

# Science-policy interactions for climate change adaptation in Sweden

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”Europe adapts to climate change”  
Utrecht, 14 September 2009



# Main national background documents for adaptation in Sweden

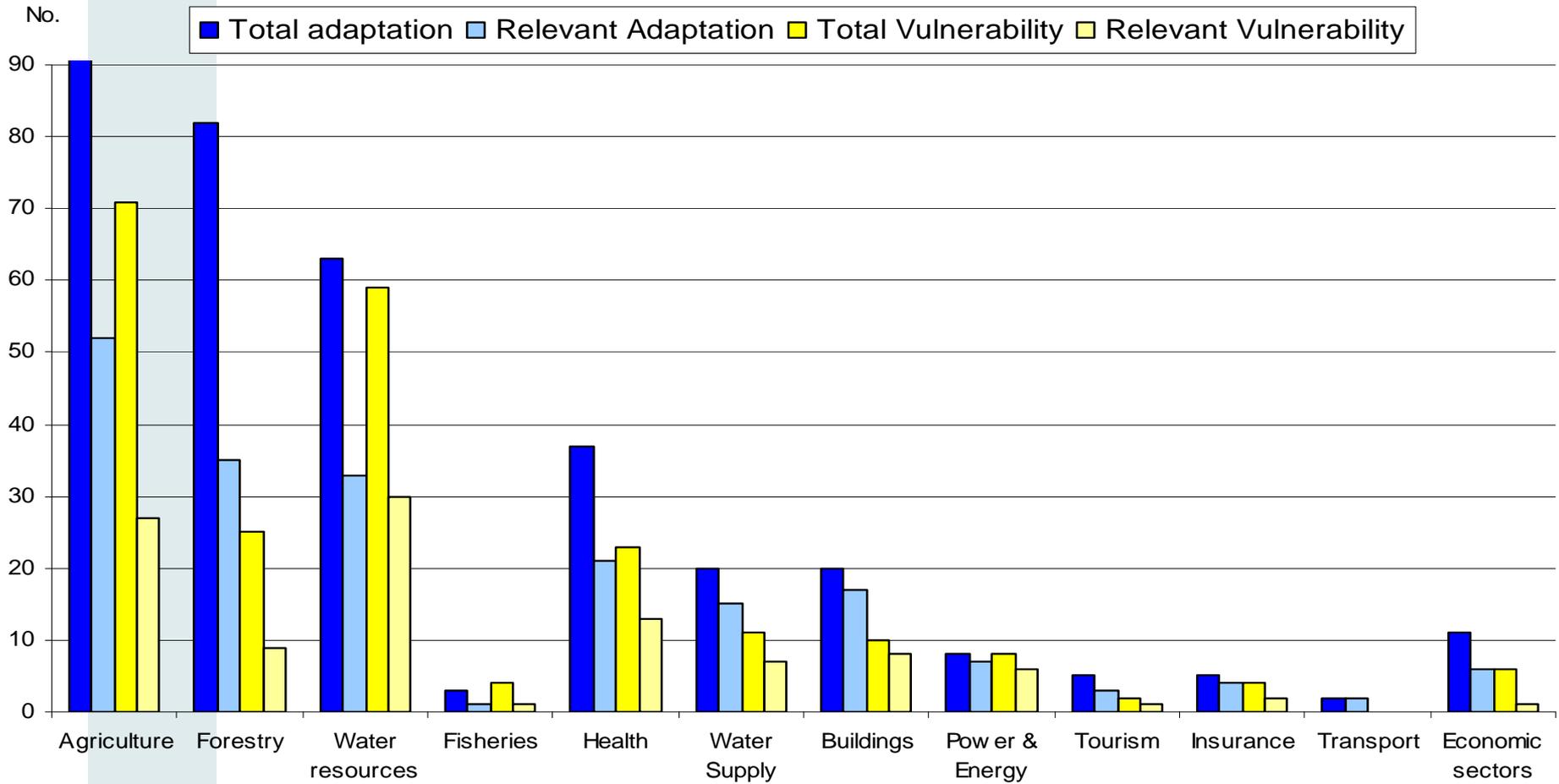
- **Climate and vulnerability commission (2005-2007)**
- **Climate bill** (Prop. 2008/09) suggest and instruct about responsibilities and distribution of roles in Swedish context.

