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Ecological regulation services of Hainan Island ecosystem and their valuation
(PMID:15573995)

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[Ying Yong Sheng tai xue bao = The Journal of Applied Ecology / Zhongguo Sheng tai xue xue Hui. Zhongguo ke xue Yuan Shenyang Ying Yong Sheng tai yan jiu suo zhu ban](#) [2004, 15(8):1395-1402]

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Abstract

Highlight Terms

Gene Ontology(1) Species(1)

Ecosystem services imply the natural environmental conditions on which human life relies for existence, and their effectiveness formed and sustained by ecosystem and its ecological processes. In newly research reports, they were divided into four groups, i. e., provisioning services, regulation services, cultural services, and supporting services. To assess and valuate ecosystem services is the foundation of regional environmental reserve and development. Taking Hainan Island as an example and based on the structure and processes of natural ecosystem, this paper discussed the proper methods for regulation services assessment. The ecosystems were classified into 13 types including valley rain forest, mountainous rain forest, tropical monsoon forest, mountainous coppice forest, mountainous evergreen forest, tropical coniferous forest, shrubs, plantation, timber forest, windbreak forest, mangrove, savanna, and cropland, and then, the regulation services and their economic values of Hainan Island ecosystem were assessed and evaluated by terms of water-holding, soil conservancy, nutrient cycle, C fixation, and windbreak function. The economic value of the regulation services of Hainan Island ecosystem was estimated as $2035.88 \times 10(8)$ - $2153.39 \times 10(8)$ RMB yuan, 8 times higher to its provisioning services (wood and agricultural products) which were estimated as only $254.06 \times 10(8)$ RMB yuan. The result implied that ecosystem regulation services played an even more important role in the sustainable development of society and economy in Hainan Island.

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