



RVA-process

How will the findings be integrated in risk and crises management?

- Prioritise preventive measures etc.

Identify risks and threats (what can happen and why?)

Analyse risks

- Probability
- Consequences,

Identify measures to reduce risk and/or to reduce consequences

Analyse vulnerability

- What makes us more/less affected?
- Why?



EID KOMMUNE

Time span and climate change

Temperatur for hele året, RCP8.5

2031 - 2060

2071 - 2100



Temperatur for hele året, RCP8.5

2031 - 2060

2071 - 2100

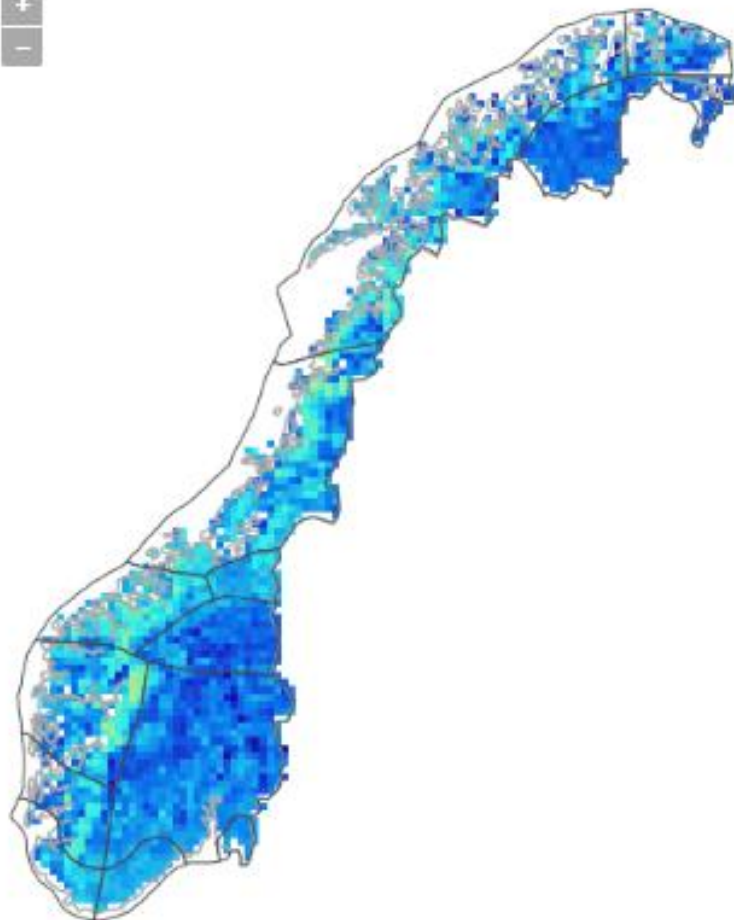




