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Adaptation to catastrophic events with two layers uncertainty: Central planner perspective

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Author(s) Bondarev, Anton; Krysiak, Frank C.
Author(s) at UniBasel Bondarev, Anton ; Krysiak, Frank Christian ;
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We study the optimal adaptation to extreme climate events by the central gov- ernment in a setup where events are dynamically uncertain and the government does not know the true probabilities of events. We analyze dierent policy decision rules minimizing expected welfare losses for sites with dierent expected damages from the catastrophic event. We nd out under which conditions it is optimal to wait before implementation of a prevention measures to obtain more information about the underlying probabilistic process. This waiting time crucially depends on the information set of the planner and the implemented learning procedure. We study dierent learning procedures on behalf of the planner ranging from simple perfect learning to two-layers Bayesian updating in the form of Dirichlet mixture processes.
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