



Harmoni-CA

Adaptation portfolios in water management

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Abstract:

One way of dealing with future uncertainties in water management is the concept of adaptive (water-) management. As it is acknowledged that the future is inherently uncertain, it cannot be known which set of water management activities will be the most effective for handling future changes such as climate change. A challenge, therefore, is to find a robust set of measures that can handle unexpected shocks or events, while maintaining investments in individual measures at an acceptable ('affordable') level. An approach that is widely used to facilitate the development of robust management strategies is originally developed within research in financial economics and is formulated as the Modern Portfolio Theory

(Markovitz, 1952). This theory aims at finding sets of investments that diversify risks ('uncertainties') thereby reducing the overall risk of the total investment. The goal of this research is to use the Modern Portfolio Theory as an inspiration for developing a framework for developing robust water management strategies under uncertainty.