

# Awareness of climate change and significance of climate change policies at the local agendas: A comparison of Norwegian and Polish municipalities

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# Climate change policies

- Mitigation
- Adaptation
  
- International
- National
- Regional and local
  - Combining several scales required for successful implementation of climate change policies (Swart et al., 2009)

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# CC policies at the local agendas

- Mainstreaming
  - moving environmental issues from the periphery to the centre of decision-making (EEA, 2005)
  - the integration of environmental objectives into non-environmental sectors (Nuan et al. 2012)
  - Horizontal (cross-departmental cooperation)
  - Vertical (dedicated organizational unit)
- Where does it succeed?

# What raises awareness?

- Exposure to extreme weather events
  - Previous events (Næss et al. 2005, Amundsen et al. 2010, Rauken et al. 2014)
  - Predicted events
- Available resources (Rauken et al. 2014)
  - Human resources, information, organization
  - Funding, infrastructure
- Interpretative frames
  - Availability
  - Reliability

# Countries compared

## Poland

- Exposed to floods, extreme precipitation, droughts
- Huge floods in 1997 and 2010 + local events
- CC – marginal issue in public opinion
- More focus on mitigation
- Lack of reliable downscaled scenarios
- Active role of central government & EU funds

## Norway

- Exposed to floods, storms, landslides, extreme precipitation
- Many local events
- CC – one of important political issues
- Focus both on mitigation and adaptation
- Downscaled scenarios
- Passive role of central government

# Research questions

- What factors influence the awareness of CC in Polish and Norwegian local governments?
- How important are CC policies compared to other local policies in Polish and Norwegian local governments?
  - Is there a visible linkage between CC and other issues local governments deal with?

# Data

## Poland

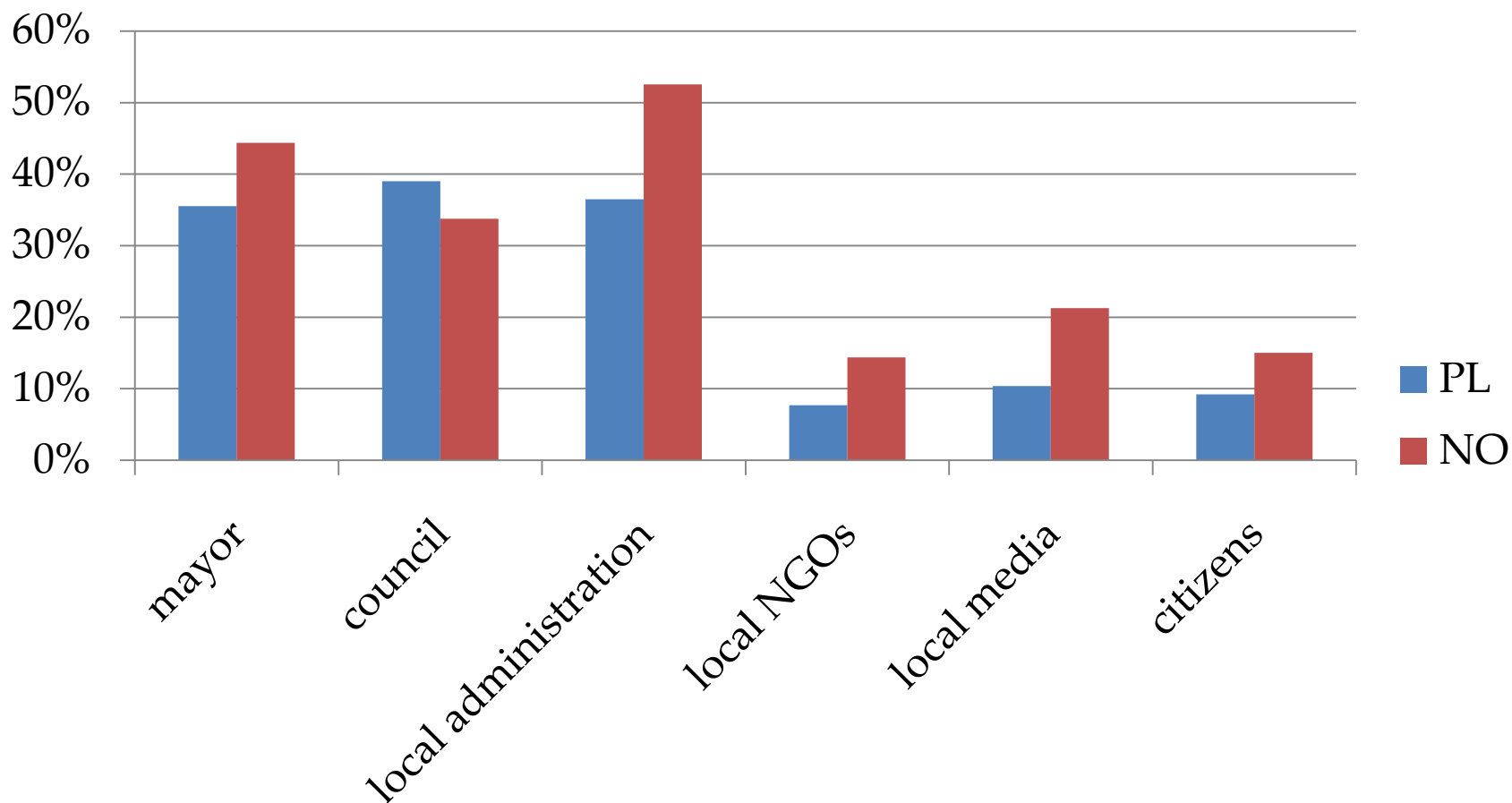
- N=1311
- CAWI & postal
- June 2014 – September 2014
- 4 case studies

