

# Pricing the ecosystem and taxing ecosystem services: A general equilibrium approach

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## Abstract

In an integrated dynamic general equilibrium model of the economy and the ecosystem humans and other species compete for land and prey biomass. Each submodel exhibits a price-driven competitive allocation mechanism, and the endogenously determined habitat is either openly accessible or privately owned. In both scenarios specific corrective taxes or subsidies are needed to internalize ecosystem externalities. An open access habitat causes additional inefficiencies through diverging prices for biomass and land in both subsystems. Values of all ecosystem components are determined in an efficient steady state clarifying the role and the interplay of ecosystem prices and economic prices.

## JEL classification

H21; Q28

## Keywords

Land; Biomass; Ecosystem services

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