Nedbør for hele året, RCP8.5

2031 - 2060

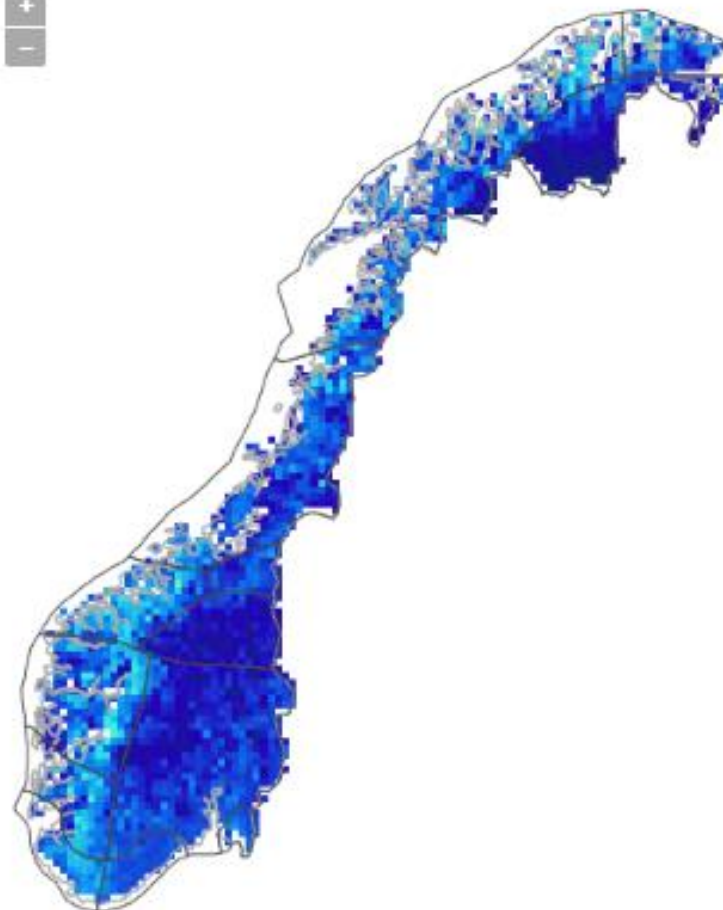
2071 - 2100



Nedbør for hele året, RCP8.5

2031 - 2060

2071 - 2100



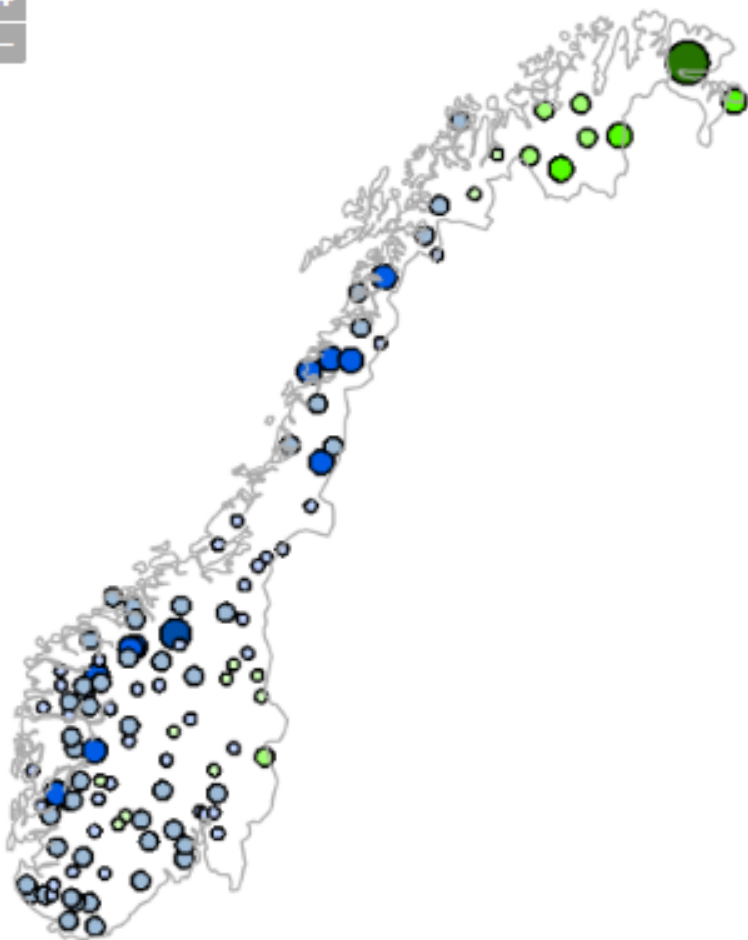


EID KOMMUNE

Flom for hele året, RCP8.5

2031 - 2060

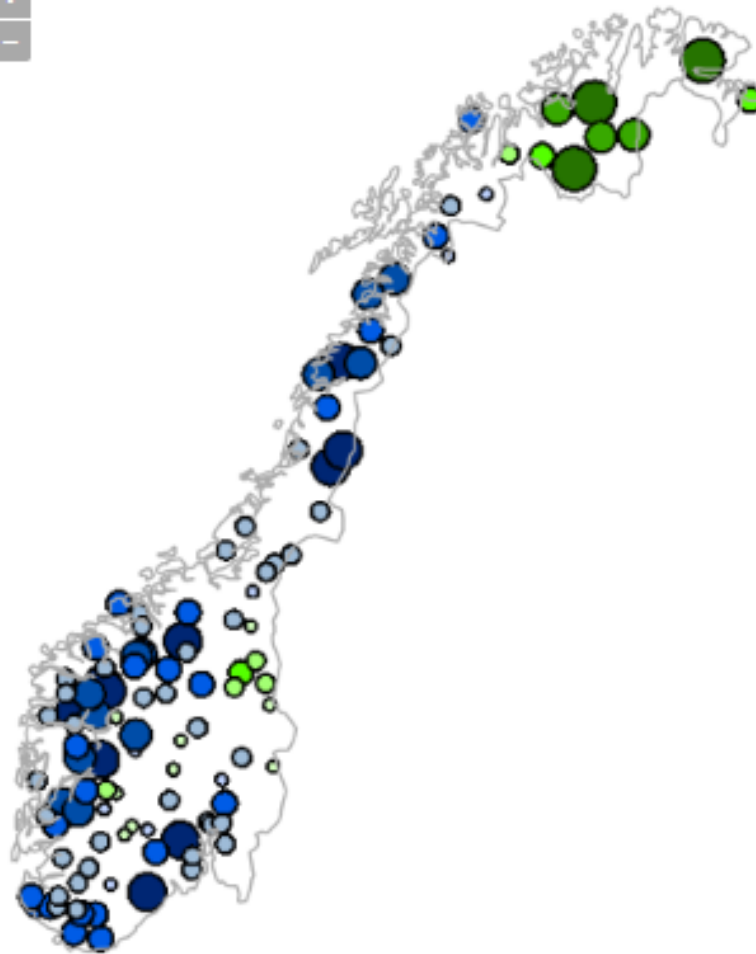
2071 - 2100



Flom for hele året, RCP8.5

2031 - 2060

2071 - 2100





EID KOMMUNE

Development of risk and vulnerability assessments in Eid, Selje and Vågsøy municipalities

Municipal Director Elin Leikanger
Eid Municipal Council