Informed by:

- The IPCC
- National and European research
- Stakeholders (local, regional, national authorities, sectors, private business)



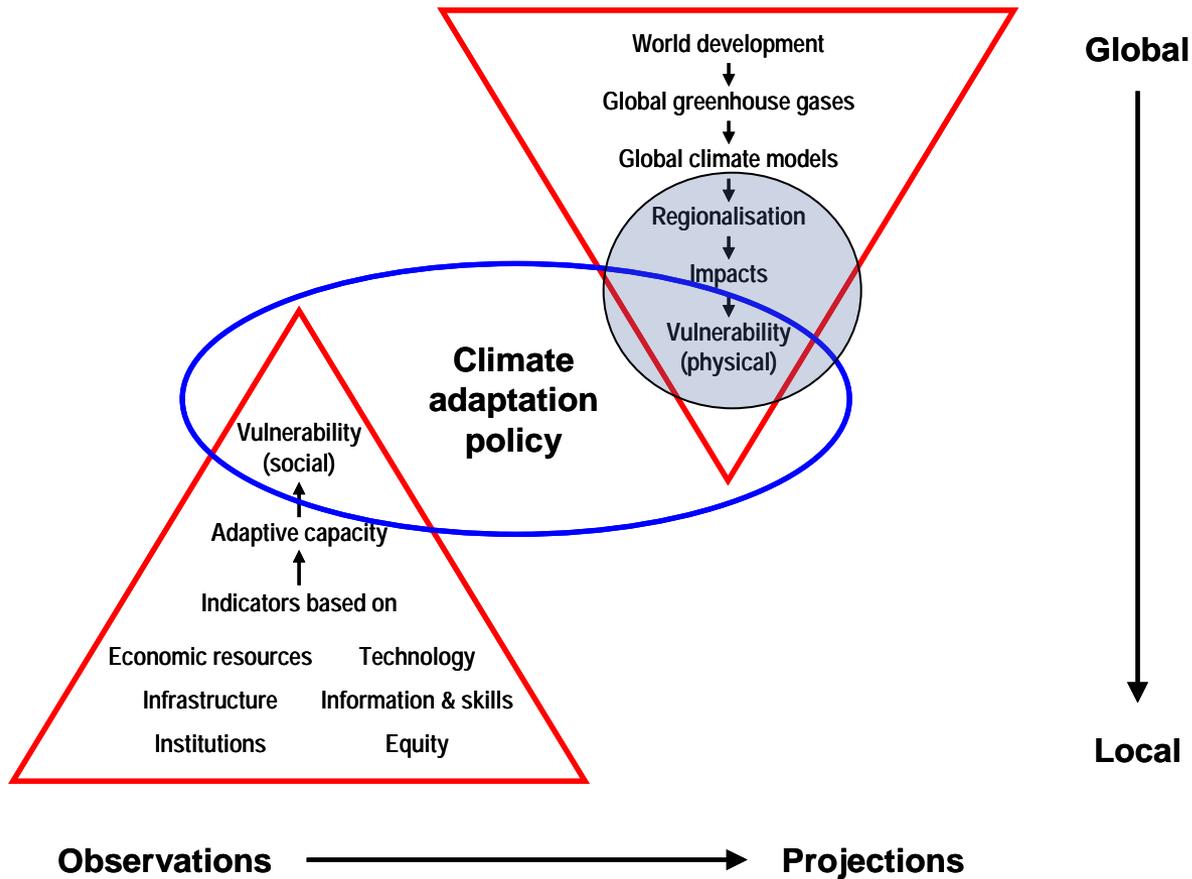
# Articles after sector and Scandinavian relevance



Simonsson, Hjerpe and Foltescu



# Top-down and bottom-up research approaches on climate adaptation



after Dessai and Hulme (2003)



# What had been published in Sweden on vulnerability and adaptation before 2005?

- One article had been published from Sweden on vulnerability. It discusses a hurricane disaster in India.
- Eight articles were published on adaptation.  
Six of these are natural scientific research on: flora and fauna in the Arctic.  
One is social science on the same hurricane disaster as mentioned above  
One is technological /engineering research on urban water supply systems in the town Lycksele



