The Global Economic Contribution of Protected Natural Lands and Wilderness through Tourism

BY H. KEN CORDELL and J. M. BOWKER

Introduction

These are the first-round results of a project aimed at exploring at a global scale the complex relationships between protected natural lands, tourism, and economic growth. In this first round we mainly were interested in secondary sources of data and parameters from previously published studies. In presenting results for the 8th World Wilderness Congress, we provided summaries of the area of protected natural lands, estimates of the economic impacts stimulated by tourism drawn by these lands, and the spatial distributions of these lands and impacts around the globe. We were surprised to discover that only a very limited amount of research has been done previously to assemble the concepts, models, data, and summaries necessary for such an effort at a global scale. Thus, it was necessary for this project to tightly define the concepts of tourism and nature-based tourism that are relevant to assessing global impacts. Next it was necessary to identify and obtain contemporary best data enumerating tourists, their travels, and their spending. Finally, it was necessary to pull key concepts and data together for defining, quantifying, and spatially marking the economic activities associated with tourists traveling to visit and see protected natural lands.

Protected Natural Lands

The World Resources Institute (WRI) has listed eight ecosystem types ranging from marine to polar in its recent partnership publication, the *Millennium Ecosystem Assessment* (Millennium Ecosystem Assessment 2005). The Assessment reported that the structures of the world's ecosystems have changed more rapidly in the second half of the 20th century than at any other time in human history. The ecosystems that have been most significantly altered globally by human activity include marine and freshwater ecosystems, temperate broadleaf forests, temperate grasslands, Mediterranean forests, and tropical dry forests. Acceleration of human demands has resulted in unsustainable use of natural lands, with 60% now seriously degraded. In an effort to address degradation and conversion to cultivated or developed uses, a number of countries and organizations have been working toward greater protection. Between 1962 and 2003, the world listing of protected natural areas increased from 9,214 to more than 100,000 (United Nations Environment Programme 2003). The area in protected status rose from 2.4 million in 1962 to 20.3 million square kilometers (7.8 million sq. miles). Based on the Assessment, currently about 11.3% of the Earth's terrestrial area is now classified as protected. These protected lands are often a draw for tourism.

Mike Bowker (left) and Ken Cordell in Alaska.

Tourism

Tourism includes any number of activities that involve persons traveling to and staying in places outside their usual environment. The broad type of tourism most relevant to this article is nature-based tourism, which includes trips to see, photograph, or visit both protected and unprotected natural lands. Globally, tourism has been growing rapidly. Annually, millions of people travel to see and experience natural lands. In the process of traveling to and/or going into destination natural areas, tourists purchase transportation, lodging, food, souvenirs, and crafts and thus create economic impact. About 11.3% of the natural lands people travel to see are protected. The economic impact of protected land tourism accounts for the number of travelers, amounts they

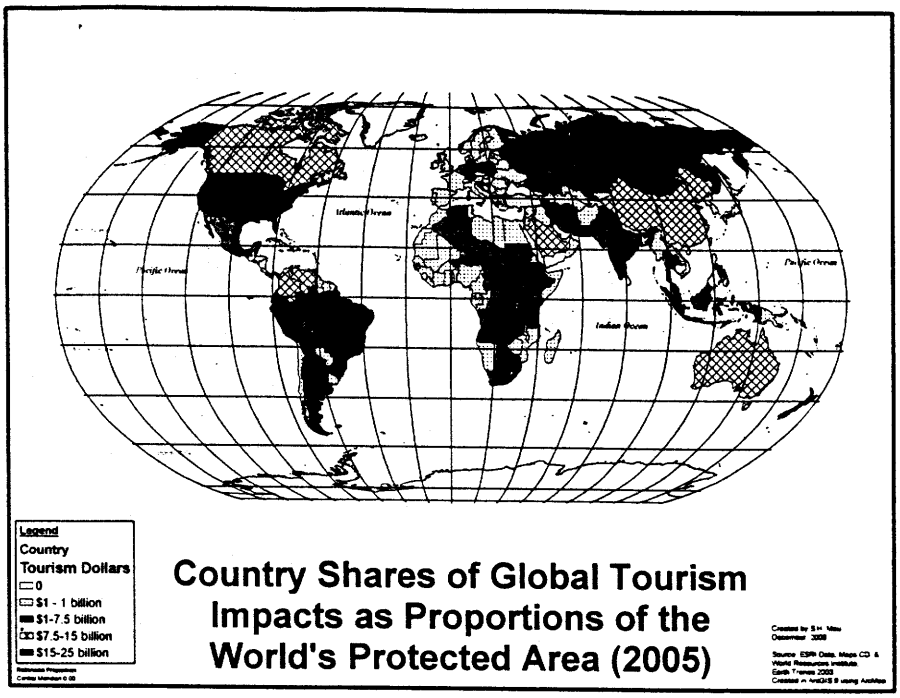


Figure 1—Global distribution of protected area impacts.

spend, and how their spending spreads through an area.

