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Swedish University of Agricultural Sciences

Kristina Blenow Forests and Climate Change: Adaptation  
Initiatives and New Management Practices  
Nancy France 9 March 2017

# **Climate change and forests - strategies for the adequacy of communications**

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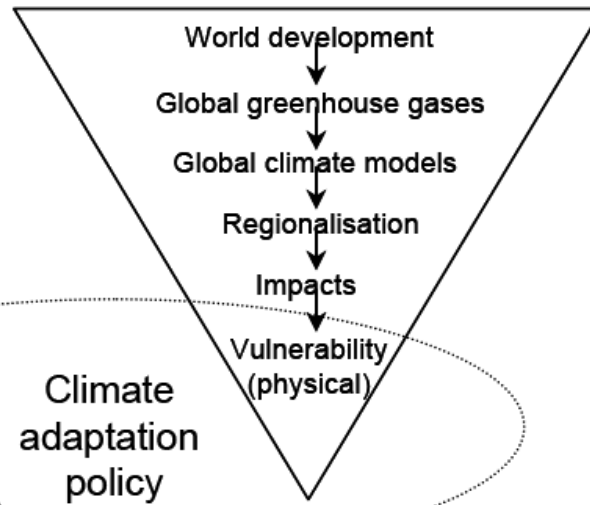


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**Did he take  
measures to  
adapt to  
climate  
change?**