# Conclusions from the Climate and Vulnerability Commission

”Sweden will be strongly affected by climate changes. Adaptation to climate changes should start already today”





Foto: Björn Palmqvist

# RISK- OCH SÅRBARHETSANALYS OM DET OTÄNKBARA BLIR VERKLIGHET...

Analys av kommunens risker/sårbarheter  
och planering för säkerhet

## Sårbarhetsindex 2007

En jämförelse av de västsvenska kommunernas sårbarhet

Kraften i Västsveriges utveckling utgår från  
Göteborg och dess kranskommuner. Nio av de tio  
högst placerade kommunerna tillhör  
Göteborgs arbetsmarknadsregion.



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## RISK OCH SÅRBARHETSANALYS

November 2005

### SÅRBARHET FÖR VÄGNÄTET UR ETT KONSEKVENSPERSPEKTIV

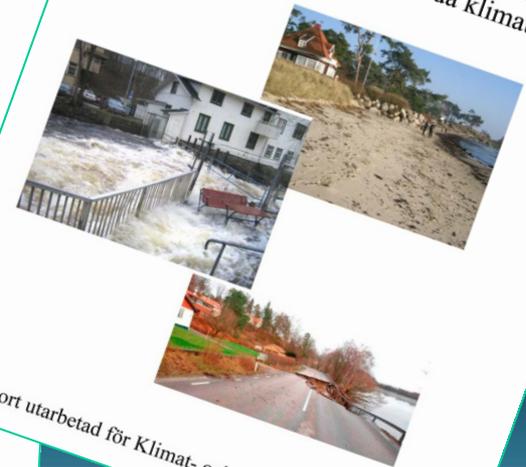


Underlagsrapport för inriktningsplaneringen 2010-2019,  
Västra Götalandsregionen

2007-05-24

## Extrema vädersituationer - Hur väl rustat är Göteborg? -

### Översiktlig sårbarhetsanalys för översvämning, skred, ras och erosion i bebyggd miljö i ett framtida klimat



En rapport utarbetad för Klimat- och sårbarhetsutredningen

# What are the sources of information at the local level for adaptation strategies and policy?

- IPCC (Background description of climate change)
- National Authorities; eg SMHI
- The Commission on climate and vulnerability
- The Climate Bill
- Sectoral studies
- Occasional site-specific academic studies



