

OVERVIEW OF THE DESALINATION AND WATER RESOURCES

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Summary

This overview looks at the situation with regard to the earth's stock of fresh water, and emphasizes the need to augment these supplies for human sustainable development. Desalination for augmentation of water resources and water treatment and reclamation for water reuse are considered as inevitable means to meet the fresh water demand in many regions of the world. The development of desalination over the years is reviewed and some of the large scale desalination plants are introduced. The study shows that the cost of desalinated water is far less than what is usually estimated and asserts that such estimates seem to have ignored the economy of scale. The link between energy and water is studied with a view to ascertain viable solutions to the challenge of growing demand. Water treatment methodologies are outlined for recycling, reclamation and reuse of water with focus on the issues of health. With reference to sustainability, the study looks at the vast potential of the sun's radiation for use both for energy and water systems. A perspective view of sustainable development is presented and discussed in relation to sustainable energy driven desalination. The merits of different options for

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