

## **Expert assessment of health-relevant adaptation options**

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### *Problem definition*

Health impacts of climate change (CC) are poorly known but are expected to occur – also in the Netherlands. Much research has explored how the Netherlands can adapt to changes in sea level, river runoff, fresh water supply and extreme weather events, but adaptation to CC-related health impacts has received little attention yet. The Netherlands Environmental Assessment Agency (PBL), the WHO Regional Office for Europe and the Utrecht University (UU) have joined forces to work together to assess the appropriateness of adaptation options on CC-related health impacts.<sup>1</sup>

### *Theoretical framework and methods*

We developed a framework to judge the appropriateness of health-relevant adaptation options. The framework consists of four assessment dimensions including a set of assessment criteria, of which the principal ones are listed:

1. 'Impact': health gain, risk of not intervening, and social impact;
2. 'Required efforts': economic costs, encroachment, and co-benefits;
3. 'Uncertainty-proof': robustness, flexibility, and no-regret;
4. 'Political salience': urgency, control type, and public support.

An extensive set of adaptation options was derived from suggested policy measures in international and European position papers on CC and health. The four strategic objectives of the European Regional Framework for Action offered the structure for categorising these options, capturing four themes: (a) health in all policy, (b) health systems, (c) awareness raising, (d) research, information systems, methods and tools. Next, the options were evaluated in a guided discussion setting as part of an international expert meeting: 'Policy options for climate change and health'. In four parallel groups, one for each strategic theme, experts jointly selected the most health relevant options from the gross list and subsequently scored them using the set of criteria. These criteria were first collectively discussed to generate shared understanding and consequently, each expert individually filled out a score card of criteria for each option.

### *Results*

The assessed options are positioned along the 2<sup>nd</sup> assessment dimension of ‘required efforts’ and 3<sup>rd</sup> assessment dimension ‘uncertainty-proof’.<sup>2</sup> Moreover, from perspective of decision support, the options are additionally positioned according to the 4<sup>th</sup> assessment dimension of political salience. Table 1 [insert table 1 here] demonstrates the analysis matrix for the strategic theme ‘health systems’. For example, the option B2 on early-warning and alarm systems requires the lowest effort and is the most uncertainty-proof and politically salient. The analysis does not include the 1<sup>st</sup> assessment dimension ‘impact’. All options were selected because of their high impact and therefore cannot be distinguished on these grounds. Positioning along these dimensions eventually allows for linking possible adaptation responses to characteristics of CC-related health impacts, such as plausibility, degree to which science can reliably quantify the impact given the state of knowledge, and relevance for adaptation. These latter characteristics were collected in a separate expert elicitation study on uncertainty in a wide range of potential health impacts of climate change. The paper will describe the process of linking the adaptation options with their scores to the findings of the elicitation study on the various health impacts, herewith illustrating opportunities for appropriate adaptation response.

## References

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