

Annual Review of Environment and Resources
Freshwater Scarcity

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Keywords

freshwater, water scarcity, peak water, water use, water demand, water indicators

Abstract

The availability and use of fresh water are critical for human health and for economic and ecosystem stability. But the growing mismatch between human demands and natural freshwater availability is contributing to water scarcity, affecting industrial and agricultural production and a wide range of social, economic, and political problems, including poverty, deterioration of ecosystem health, and violent conflicts. Understanding and addressing different forms of water scarcity are vital for moving toward more sustainable management and use of fresh water. We provide here a review of concepts and definitions of water scarcity, metrics and indicators used to evaluate scarcity together with strategies for addressing and reducing the adverse consequences of water scarcity, including the development of alternative sources of water, improvements in water-use efficiency, and changes in systems of water management and planning.