



# Adaptation in Urban Planning and Waterfront Development

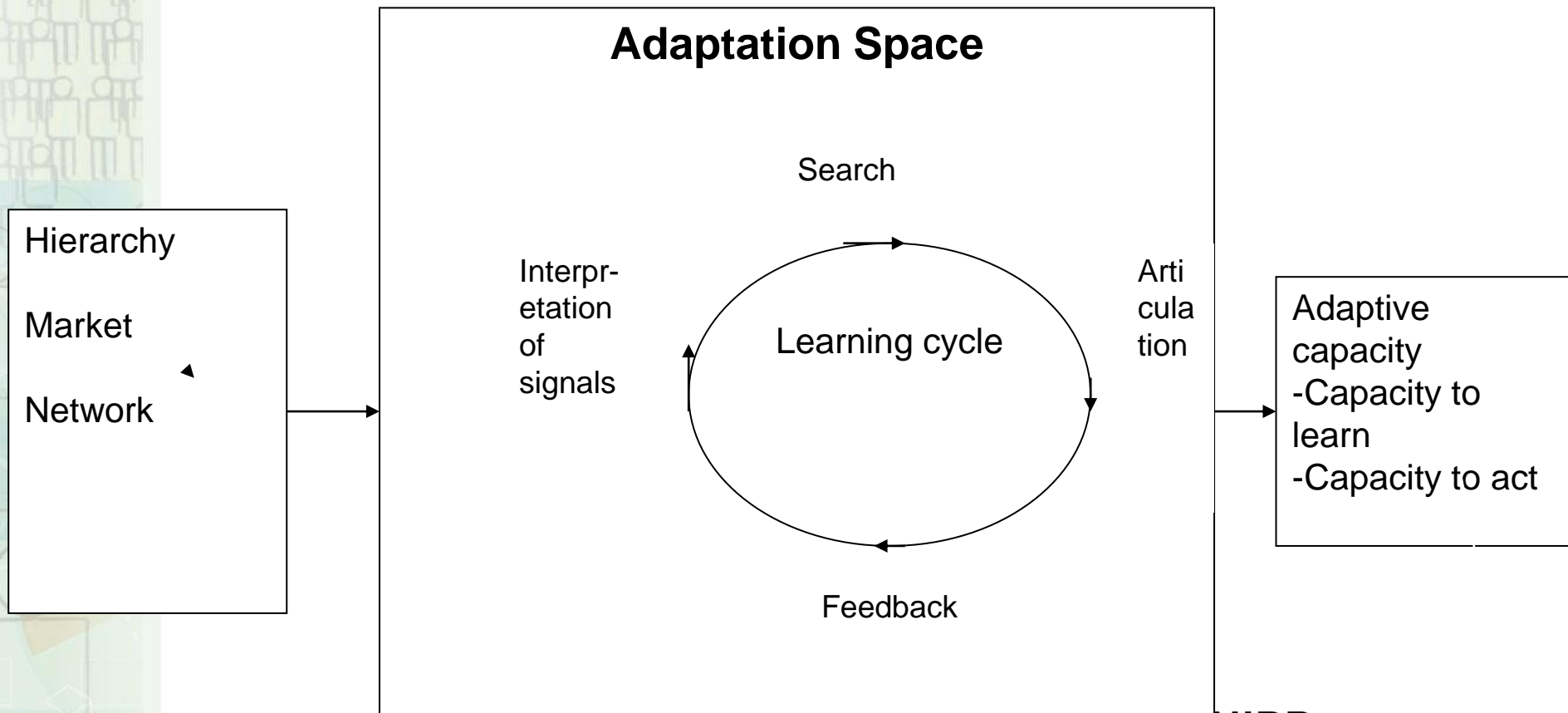
Sub-project 4 in: The Potentials of and  
Limits to Adaptation in Norway  
(PLAN)

