

Valuing flood control service by cost-based approaches: a case of study in southern of Turkey

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Abstract: Forest ecosystems provide several goods and services. These goods and services are generally grouped into four categories: provisioning, supporting, regulating, and cultural services. Flood control service is one of regulating services of forests. Flood control service has both ecologic and socio-economic dimensions. Because, when occurring floods, agricultural lands and settlements are damaged. Even people and animals might lose their lives. For preventing floods or decreasing damages of them, watersheds should be planned. For this aim, not only ecological effects of floods, but also its economical effects should be evaluated. In order to determine of values of regulating services of forests (soil and water protection, climate regulation etc.), several methods are used. One of them is cost-based methods. In this group, the most common ones are Damage Cost Avoided Method and Replacement Cost Method. The aim of study is to determine value of flood control service using cost-based methods. For this aim, Erdemli Basin was selected in Mersin Province in southern of Turkey. In 2012, a flood was occurred in the basin. In the study, the general information about flood was given. In addition, the costs belong rehabilitation activities after flood were determined. Thus, the value of flood control was approximately accounted.

Keywords: Flood control, Costs-based approaches, Erdemli Basin