The role of beliefs, expectations and values for decision-making in response to climate change

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Effective support for people´s responses to climate change requires knowledge on the gap between physical climate change science and practices where the responses are realized.

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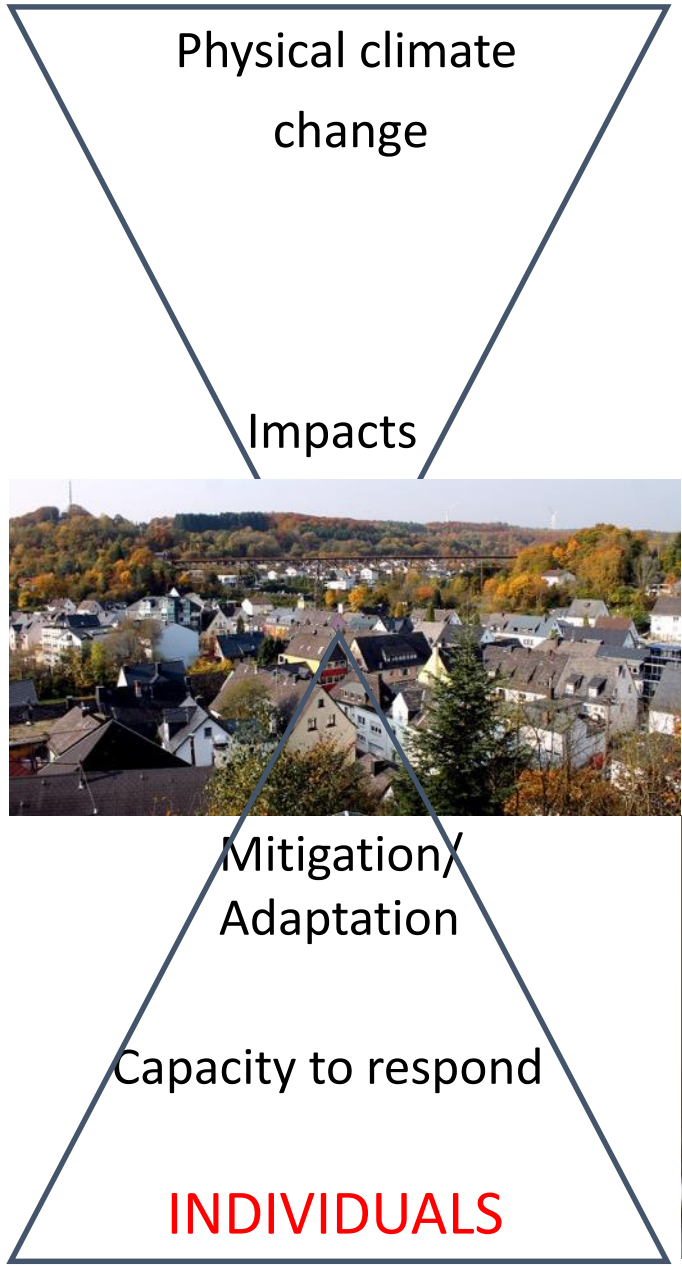
Decision-making in response to climate change requires **strong belief in the local impacts of climate change**

This belief can be **fortified if one believes that one has experienced the impacts of climate change**



Climate change: Believing and seeing implies adapting. Blennow, K, Persson, J., Tomé, M., Hanewinkel, M. 2012. *PLOS ONE*, 7(11):e50181.
DOI: 10.1371/journal.pone.0050182