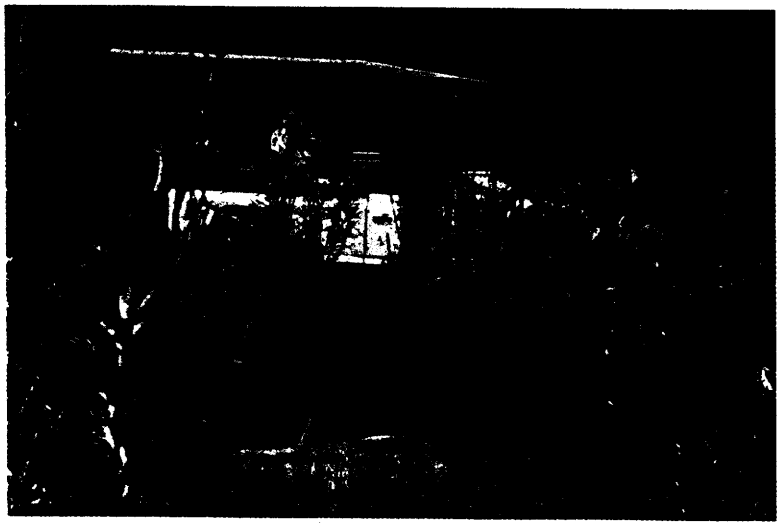
Approach

The approach adopted for this article was to obtain overall measures of the global economic impact of tourism, and then through several steps, to disaggregate the relevant economic measures into proportions attributable to the tourism associated with protected natural lands. The World Travel and Tourism Council (WTTC 2005), and its Oxford Economic Forecasting partner have been improving estimates of the economic impact of tourism (Organisation for Economic Co-operation and Development 2001). Disaggregating their resulting Tourism Satellite Accounts was basic to our study as follows:

1. Identify the proportion of total world tourism spending motivated by travel to see and/or visit natural lands.
2. Identify the proportion of world nature-based tourism that is attributable to travel to see or visit protected lands.
3. Identify the proportion of world nature-based tourism that is attributable to protection of IUCN Class 1b, wilderness.
4. Identify the proportion of world protected natural lands and wilderness that is attributable to protection in the United States.

Results

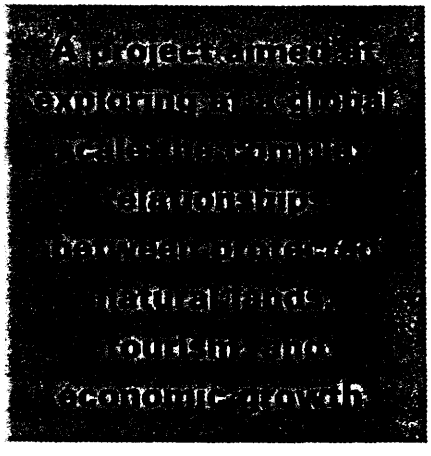
Total global tourism impact was estimated by the World Travel and Tourism Council at US$6,201.5 billion in 2005. The literature indicates that approximately one-third of tourism travel is nature motivated. One-third of this US$6,201.5 billion is US$2,066.96 billion, which we considered to be a reasonable estimate of global nature-based tourism impact in 2005. Because 11.3% of global natural lands are protected, it seems reasonable to assume that 11.3%, or US$233.6 billion per annum, of nature-based tourism can be attributed to natural lands that are protected. Using this same approach to disaggregation, we estimated that U.S. protected lands contribute US$34.6 billion per annum to the U.S. and world economies. Of the U.S. protected lands, 14.3% is designated wilderness, which we estimate contributed US$4.9 billion in 2005. As a cross-check, we compared our result with Filion's nature tourism estimate (Filion et al. 1994), and found it compared very favorably with our estimate of US$2,067 billion of global economic impact from nature-based tourism.



Figures 2a and 2b—Nature-based recreation and tourism are growing quickly and becoming the leading industry for many communities in rural areas, whether it is in the cold polar regions such as at the annual Iditarod dog sled race in Alaska, or in the hot, mopane forests of Botswana. Photos by Vance G. Martin.

The Future

The World Tourism Organization (2005) projects tourism will continue growth well into the future. Trips taken for nature-based tourism in the United States are projected to grow between 110% and 145% by 2020 for many activities (Bowker et al. 1999). As the world's human population and economic means grow, unprecedented pressures are being placed on its natural lands as places of interest to see, photograph, visit, and admire. However, the natural attraction of many of these areas as places where tourists can see and experience natural settings is quickly being degraded. Will the economic contribution of protecting areas in the end outweigh the multiple pressures that have led to their continuing demise as natural areas? The world's human population is growing at around 6.2 million per month (U.S. Census Bureau 2005). In the face of this growth and its migration around the world, it is clear that different biomes in different regions of the world will encounter significant human impacts. With the world's protected and unprotected natural lands contributing more than US$2 trillion per year, is it worth adding protection status to more of the world's unprotected natural lands?



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