## Norway

- N=218
- CAWI
- November 2014 – February 2015
- 3 case studies



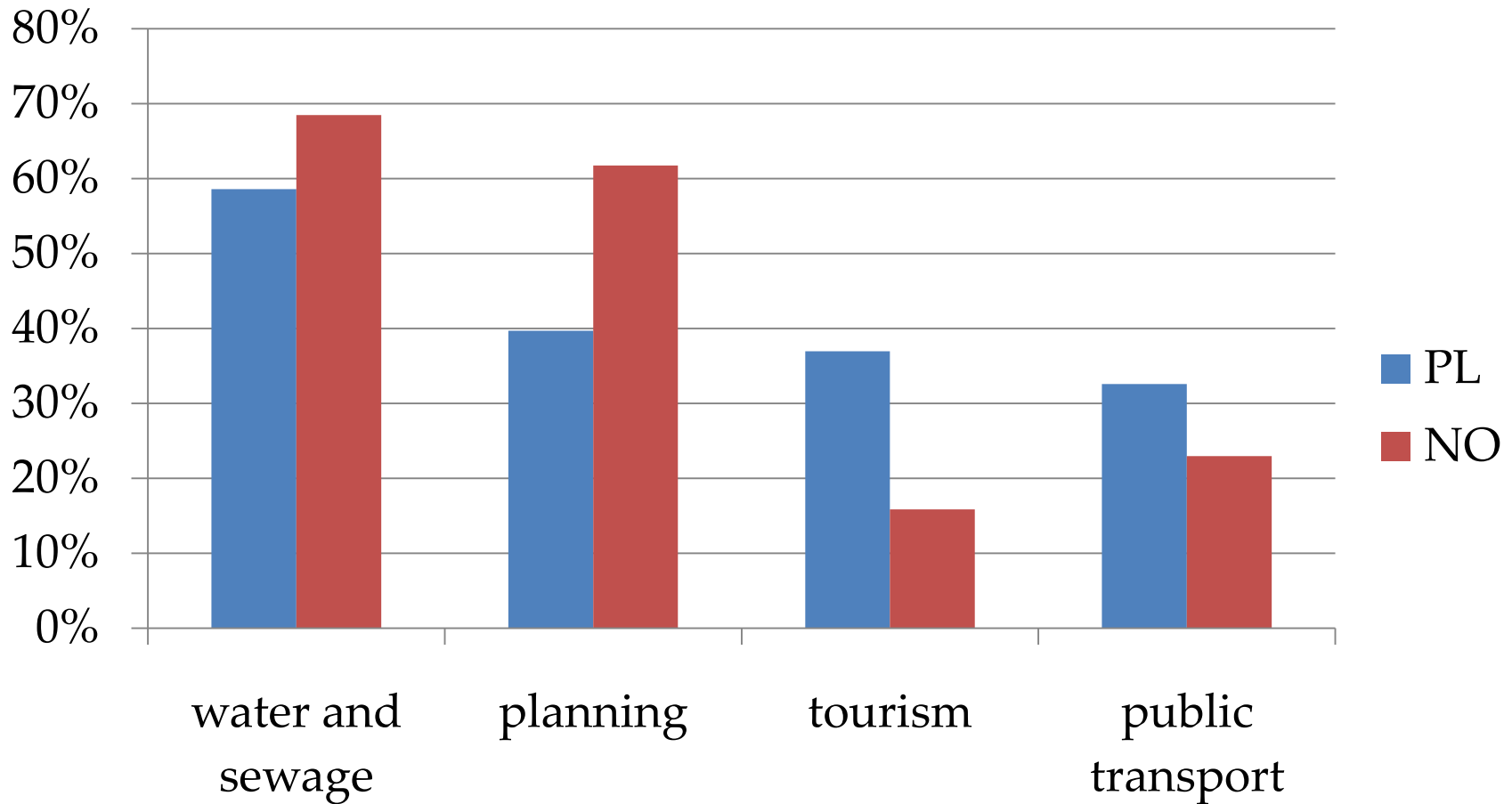
# Declared interest in CC - key actors compared