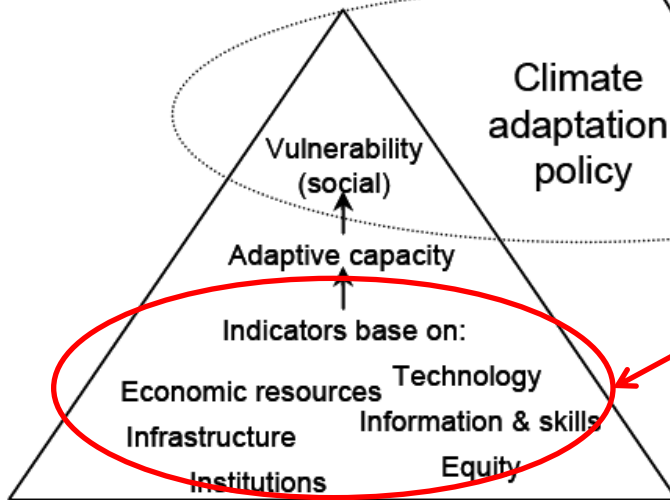
## Top-down approach

Global



Local

Climate  
adaptation  
policy



## Bottom-up approach

**General structural  
model predicts:**

**Adaptive capacity larger  
In northern Europe than  
In southern Europe**

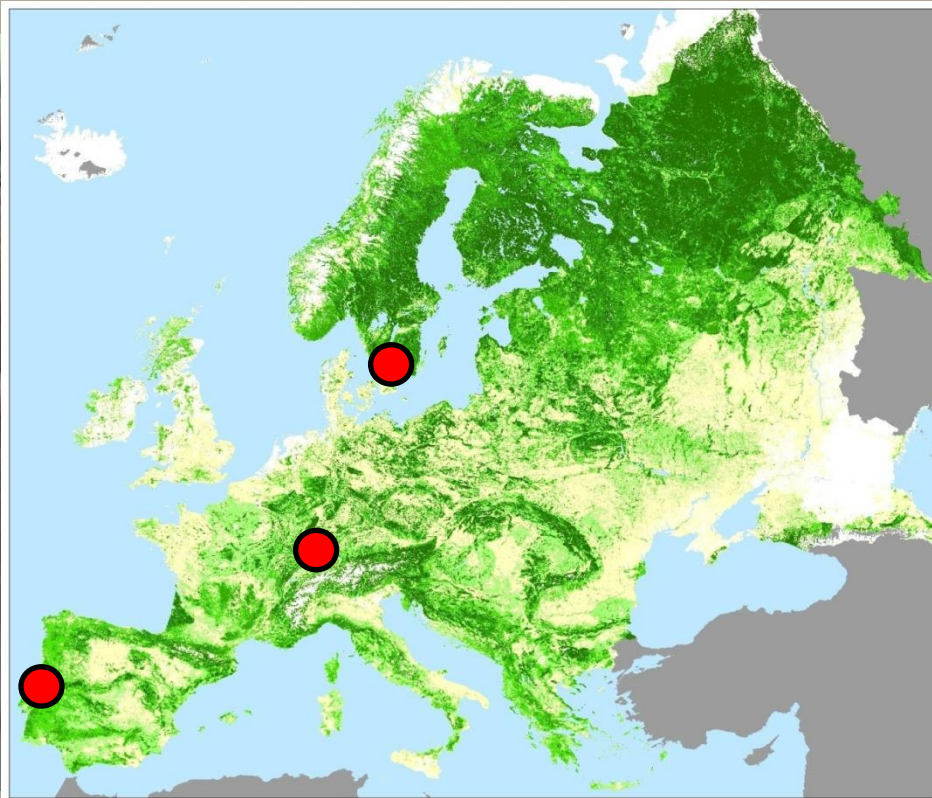
Past

Present

Future



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Proportion of total forest  
from total land area  
(% at 1 km x 1 km resolution)

- 0 - 1
- 2 - 10
- 11 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- No data
- Water
- No data

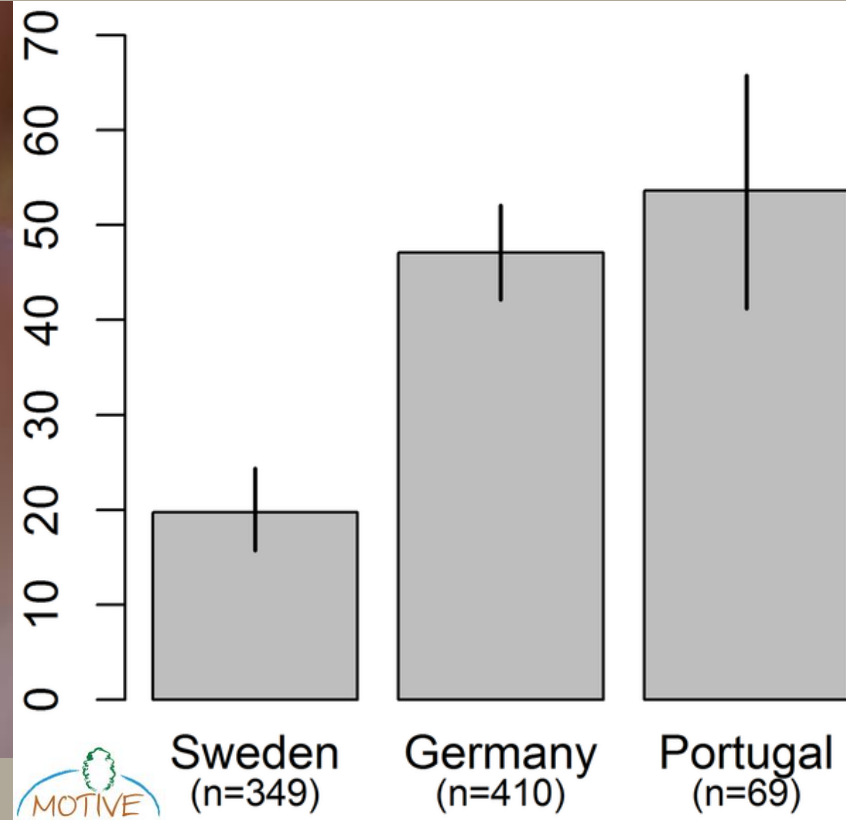
0 75 150 300 450 600 750  
Kilometers



# Did take measures to adapt forest management to climate change



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Accurately  
explains and predicts  
adaptation to climate  
change:

- Strength of belief in the local effects of climate change?
- Strength of belief in having experienced effects of climate change?



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**Risk perception –**  
crucial for explaining and  
predicting forest  
adaptation decisions!



