Regional Forest Ecosystem Services Assessment: A Case Study of Shandong Province

DUAN Xiaofeng XU Xuegong (College of Environmental Sciences, Peking University & Laboratory for Earth Surface Processes, Ministry of Education, Beijing, 100871)

Forest ecosystem plays an important role in supplying and maintaining ecosystem services in the situation of rapid economic development in Shandong province. Forest ecosystem services are divided into four facets: production, recreation, air quality improvement and water-soil conservation. Forest ecosystem services' values of the different counties are accounted by using the eco-economy evaluation methods. Based on the forest ecosystem services' values and mechanism analysis, an integrated assessment index system was established, which consisted of six indexes. The integrated assessment index system described the services at three aspects such as structure, density, and quality. By using the Polygon Synthesis Indicator method, each country got an score of integrated assessment. As a result, only 0.39 percent of the total area in Shandong province scores from 0.75 to 1 (grade 1), 2.37 percent scores from 0.5 to 0.75 (grade II), 41.65 percent scores from 0.25 to 0.5 (grade III), and 55.59 percent scores from 0 to 0.25 (grade IV). The results indicate that the forest ecosystem services of most counties in Shandong province is poor. According to the integrated assessment, some advices are proposed.

Key Words: forest ecosystem services assessment polygon synthesis indicator method Shandong province

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