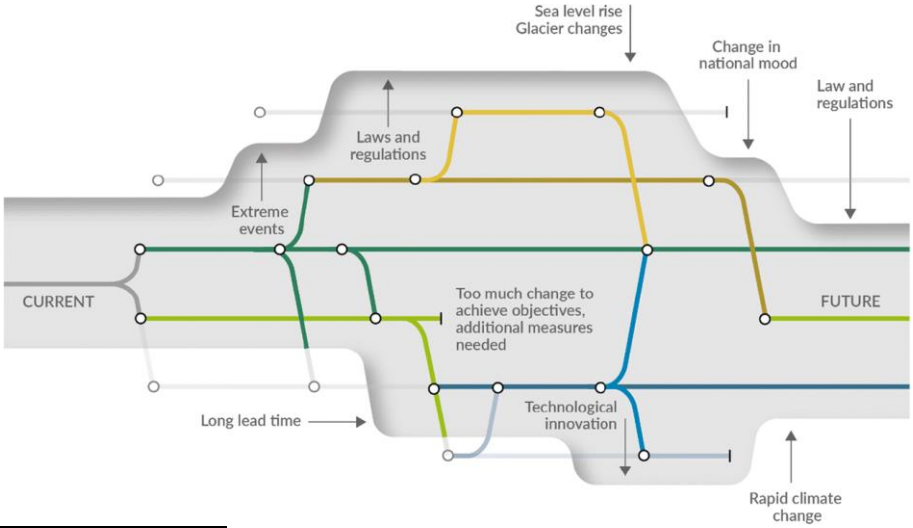
The economics of strategic choices in climate adaptation

Abstract contribution for the 4thMORSE Conference - Albert Faber[1]

Choices with respect to climate adaptation are made by policy makers in government, but also by a range of other agents. These choices are made on short-term economic considerations. For example, policy makers may choose to build houses in high risk flooding areas, citizens may choose to turn up air conditioning, or farmers may choose to irrigate more intensely. Such choices can have strong cascading effects for the future, e.g. by increasing emissions or by reinforcing drought. These cascading effects are thus not (sufficiently) taken into consideration.

Strategic thinking about climate adaptation takes better account of future consequences. Strategic climate adaptation policy may be considered in terms of the exploration of a 'solution space' of (possible) choices in time. Solution space can be understood in terms of a range of biophysical, techno-economic, socio-cultural and political-institutional factors. The solution space for strategic choices is contingent of choices in the past and may thus shift over time. Any choice thus determines the solution space for the future, through lock-ins and path dependencies (see figure).[2]

The economics of strategic choices in climate adaptation would thus take better account of long term future consequences (e.g. in terms of second and third order cascading effects), solution space (e.g. in terms of option values) and lock in-effects (e.g. in terms of structural transition costs). We aim to include such considerations in a policy advice on long term strategic policy choices for climate adaptation. Some first ideas can be discussed.



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[2] Haasnoot, M., Biesbroek, R., Lawrence, J. *et al.* Defining the solution space to accelerate climate change adaptation. *Reg Environ Change* 20, 37 (2020).