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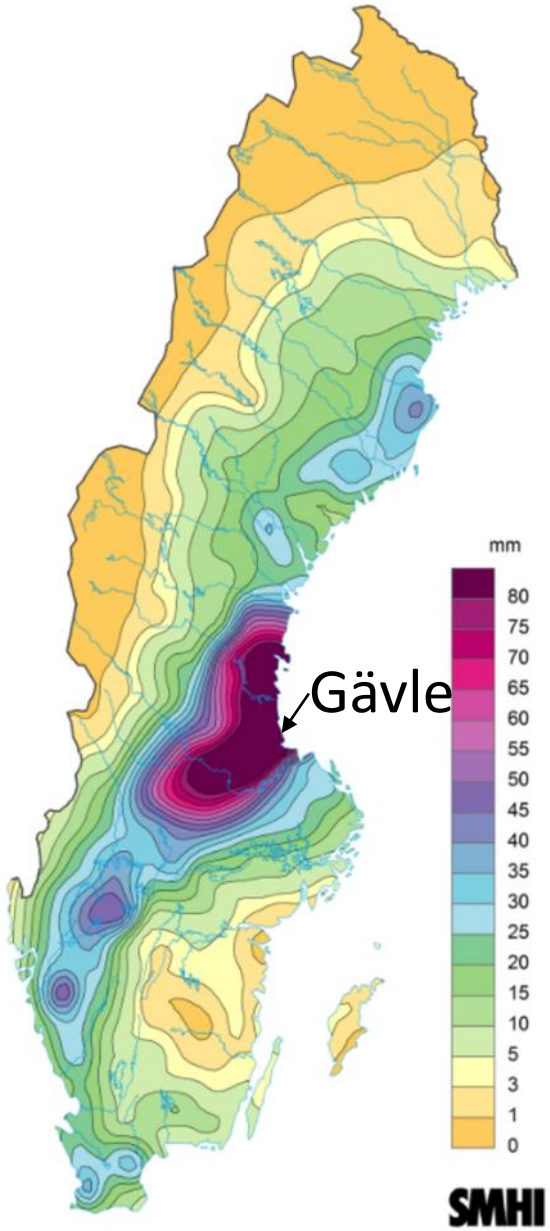
Not enough to have been exposed to an event – **one needs to subjectively attribute the causes of the event to climate change**



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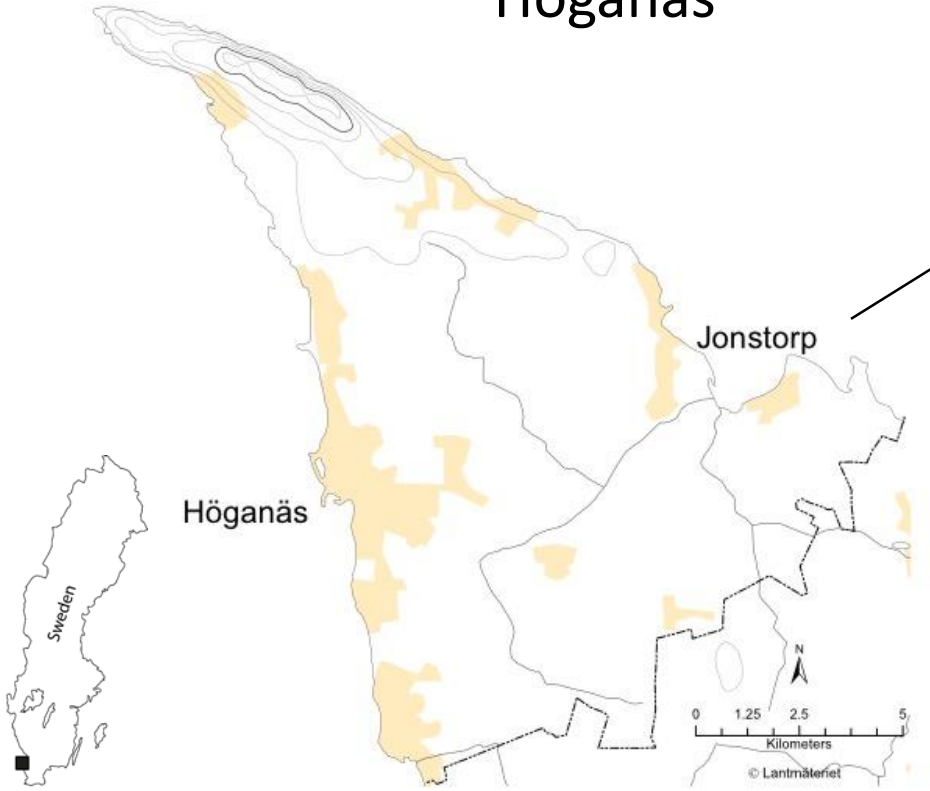
People living in Jonstorp, where the consequences of sea level rise on erosion are more visible, more strongly attributed the causes of events to climate change than people living in Höganäs



People in Jonstorp have a higher preparedness to take measures to adapt than those in Höganäs