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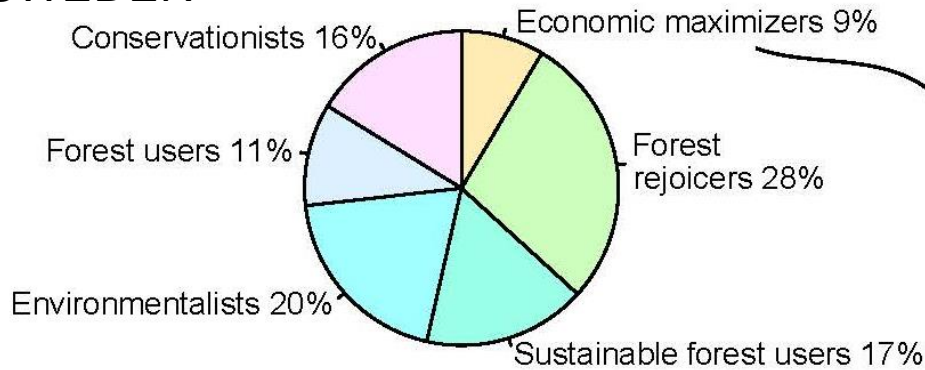
# Storm Gudrun 2005

## 75 Mm<sup>3</sup> -- almost an annual harvest in Sweden

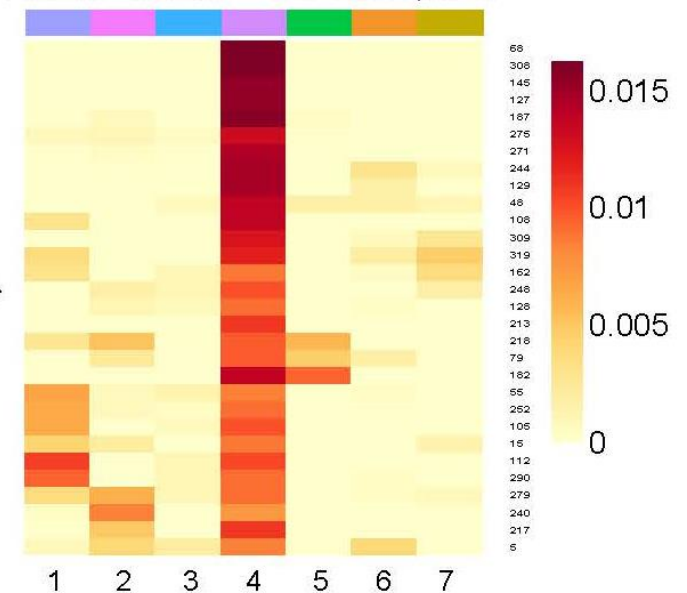




## SWEDEN



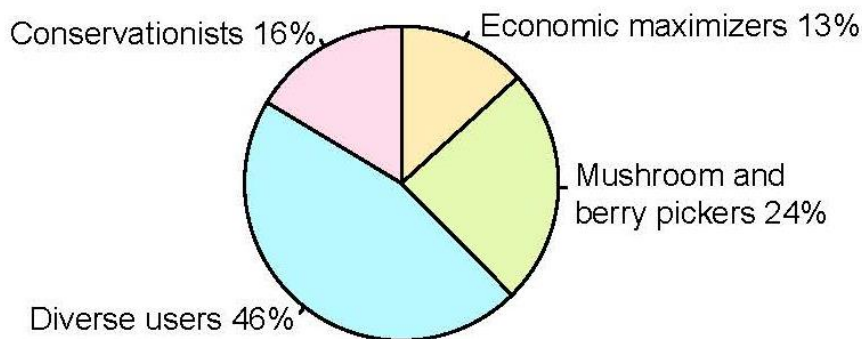
Economic maximizers' value profile



### Value cluster

- 1 Ecosystem services
- 2 Life as a forest owner
- 3 Mushrooms and berries
- 4 Economic gain
- 5 Self sufficiency
- 6 Forest walks
- 7 Conservation

## GERMANY





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Adequate communication:

contains the information needed for effective  
decision making and,

the users can access and comprehend it.



