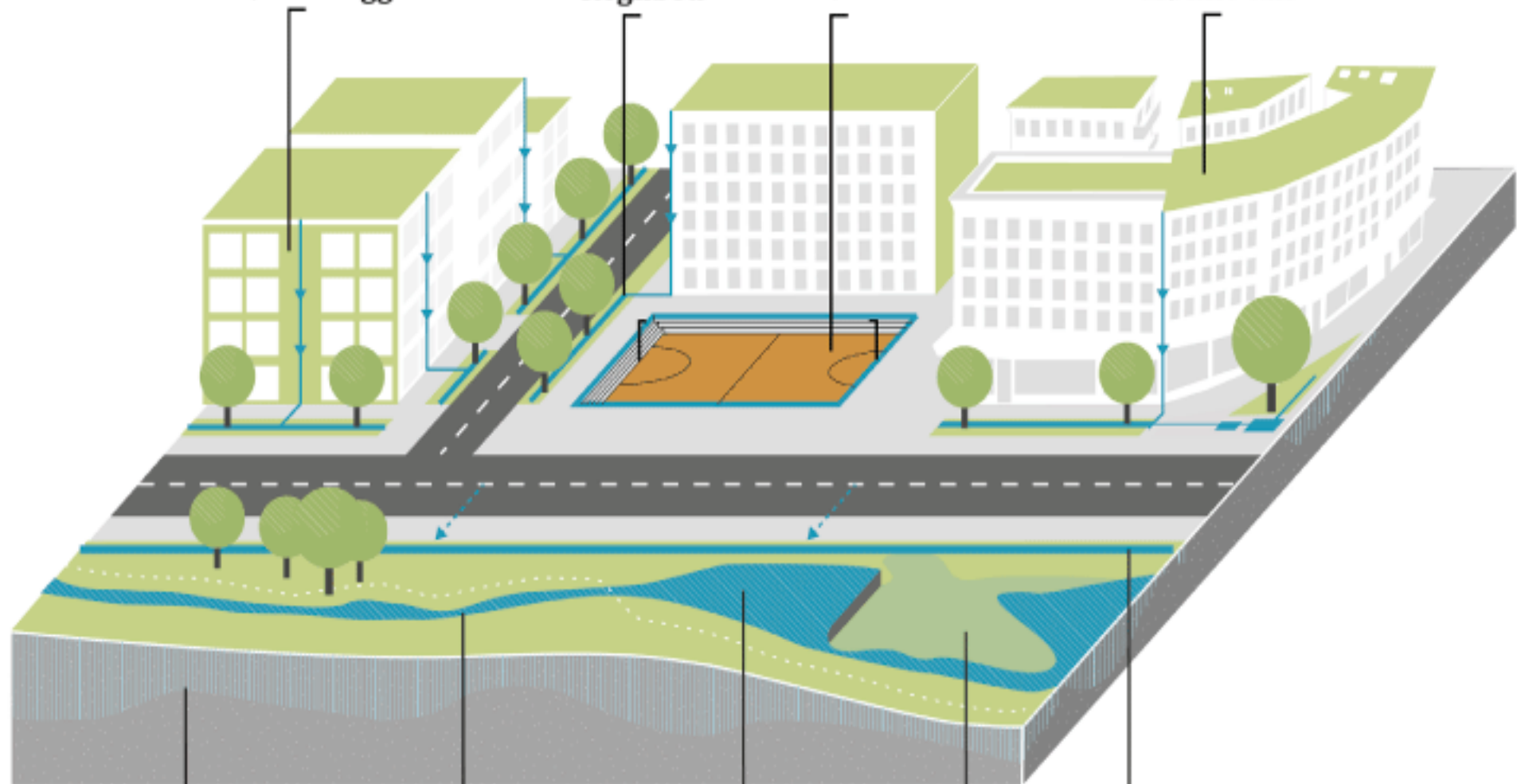


Grønne vegger

Regnbed

Oversvømmelsesareal

Grønne tak



Naturlig infiltrasjon

Åpen bekk

Overvannsdam

Våtmark

Åpen grøft



Thank you for your attention