Are values related to culture, identity, community cohesion and sense of place the values most vulnerable to climate change?
Blennow, K., Persson, E., Persson, J., 2019. PLOS ONE, 14:e0210426. https://doi.org/10.1371/journal.pone.0210426

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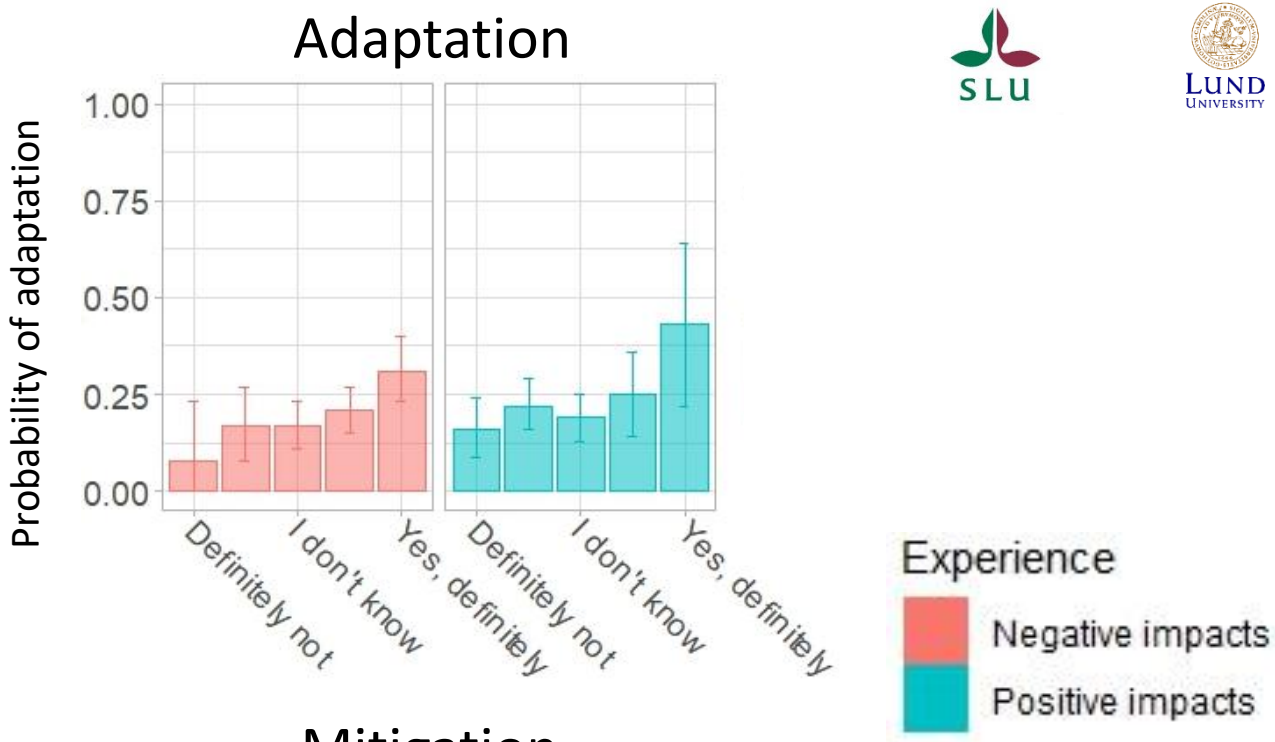
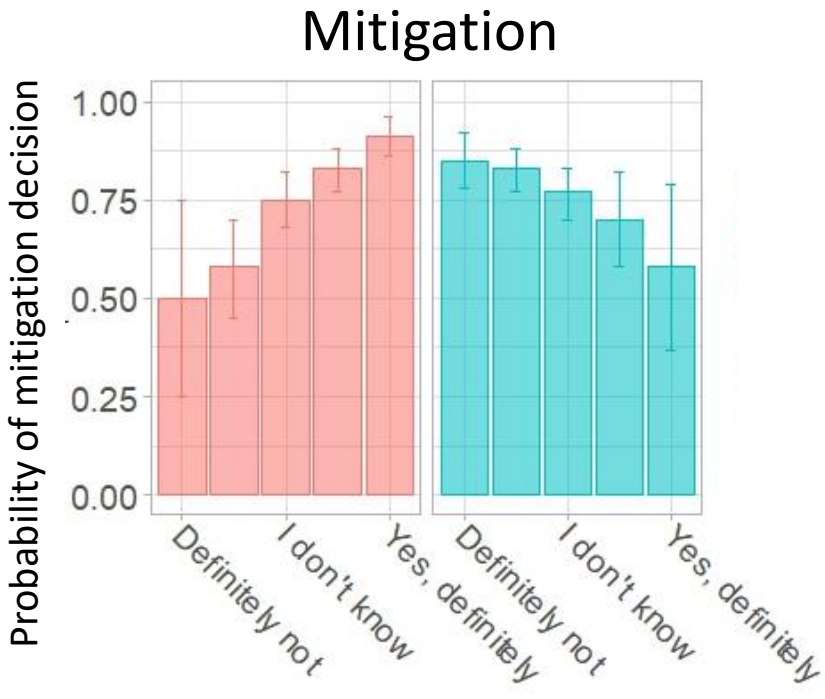


