The Gordon-Schäfer model after (nearly) 50 years. Status and extensions.

by

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Abstract

For nearly 50 years the Gordon-Schäfer model has been one of the most powerful models, if not the most powerful one, within natural resource economics. The model, coined after H.S. Gordon's famous paper from 1954 and the biologist M.B. Schäfer's work from 1957, was originally formulated as an equilibrium fishery model. All the basic insight economists have about profitability and utilisation of a fishery can be traced back to this model. This is also so for basic policy implications and regulating schemes. The Gordon-Schäfer model has been reformulated in various directions, and in the first part of the paper some of these directions are summarised and discussed. In the second part of the paper, the model is extended to analyse an exploitation scheme of a fishery, or a stock of wildlife, when where there are more than one exploiter, and where the biological resource may represent a value as well as a pest, in addition to having a harvesting value.

Key words: Renewable resources, harvesting, stock values