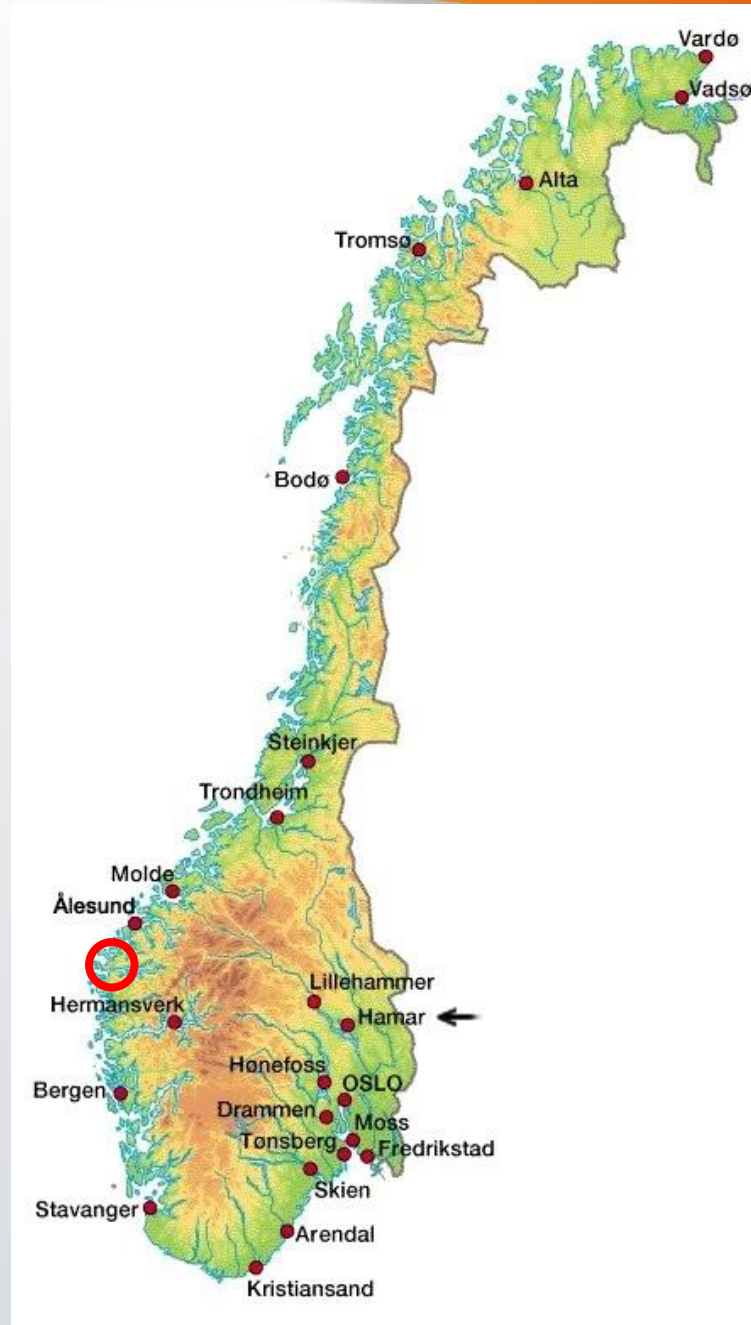
Civil Protection Act

“The municipality is obliged to identify undesirable incidents that could occur in the municipality, assess the probability for these incidents to occur, and how this work will be assessed and compiled into a holistic risk and vulnerability analysis....”



Background

- 2014 – Municipal RVA developed, but not approved by the County Governor
- Consequence - Inter district cooperation 3 municipalities – Eid, Selje, Vågsøy





EID KOMMUNE



WARMER – WETTER - WILDER



Why cooperate?