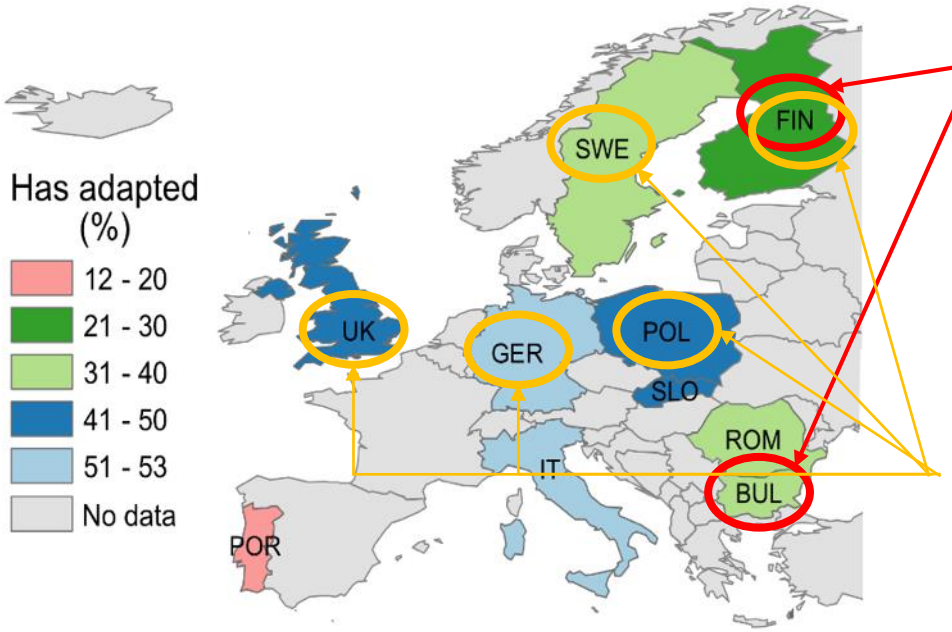


Based on data collected among citizens of Malmö, Sweden

To Mitigate or Adapt? Explaining Why Citizens Responding to Climate Change Favour the Former. Blennow, K. Persson, J., 2021. *Land*, 10, 240. https://doi.org/10.3390/land10030240

More than 4 in 5

- believed in the local impacts of climate change
- attributed the causes of events they had experienced to climate change