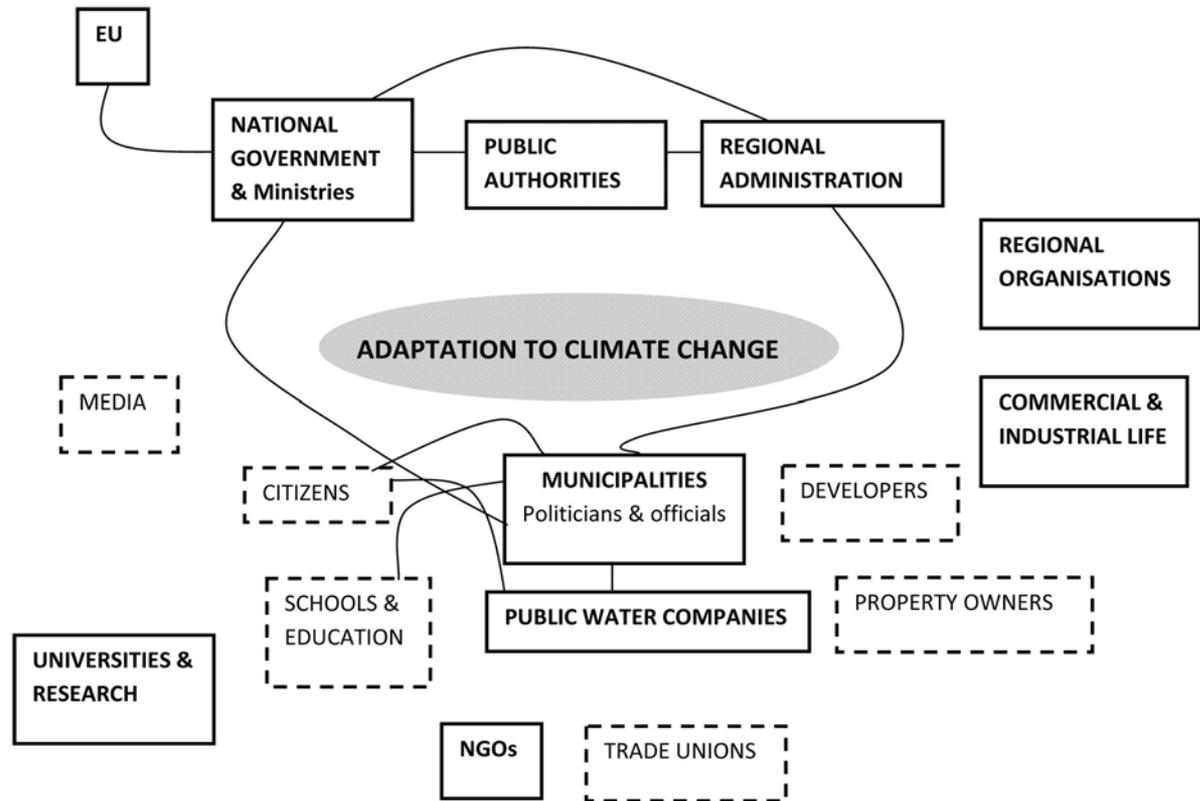
# Botkyrka municipality – an example



The Climate strategy has two approaches, complemented by the Energy plan (aiming at a less energy demanding society) ; and the Crisis Management and Preparedness plan (aiming at us coping with emergencies such as flooding)



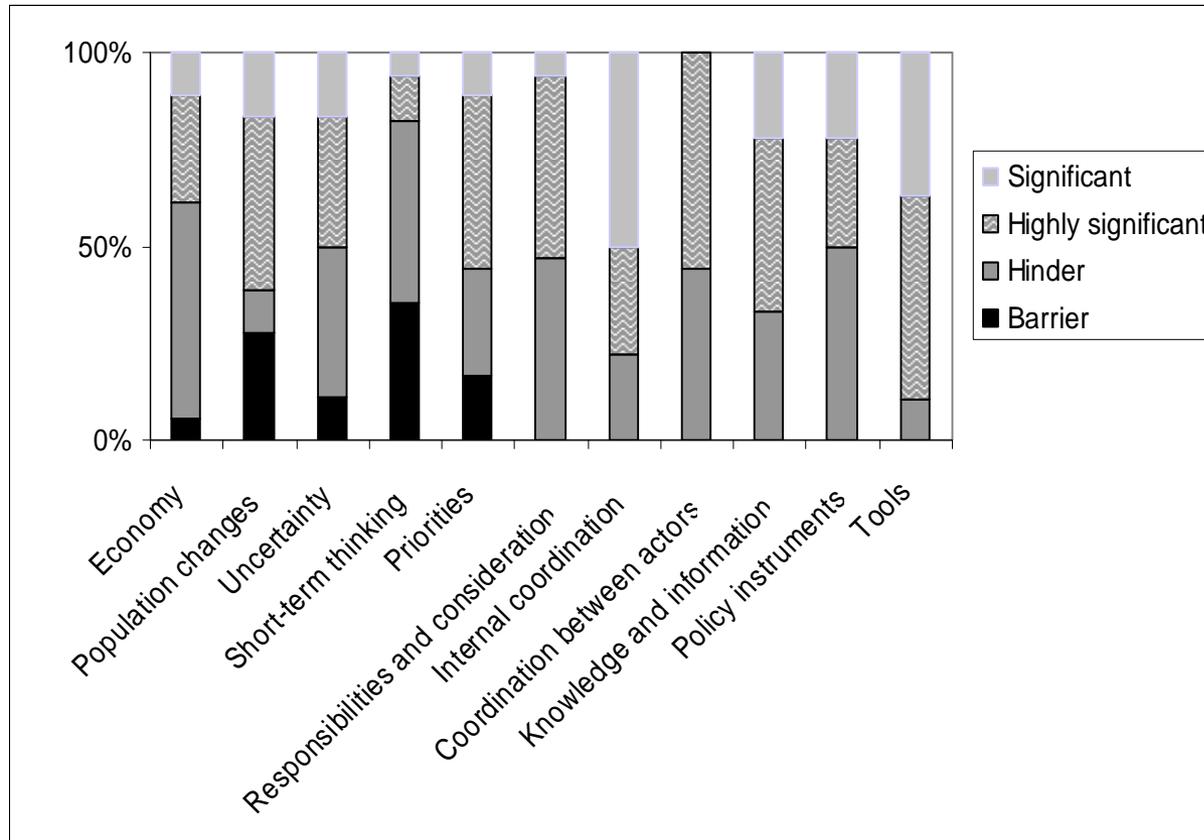
# Perceived important actors for climate adaptation in the Stockholm region



(modified from Simonsson *et al*, forthcoming 2009).