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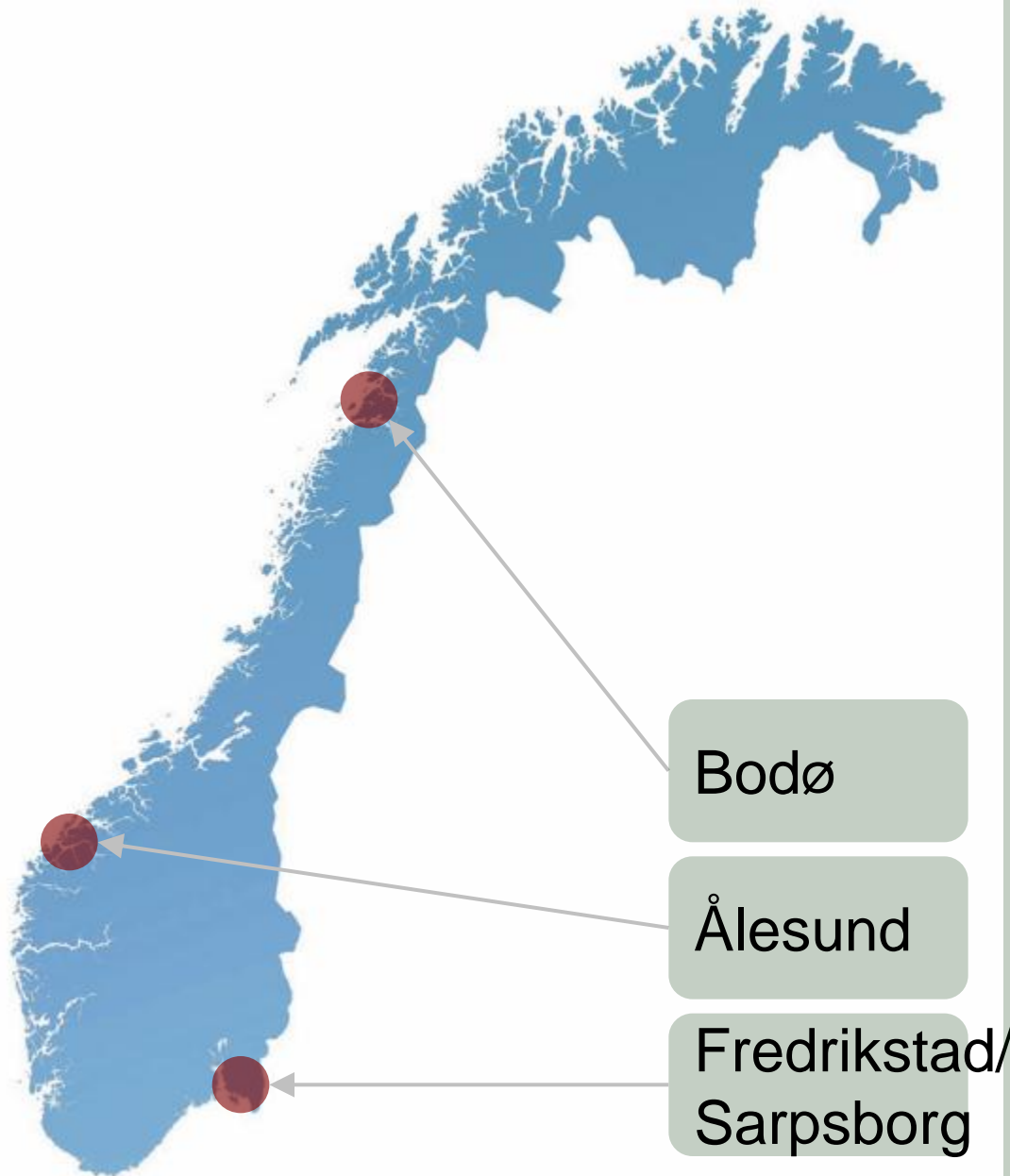
# Context for adaptation: Urban governance theories

- Look to our own research field, theoretically and empirically
- Adaptation within a neo-liberal planning ideology
- Adaptation within a complex setting of numerous actors with different values, goals and interests
- A challenge of coordination and collective action
- The theoretical framework is outlined in *Adapting to Climate Change: Organizational learning and governance in adaptation in urban development*