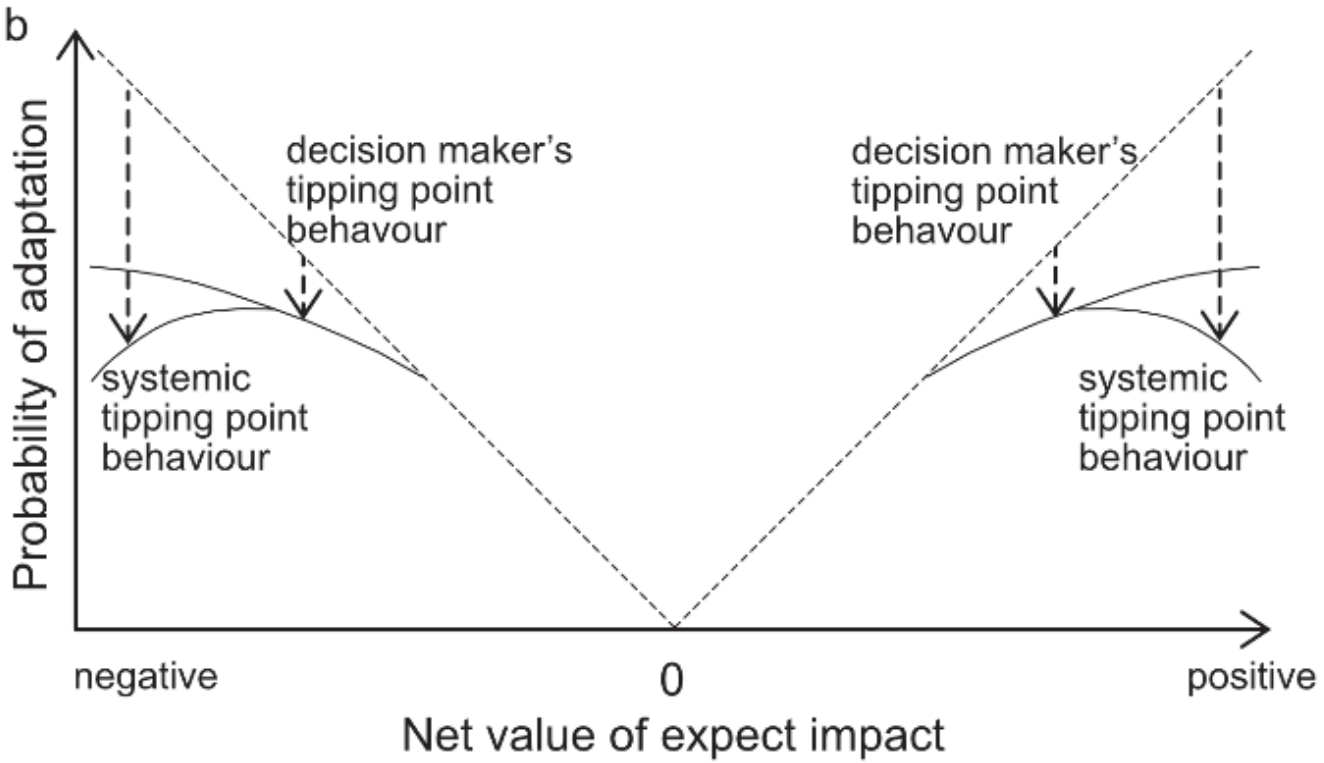
Weak belief in or uncertainy about local impacts of climate change on the forest: communications on climate change *per se* and their impacts on the forest needed

Weak subjective attribution of causes of events to climate change: communications that fortify their beliefs that they have experienced the impacts of climate change

Forest professionals 2016

The role of beliefs, expectations and values in decision-making favoring climate change adaptation – implications for communications with European forest professionals. Blennow, K. Persson, J., Gonçalves, L.M.S., Borys, A., Dutcă, I., Hynynen, J., Janeczko, E., Lyubenova, M., Merganič, J., Merganičová, K., Peltoniemi, M., Petr, M., Reboredo, F., Vacchiano, G., Reyer, C.P.O., 2020. *Environmental Research Letters*,15: 114061. /doi.org/10.1088/1748-9326/abc2fa

Decision-making in favor of adaptation to climate change generally increases with the absolute value of the net of positive and negative expected impacts in the absence of 'tipping point' behavior.



DeveLoP – A Rationale and Toolbox for Democratic Landscape Planning Blennow, K., Persson, E., Persson, J. 2021. *Sustainability*, 13:12955 https://doi.org/10.3390/su132112055