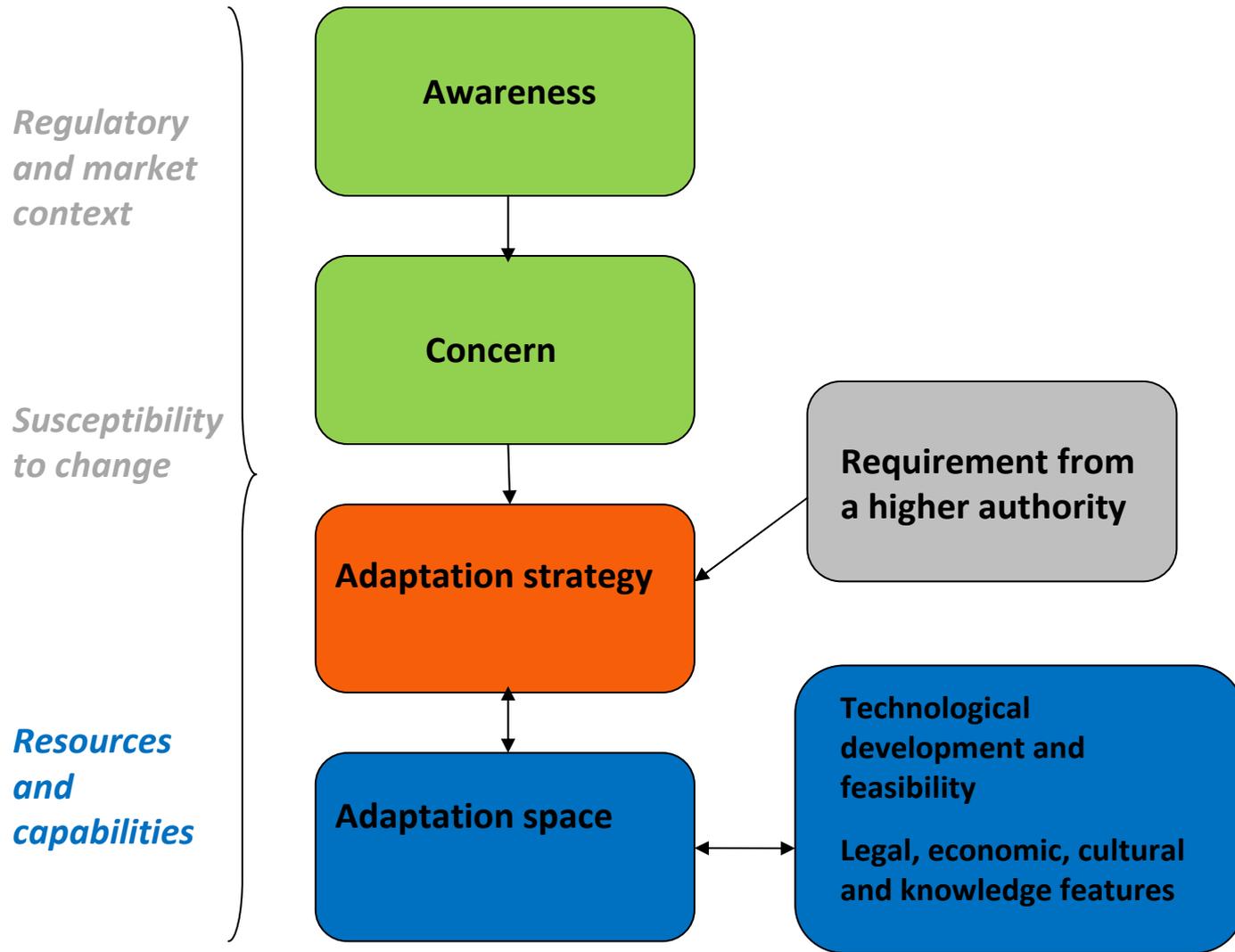
# Stakeholders perceptions of limits to implementation of adaptation measures



