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## Natural and Environmental Amenities: A Review of Definitions, Measures and Issues

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### ABSTRACT

This study investigates the notions of natural and environmental amenities in the social science literature, the ways they are defined and measured, and related issues. We analyze 328 peer-reviewed articles published over a 40-year period (1974–2013). We observe an exponential growth in publications, with a small set of economics journals publishing most of the corpus. Despite this body of work, there are still no widely acknowledged definitions of these notions. Research objectives have changed from an initial focus on recovering the implicit prices of natural/environmental amenities, to a more recent and growing interest in evaluating their impacts on regional development and quality of life. Regarding measurement, most papers use unidimensional measures of natural attributes (esp. water bodies, land cover/use). This survey leads to a discussion of prospects for future research.

### 1. Introduction

For several decades, amenities have been of interest to economists, geographers and spatial planners, among others. Amenities have long been believed although not proven empirically to increase the value of land or housing (e.g., Rosen, 1979). More generally, it has been hypothesized that amenities enhance the attractiveness of a given location and contribute to local growth and well-being (e.g., Green et al., 2005). The interest in this area is not limited to academia; it has attracted the attention of local development practitioners and elected officials, who perceive amenities as a means to foster the image of their locale and attract households – whether permanent or temporary residents, and firms (e.g., Gottlieb, 1994). At the same time, there has been a parallel increased interest in disamenities, or how negatively-perceived local attributes affect various dimensions of local development.

Based on an extensive analysis of peer-reviewed articles published over the course of some 40 years, this study aims to provide a concise but comprehensive overview of publication trends, definitions, measures and research issues related to the notions of natural and environmental amenities. This survey should be of interest for several reasons: (1) It will allow academics (and practitioners) interested in the literature on natural/environmental amenities but not familiar with it, to rapidly grasp the many issues it covers, and the main related journals; (2) Scholars already involved in research on natural/environmental amenities will obtain insights into other related issues and the

importance and dynamism of their particular research field compared to other fields; (3) From a practical perspective, researchers working on other topics will find it useful to have a summary of the most frequently measured types of natural/environmental amenities, for instance, to include them as control variables in their models; (4) More specifically, several authors have pointed to the lack of commonly-accepted definitions of natural/environmental amenities (e.g., Chi and Marcouiller, 2011; Kahsai et al., 2011; Gutmann and Field, 2010; Ferguson et al., 2007). An extensive review of these definitions might perhaps confirm this critical assessment. It will also help academics to reflect on the differences among the existing definitions, and make more informed decisions about which to use; (5) Lastly, this survey should help to identify research gaps and needs in terms either of unaddressed or scarcely addressed issues, or indicators that have been ignored (or rarely) considered.

We address the following four main questions: (Q1) What are the trends in publications related to natural/environmental amenities, overall and in the main journals publishing research in this area? (Q2) Which of the related research issues have been addressed? (Q3) Are there clear and widely-acknowledged definitions of ‘natural amenity’ and ‘environmental amenity’; and what are the main differences and similarities among the existing definitions? (Q4) How are natural and environmental amenities measured in empirical studies?

To address these questions, we created a database of 328 peer-reviewed social science articles published before 2013, extracted from the

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