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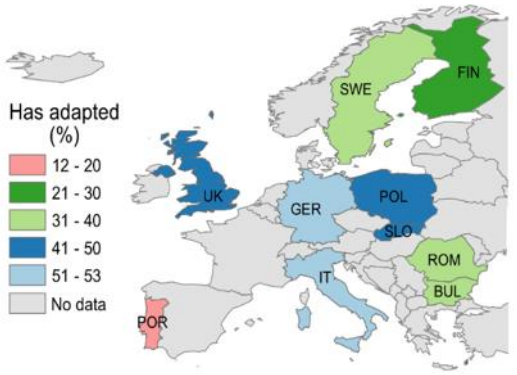
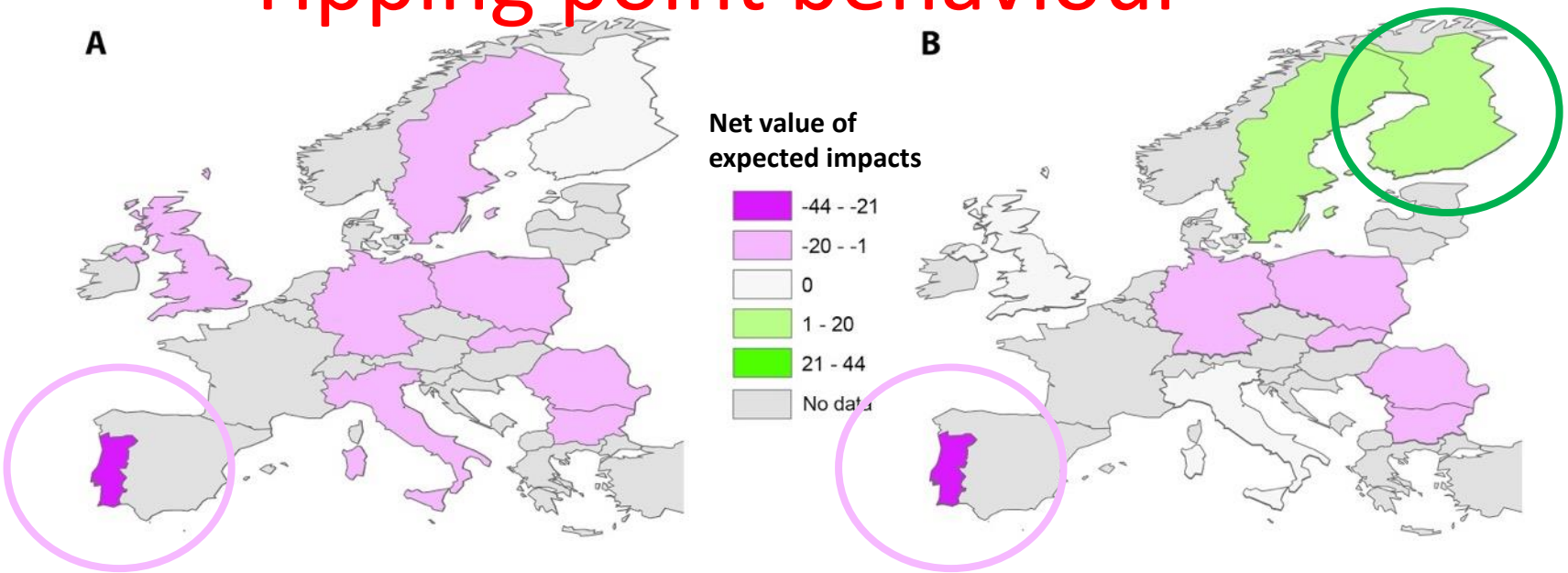
Median net value of expected climate change impacts among professionals in the forest sector



Expected sudden impacts of climate change

Expected gradual impacts of climate change

Tipping point behaviour



No polarization–Expected Values of Climate Change Impacts among European Forest Professionals and Scientists. Persson J; Blennow K; da Silva Gonçalves LM; Borys A; Dutca I; Hynynen J; Janeczko E; Lyubenova M; Merganic J; Merganicova K, Peltoniemi M; Petr M; Reboredo F; Vacchiano G; Reyer CPO (2020) *Sustainability* 12(7):2659.

Conclusions

Landscape analysis, with the bio-geophysical environment and the beliefs and expectations of the individuals, can bridge the science/practice gap by way of

- local assessments of risk and benefit
- identification of drivers and strategies of decision-making
- identification of communication needs
- evidence-based guidelines for effective climate change policies, including communications

DeveLoP – A Rationale and Toolbox for Democratic Landscape Planning
Blennow, K., Persson, E., Persson, J. 2021. *Sustainability*, 13:12955 https://doi.org/10.3390/su132112055

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