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Forest owner value profiles do not exert a stronger influence on risk perception than university education does

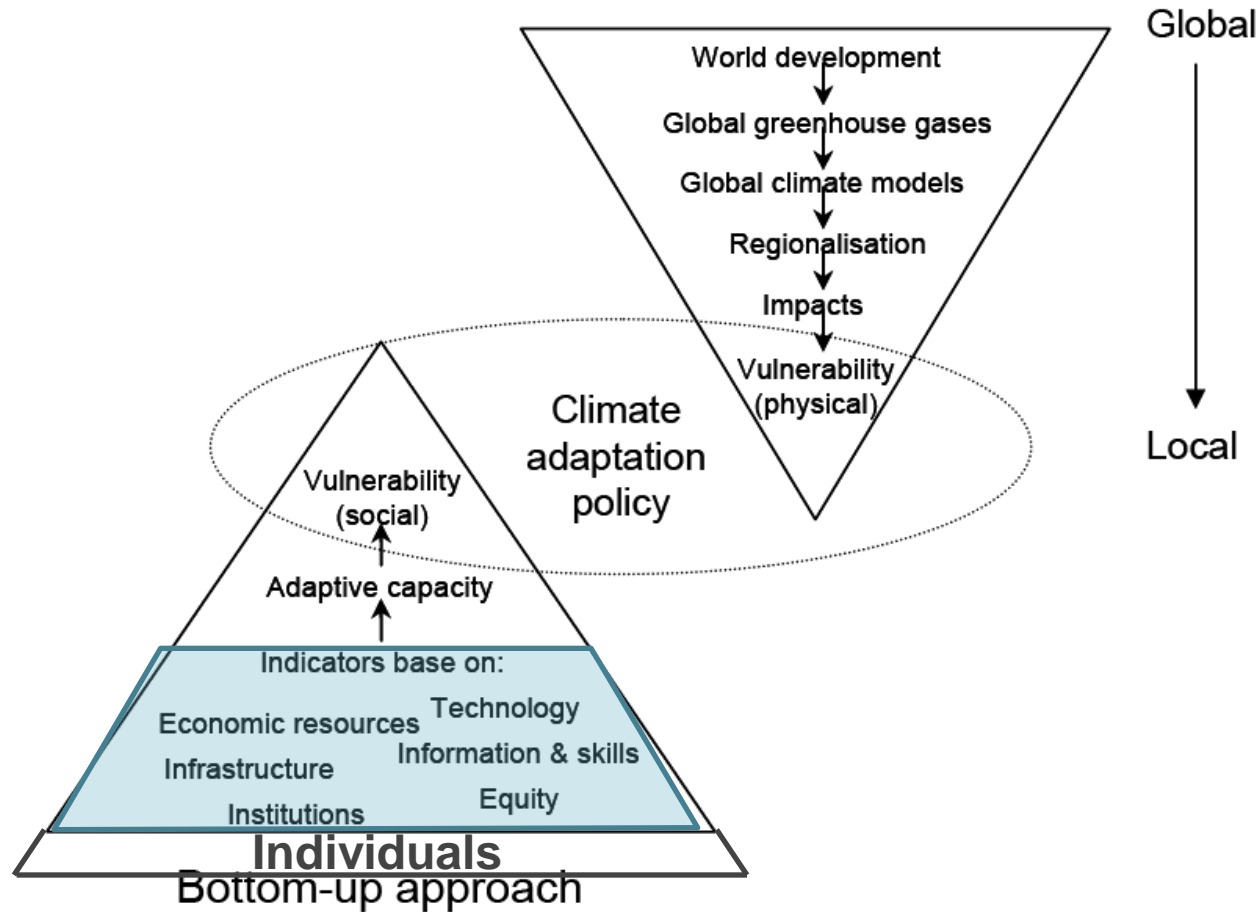
- No reason to rule out education as a means of fostering understanding in forest owners who can learn about and adapt their decision-making to a changing world.

Help the forest owners experience climate change by monitoring, sharing the information and providing real-world examples to learn from.

Blenow K, Persson J, Persson E, Hanewinkel M (2016) Forest Owners' Response to Climate Change: University Education Trumps Value Profile.

PLOS ONE, 11(5): e0155137. doi: <http://dx.doi.org/10.1371/journal.pone.0155137>

## Top-down approach



# Understanding risk to enable developing standards for the adequacy of communications

- Information on beliefs and desires
- Knowledge of heuristics
- Open environment to promote learning
- Consider knowledge risk
- Consider the distribution of risk and benefit



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# Thank you!