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Modeling portfolio solutions for modern water systems with uncertain changes

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By historical standards, modern water systems have achieved unprecedented successes in supporting public health and economic prosperity, while diminishing threats to the environment and supporting various social objectives. These accomplishments are imperfectly spread across the globe and face important challenges for the future. This presentation will review how the successes of today's portfolio approach to water management have integrated various water management technologies and institutions to provide this unprecedented performance, and the prospects and challenges to continuing and expanding these successes. Prospects for expanding these successes to the impoverished regions and continuing these successes with changes in climate and demographics are discussed. System analysis is seen as essential for providing guidance for continuing and managing the success and failures of integrated water management technologies and institutions. The construction of models to improve and inform difficult societal discussions on water is essential for their success.