

Land use change in the upstream of the Fenhe basin and its influence on runoff

Caihong Hu (1), Shengqi Jian (2), Xian Du (3), and Qiuwen Zhou (4)

(1) Zhengzhou University, School of Water Conservancy and Environment, Zhengzhou, China (hucaihong@zzu.edu.cn), (2) School of water conservancy and environment, Zhengzhou university, Zhengzhou city, Henan Province, 450001, China, Email: jiansq@zzu.edu.cn, (3) School of water conservancy and environment, Zhengzhou university, Zhengzhou city, Henan Province, 450001, China, Email:2018215036@qq.com, (4) School of Geography and Environment Science, Guizhou Normal University, Guiyang 550001, China, Email: 151667835@qq.com

In order to evaluate the effect of soil and water conservation measures on the land use in the Fenhe basin, which being as the 2nd largest branches river in the Yellow river in China, based on three indicators, including (a) a land use change significance index, (b) a land use change proportion (c) a vegetation change index, are used to characterize the primary transformation types, the intensity of land use changes, and the degree of vegetation restoration in the period 1978-2010. the basin covers an area of 39080km², which is 5.2