# Theoretical framework



# NIBR'S SUB-PROJECT - CASE CITIES



Bodø

Ålesund

Fredrikstad/  
Sarpsborg

- **First round of case studies conducted in 2008**

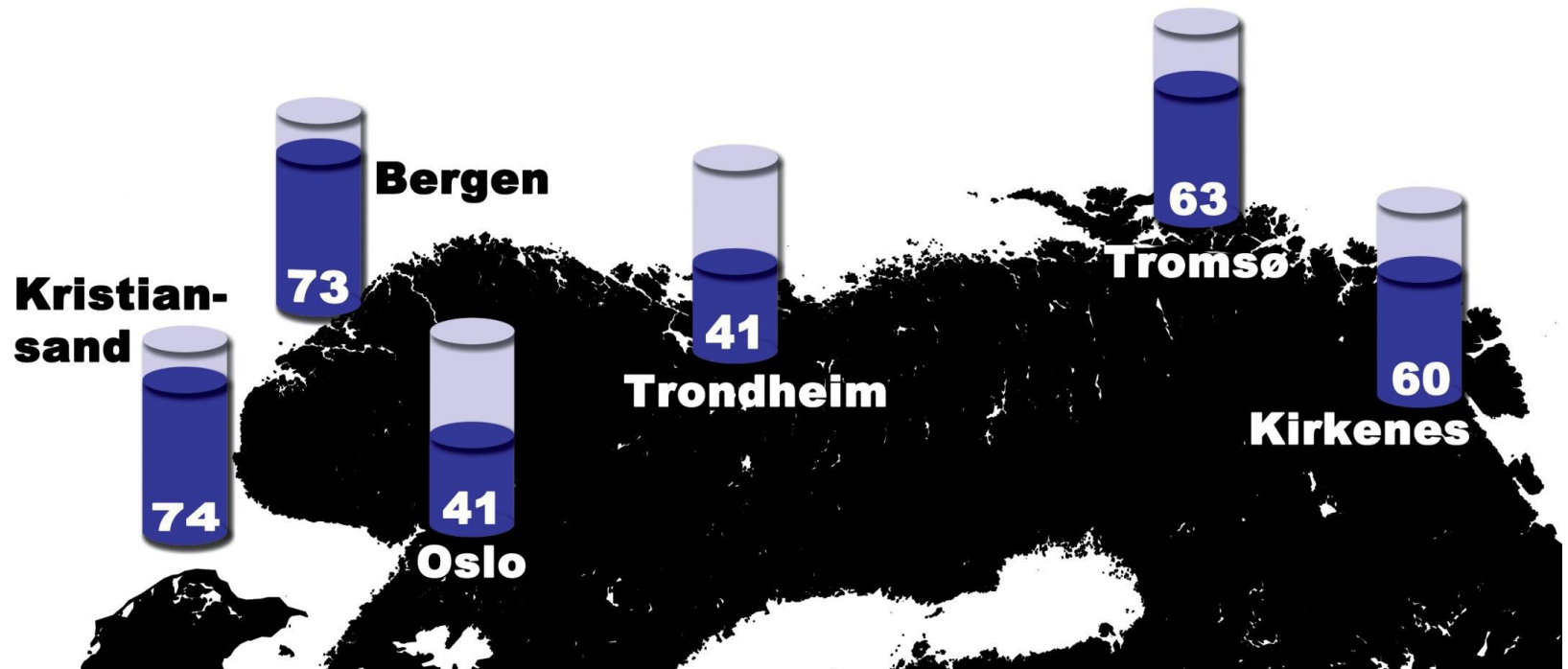
- **Second round scheduled for completion in 2009**

- **Project duration: 2007-2010**

**Give some preliminary results from Ålesund and Bodø**



# Sea Level Rise in Norway



# Ålesund



Ta deg tid. Opplev mer.

Her kan du ta en titt på et spennende utvalg av sommeropplevelser - Ålesund og Sunnmøre venter på deg!



# Scenarios about sea level rise – case Ålesund

- Urban waterfront development on earlier port areas – local plan accepted 23. april 2009
- Requirement: increased level for building: from 2.2 to 2.7 – 3,2 m
- Late in the process
- Dialogue between planning authorities, environment officer and port authority



# Case Ålesund, cont.

- New report about sea-level rise important
- Lack of regional/national guidelines – individual initiatives in the administration





# Scenarios about sea level rise – case Bodø

- Central areas already affected by storm surge
- Local plan central areas: (Nerbyen)
  - Employee contacted climate researches Bjernes-senteret i Bergen
  - Requirement: building must withstand 0,9 meters sea level rise



# Experiences from Bodø

- Fragmentation and lack of coordination internally and externally
- Risk and vulnerability analyses a technical operation
- Based on individual initiatives
- Limited feed back loops: ”municipal dementia”
- No coordination between market actors and municipality

# Preliminary findings: Hierarchy

- Central authority a limited role: no central guidelines issues:
- Fragmented central authorities: Ministry of Environment - Ministry of Justice
- Unclear division of responsibilities between national and local authorities
  - 2 % of mayors agree that the municipalities must bear the main responsibility for adaptation

# Adaptation within market

- Few signals from the market – Still great demand and high prices on water front developments possibly exposed to sea level rise
- Short planning horizon- ”build and disappear”

# Adaptation through Networks?

- So far only limited and isolated network arenas for learning and acting
- Some learning networks among municipalities sponsored by Ministry of Environment and the Norwegian Research Council