Abstract

Water Scarcity and drought are recurrent phenomena in China. In the context of environmental change, an increasing tendency in drought frequency and severity is observed in China in recent years. Therefore, it is imperative to take necessary initiatives to reduce the impacts of drought. In this paper, an attempt is made to identify the best water management strategies to cope with droughts. For this objective the records of historical droughts and their impacts in China over the period of 1950-2009 are analyzed. It is observed that the drought affected area has increased nearly by 12 folds and the drought damaged area has increased by about 22 times in China in last 60 years. Over 87,000 reservoirs were built with a total water storage capacity of about 7,064 billion m$^3$ to cope with droughts. However, this structural supply-based management strategy was not enough to meet the increasing water demand caused by rapid economic development and population growth. A typical relationship between socio-economic development and water resources management strategy to attain sustainability in water management is developed in this study. The relationship shows that the demand-side water management strategies can be the best option to meet the challenges posed by increased severity of drought, population growth, economic development and possible climate change. The concept is later verified through the analysis of changing pattern of water consumptions by different sectors in last 60 years.