Review and prospects of desalination as a water supply method in China

Shuang Liu*, Kenneth M. Persson
Division of Water Resources Engineering, Lund University, Box 118, SE-221 00, Lund, Sweden
Tel. +46 046 222 4009; Fax: +46 046 222 4435; email: Shuang.Liu@tvrl.lth.se
Received 20 October 2010; Accepted 11 March 2012

ABSTRACT

With the development of urbanization and deterioration of water environment, the fresh water shortage in eastern coastal cities of China is more and more serious. Desalination, as the only way to increase the amount of fresh water, should be more applied in this region, while the actual development is not as expected for some reasons. The study reviews the desalination status in China from the perspective such as driving force, investment, cost, policy, safety and energy. The analysis of problems makes the recommendations how to develop desalination market and make desalination as a safety water supply. In addition, the study compares desalination with wastewater reuse in water quality, cost, management, public acceptance and so on and discusses the proposal for integrated utilization of different unconventional water sources.

Keywords: Desalination; Cost and investment; Technology; Energy; Management and policy

*Corresponding author.

Membranes in Drinking and Industrial Water Treatment—MDIW 2010, June 27–30, 2010, Trondheim, Norway

1944-3994/1944-3986 © 2013 Balaban Desalination Publications. All rights reserved.