



Study on the Water Depletion Cost

Ling Jia, Hong Gan, Changhai Qin, and Qiong Lu

China Institute of Hydropower and Water Resources Research, Beijing, 100038, (jialing0317@sina.com)

To evaluate the real input and output efficiency in the national economic operation, it is necessary to take into account the costs of natural resources depletion and environmental degradation in the system of national accounting (SNA), as they are two significant core elements of the system of environmental-economic accounting (SEEA). As a satellite account of SEEA, system of environmental-economic accounting for water (SEEAW) also puts the water depletion-cost as an important component. This paper aims at proposing the issue of including the resources depletion-costs, although it is difficult to evaluate in SEEA currently. The calculation of water depletion-cost proposed is distinguished from the evaluation method of non-renewable resources depletion values. This method is based on two aspects: [U+FFFD]rom the perspective of water resources renewability, the concept of water depletion caused by water consumption of human activities and its calculation are presented; [U+FFFD]ater shadow price at the national level conducted on the basis of water hybrid accounts, and it is used as the price of water resources which covers the values of water in commercial, social, environmental and ecological aspects. Finally, the approach is applied to estimate the water depletion-cost in mainland China and the Haihe river basin. Determination of water depletion-cost will provide important theoretical approaches and technical supports to SEEA.