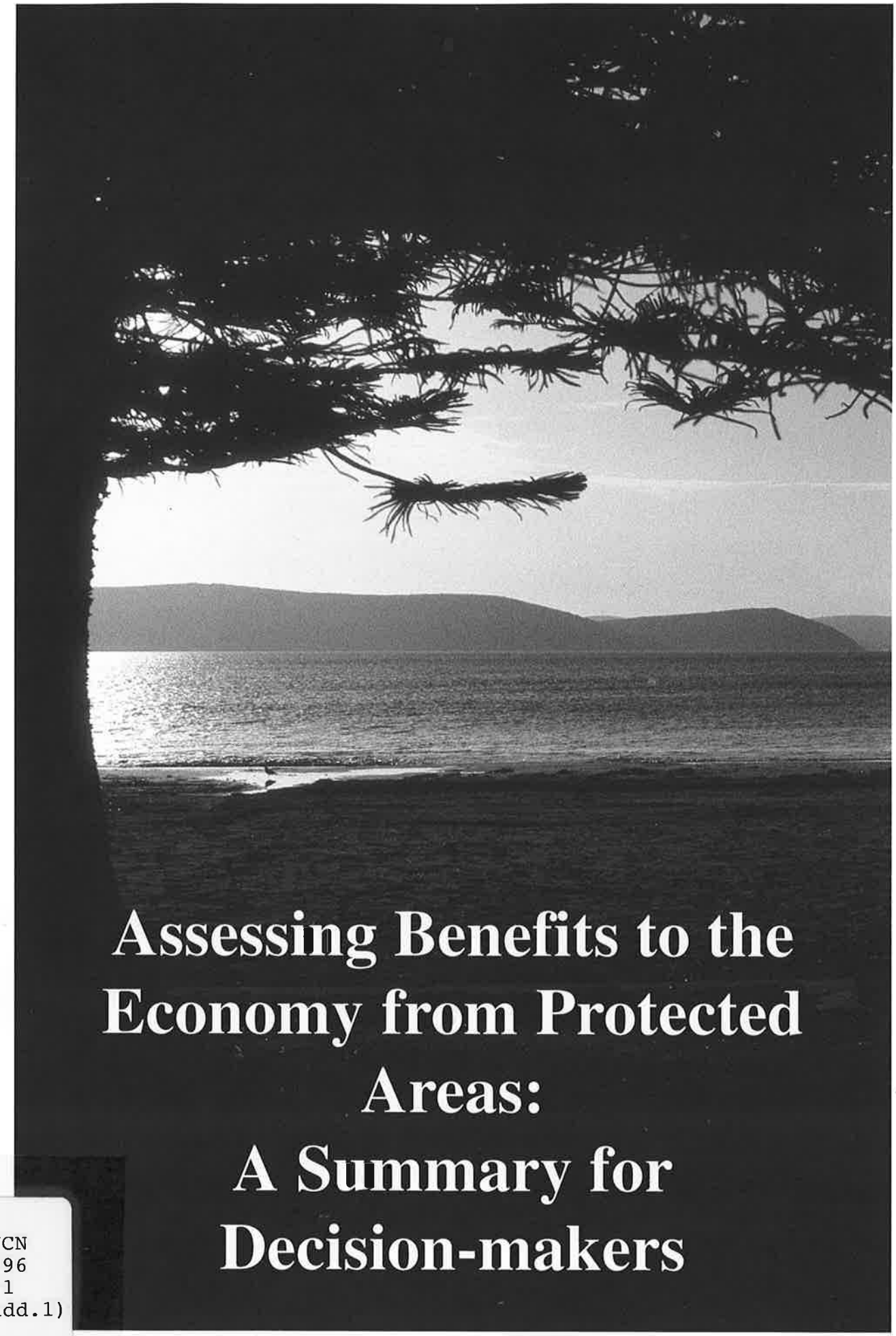

Assessing Benefits to the Economy from Protected Areas: A Summary for Decision-makers

World Conservation Union

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Calculating the economic benefits of protected areas is a small step towards reversing a centuries-old trend of pitting humanity against nature. Few living in today's knowledge-based industrial economy can perceive the economy as a whole. As a result, the linkage between economic productivity and ecological productivity has become less visible, and seemingly, less plausible.

Traditional thinking has taken the line that saving the environment implies 'sacrificing' the economy. The emerging view however, is that protected areas and national parks represent an increasingly valuable source of economic activity which more than offsets their cost. This new understanding of the subject is emerging from studies being conducted around the globe. The National Parks Service of USA reports that 11 of its national parks each generate close to $1 billion per year in regional revenues. In Australia, a study found that eight protected areas were responsible for $A2 billion in gross expenditure on an annual basis

The Belize economy was estimated to receive 25percent of its GDP from tourism connected with its protected areas. The protected areas of British Columbia were considered to be the equivalent to a major export industry, and in themselves a major employer (creating 9 000 jobs directly and indirectly). It was reported that the parks system generates, on an annual basis, $160 million dollars in tax revenue and $400 million dollars towards the provincial Gross Domestic Product

These figures undermine the traditional view that the environment has no place in the economy.

