

Study and practice of small hydropower project development with riverine ecosystem protection

JIEYOU LI, LIJUAN GUO, WANG CHEN, YANG ZHANG & HAO JIANG

State Key Laboratory of Hydrology-Water Resources and Hydraulic Engineering, Hohai University, Nanjing 210098, China
leejy2057@hotmail.com, leejy2057@sina.com

Abstract Rapid economic development and societal growth need an adequate supply of energy resources. Hydropower, as a kind of clean energy, is an important component of energy development and construction. The development of small hydropower projects is enormously beneficial economically, but it has many adverse effects on riverine ecosystems. Based on an analysis of the current situation of a small hydropower project development in Luoding city, in Guangdong Province, south China, as an example, the socio-economic advantages and adverse influence on the riverine ecosystem are discussed, giving particular attention to the following aspects: repair of the riverine ecosystem of a completed small hydropower project; successful development of new small hydropower projects; and improving estimation of the environmental impacts of small hydropower project development.

Key words small hydropower project development; riverine ecosystem; environmental impacts; adverse effects; protection practice