- Simular challenges
- Same external actors
- Incidents in one municipality may have consequences for neighbours
- Share competance and resources



Starting point - Municipal duties

- security of citizens
- secure critical society functions
- coordinate across sectors in the municipality
- be a driving force towards other actors
- have capacity to handle undesirable incidents
- work holistic and systematic with Civil Protection and Emergency Planning



How did we organise ?

- Steering committee 6 persons (CEOs and deputies)
- Project leader, employed by one of the councils
- Project groups, technocrats from sectors:
 - Communications/infrastructure
 - Education
 - Health and social services
 - Planning



Preliminary work– project plan

- Define objective, limitation, method and process
- Clarify resources available (knowledge, fundings, tools, people...)
- Project plan approved by all 3 full councils - a clear mandate!



Preliminary work

- Description of the municipalities
- Agree on definitions
 - Risk = probability x consequence



Probability

Category	Description	Probability
High probability	More than 1 time in 10 years	> 10 %
Medium probability	1 time in 10-50 years	2-10 %
Less probable	1 time in 50-100 years	1-2 %
Low probability	1 time in 100-1000 years	0,1-1 %
Very low probability	Less than 1 time in 1000 years	< 0,1 %



Preliminary work

- Description of the municipalities
- Agree on definitions
 - Risk = probability x consequence
 - Vulnerability – which critical social factors are affected, and how vulnerable are they?
 - Life and health
 - Stability
 - Nature and environment
 - Material values



Consequenses – life and health

Category	Deaths	Injuries
Very high	> 10	More than 20 people seriously injured
High	1-10	10-20 people seriously injured
Medium	None	0-10 people seriously injured
Small	None	Minor injuries, first aid
Very low	none	Insignificant injuries



RVA-process

How will the findings be integrated in risk and crises management?

- Prioritise preventive measures etc.

Identify risks and threats (what can happen and why?)

Analyse risks

- Probability
- Consequences,

Identify measures to reduce risk and/or to reduce consequences

Analyse vulnerability

- What makes us more/less affected?
- Why?



Step 1

How to identify dangers/undesirable incidents ?



Workshop day 1

Internal and external participants

- Hospital
- Energy company
- Water Resources and Energy Directorate
- Road Authorities
- Harbour Authority
- Food Safety Authority
- Police
- Home Guard and Civil Defence
- Municipal Inter District departments
 - IT
 - Solid waste management
- NGOs
 - Ocean Rescue org.
 - Red Cross
 - Womens sanitary org
- CBOs



Identify risks – how?

Workshop 1

Presentations by external participants:

- From your point of view – what are the most important risks in our region?
- What are your expectations to the council concerning civil protection work?
- How can your organisation contribute in the analysis phase or by undesirable incidents?



Workshop day 2 – 12 tecnocrats

- Identify risks based on:
 - Information from day 1
 - National guidelines and statistics
 - County RVA
 - Excisting RVAs from each municipality
 - Local knowledge and experiences



Identified dangers

Category	Incidents
Nature based incidents	
Extreme weather	Wind, rain/snow, cold wave, heat wave
Flooding water	flooding rivers, high tide
Avalanches	Snow, quick clay, rockslides
Epidemics	diseases, failure in provision of service, infections
Other nature bases incidents	Earthquake, fire
Accidents	Buss, boats, tunnels, closed roads, lack of electricity or telecom, pollution etc
Deliberate incidents	Terror, hacking



Prioritisation

- Some incidents had very low probability or risk
- 20 incidents were common to all three municipalities, very few incidents were unique for just one municipality
- We shared incidents: 8-10 for each municipality



Risk matrix

Konsekvens Sannsyn	1.Svært små	2.Små	3.Middels	4.Store	5.Svært store
E Svært sannsynleg	7, 8			2?, 3, 9, 23A?	
D Sannsynleg		10,16	4?, 5	12, 23B	1
C Mindre sannsynleg	6, 15			17, 19	13?
B Lite sannsynleg			18	14	21
A Svært lite sannsynleg	22			11	20

