

Water Security under Climate Change

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Abstract. We ask the question: What is water security and what systems can we engineer to ensure water security under the specter of global warming and the looming climate change? How is this security impacted by burgeoning population, rising standard of living, growing energy demands, and massive migration of people? To address these questions entails answering a number of other questions: (1) What is climate change? (2) Why is global warming occurring? (3) How do growing population and rising standard of living affect water security? (4) What is the relation of water security to food security, energy security, health security, and ecological security? (5) Is water security entirely a technical problem? (6) What is the role of engineers and hydrologists in enhancing and maintaining water security? (7) What systems need to be engineered to help ensure water security? (8) What systems need to be engineered to help ensure water security? These and related questions will be dealt with in this discussion. Finally, a personal perspective on water security and engineering solutions will be presented.