# New policy field?

- Horizontal mainstreaming easier
  - More organized policy fields (e.g. environment protection, water management)  
„capture” the new type of activities
- Vertical mainstreaming more popular in case of mitigation
  - Anti-flood policy → Emergency management
  - Energy efficiency

# Which sectors would be affected?



# DV: Local awareness – indices

## Norway

- It is important to take action on climate change adaptation in the municipality in order to avoid negative consequences of future climate change.
- Our municipality should do significantly more for a long-term adaptation to climate change.

## Poland

- Our municipality is not threatened by the consequences of climate change.
- Climate change should be addressed at the international level as local actions do not matter at all.

# Independent variables

- Previous exposure to extreme events (item count)
- Predicted additional exposure (0/1)
- Size ( $\log_2$  population)
- Income per capita ( $\log_2$ )
- Resources: self-assessment
- Interpretative frame
  - „I am convinced that climate change is affected by human activity“

# Results

	PL	PL + s-a	NO	NO + s-a
Constant	-2,24 (2,43)	1,92 (2,31)	-0,07 (5,00)	0,16 (5,02)
Previous exposure	<b>0,96***</b> (0,19)	<b>0,07***</b> (0,02)	<b>0,16**</b> (0,06)	<b>0,17**</b> (0,06)
Predicted additional exposure (0/1)	0,07 (0,10)	0,01 (0,10)	<b>0,61*</b> (0,25)	<b>0,60*</b> (0,25)
Log_population	<b>0,12</b> (0,04)**	0,03 (0,04)	-0,25 (0,63)	-0,22 (0,63)
Log_income	0,34 (0,21)	0,06 (0,20)	0,43 (0,70)	-0,41 (0,70)
Resources s-a		<b>0,89</b> (0,07)***		-0,07 (0,11)
CC int. frame	<b>0,66***</b> (0,11)	<b>0,47***</b> (0,11)	<b>0,76**</b> (0,26)	<b>0,78**</b> (0,26)
	$R^2 = 0,06$ $N = 1273$	$R^2 = 0,16$ $N = 1273$	$R^2 = 0,17$ $N = 155$	$R^2 = 0,17$ $N = 155$

# Conclusions

- Previous exposure and accessible, reliable interpretative frames are important factors influencing local awareness
- Anticipated future exposure systematically increases awareness in Norway, but not in Poland
  - More convincing/mobilizing predictions?
  - The result of reliable downscaled scenarios?

# Conclusions

- Local affluence does not explain the level of local awareness
- Other local resources play a certain role in Poland but not in Norway
  - CC policies as innovation → various stages of diffusion?
- In Poland, self-assessment of the local resources is more systematically related to awareness than the „objective“ measures (size, income)
  - „Too small“, „too poor“ as easy excuses?



*Thank you for your attention.*

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