Simonsson et al, 2009, forthcoming

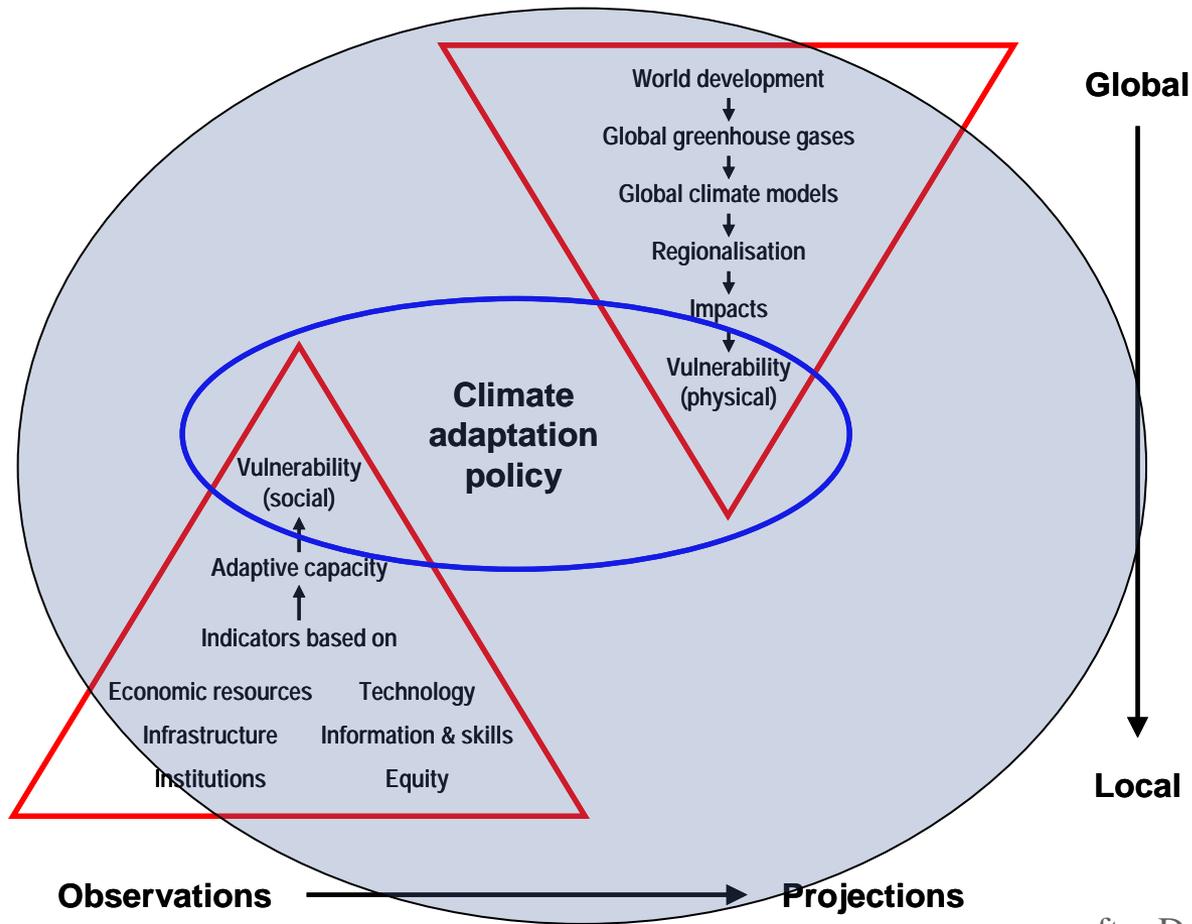


# Conceptual simplified framework for effective planned adaptation



(based on reasoning in Berkhout et al 2006 and Arnell & Delaney 2006)

# Adaptation research in Sweden is expanding



after Dessai and Hulme (2003)



# Acknowledgements

- Mistra-Swecia
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