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Defining, Valuing, and Providing Ecosystem Goods and Services; Brown, Thomas C.; Bergstrp, John C.; Loomis, John B.

THOMAS C. BROWN,\* JOHN C. BERGSTROM\*\* &  
JOHN B. LOOMIS\*\*\***Defining, Valuing, and Providing  
Ecosystem Goods and Services\*\*\*\*****ABSTRACT**

*Ecosystem services are the specific results of ecosystem processes that either directly sustain or enhance human life (as does natural protection from the sun's harmful ultraviolet rays) or maintain the quality of ecosystem goods (as water purification maintains the quality of streamflow). "Ecosystem service" has come to represent several related topics ranging from the measurement to the marketing of ecosystem service flows. In this article we examine several of these topics by first clarifying the meaning of "ecosystem service" and then (1) placing ecosystem goods and services within an economic framework, emphasizing the role and limitations of substitutes; (2) summarizing the methods for valuation of ecosystem goods and services; and (3) reviewing the various approaches for their provision and financing.*

*Many ecosystem services and some ecosystem goods are received without monetary payment. The "marketing" of ecosystem goods and services is basically an effort to turn such recipients – those who benefit without ownership – into buyers, thereby providing market signals that serve to help protect valuable goods and services. We review various formal arrangements for making this happen.*

**I. INTRODUCTION**

"Ecosystem service" is the latest environmental buzzword.<sup>1</sup> It appeals to ecologists, who have long recognized the many benefits derived from well-functioning ecosystems. It appeals to resource economists, who

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1. James W. Boyd & H. Spencer Banzhaf, *Ecosystem Services and Government Accountability: The Need for a New Way of Judging Nature's Value*, 158 *RESOURCES* 16, 16 (2005).

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