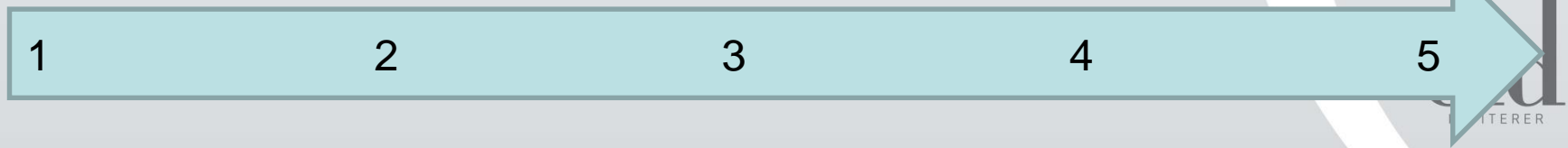


Experiences

reason – incident – consequence

1. Storm
2. Loss of energy supply
3. Failure in cleaning system
4. Polluted drinking water
5. Diseases

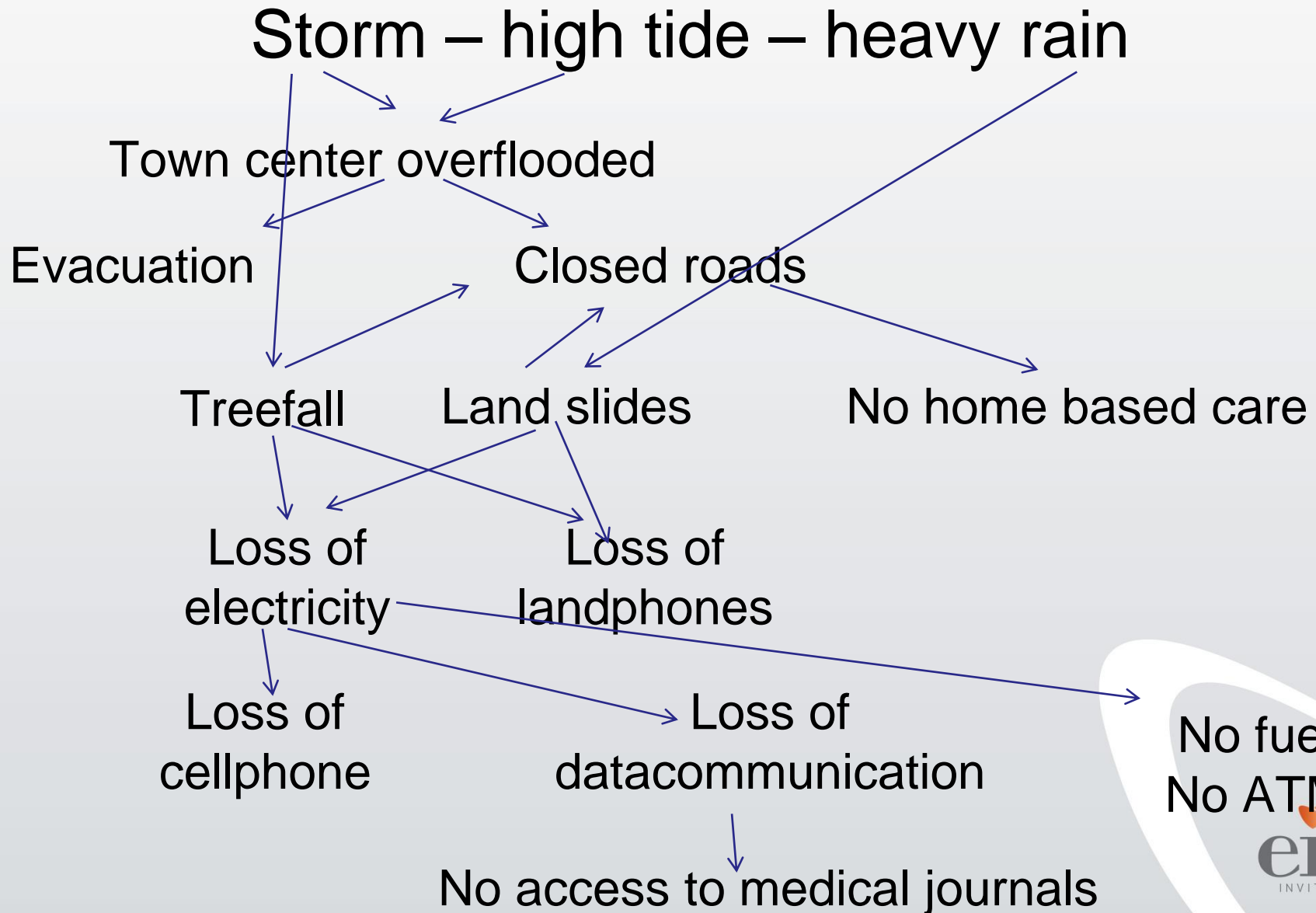
Incidents are very often connected!





Dagmar







Experiences

- Broad involvement and anchoring
- Most risks involves several sectors
- Proposed measures to reduce risks/consequenses – valuable input in other plans
- What can be done on low cost?
- Make it simple!