In the past, the traditional view could have been justified on the basis that there was an abundance of natural resources, with the scale of human activity being relatively small. As the global economy becomes a reality, the quantity of natural resources is now diminishing on a scale relative to the expanded output of industrialisation. This quantitative and qualitative shift in the balance is having the effect of increasing the value to the economy derived from natural processes. Unfortunately, public understanding of the matter is lagging. There is a danger that natural processes are being seriously undervalued at the very time when the 'real scarcity' of natural processes and hence their 'real' value are increasing.

Protected areas (PAs) are among the natural resources most frequently described as 'worthless' to the economy. They are considered to be areas which could have been developed, but for a range of reasons have been 'lost' to the economy. It is fitting therefore that a serious effort to value the contribution to the economy from natural resources should begin with PAs – given their unwarranted reputation for impeding development.

The framework provided by this report attempts to build a new understanding of the positive economic contribution of natural processes in the global economy.

The framework identifies the microeconomic management issues which arise as a consequence of the benefits to the economy generated by natural resources. An example of this is the relationship between tourism development and protected areas. Tourist development risks undermining the attractiveness of the protected area which has brought about tourist visits in the first instance. Judicious management of the microeconomics of protected areas can create sustainable and growing real incomes, probably for most of the 21st century.

The economy, economic welfare, financial values and economic analysis

The report outlines a framework for estimating the impact on the economy caused by protected areas. In this sense, it is an economic analysis, since it measures changes in the economy and concentrates upon the benefits to the economy, leaving welfare analyses to other reports.

The biosphere and the global economy: interdependent in the 21st century

Fifty thousand years ago, the hunter-gatherer stood on a hill and saw the economy on every side. The hunter-gatherer knew when the economy was in an upswing and when it was in a downswing – there was no need for economic forecasters. Today, global hunter-gatherers practise their craft in 50 storey air-conditioned buildings where they're lucky to get a glimpse of the natural world, while congregating at the local deli for lunch. This hunter-gatherer cannot stand on the top of the tallest building and 'see' the economy. Indeed, no-one can see it any more.

It has been said of the modern age, that if it isn't measured, then it doesn't exist. What is being measured are financial statistics which purport to report the condition of the 'economy'. These financial statistics are our intermediaries, relaying signals about the real production of goods and services.

Unless the 'right' statistics are being created, some aspects of our economy can go unnoticed.

The absence of systematic large-scale gathering of the data identified in this report means that key parts of our economy are being overlooked. The natural processes of the nation comprise an ecological infrastructure which underpins a considerable proportion of our economy – irrespective of other values that they undoubtably provide. The absence of adequate statistics causes an information 'blind spot' – but also leads to more serious effects. The absence of data means that these natural places are valued, on a financial basis, at a zero price. This leads to 'excessive' destruction of natural areas – implying that present economic performance in many countries is being reduced, and future economic performance is being severely curtailed.

Like transport, the legal profession, the water, communications, and power

Why protect an area?

Dixon and Sherman (1991:15) provided a list of benefits from protected areas. These comprised recreation and tourism, watersheds, ecological processes, biodiversity, education and research, consumptive benefits, non-consumptive benefits and future options - including existence values. Recreation and tourism, and watersheds provide tangible products that are sold in markets and generate revenue. It is these values that this framework seeks to assess. Other values such as non-consumptive benefits (aesthetic appreciation, for example) are significant in any full economic analysis. They are not considered however in a financial analysis that only considers impacts on the economy.

Protection of the non-financial values generated by protected areas is the primary motivation for protection. It is for this reason that a free market cannot be relied upon to provide sufficient protection to optimise the benefits to society. A free market approach only provides benefits where they are available to be sold in a market of some kind. If values cannot be sold in a market place, then a free market approach will cause an under-supply of those needs. This will result in a sub-optimal provision of the values society needs to achieve a full quality of life.

For example, a system of protected areas providing a representative selection of national biodiversity may have sites with little attraction to tourists. These sites may contain scientifically interesting micro-fauna which have little appeal to tourists, as opposed to the 'charismatic megavertebrates' (bears, lions, whales, elephants etc). The scientifically important sites provide significant value to society by their very existence and hence deserve conservation on this ground. There are a range of other non-financial values associated with sites that, when of sufficient size, provide a economic (social welfare) rationale for their protection irrespective of the level of financial values.

THE BELIZE EXPERIENCE: OPPORTUNITIES FOR ECONOMIC DEVELOPMENT

The Belize Ministry of Environment and Tourism, in conjunction with the World Wildlife Fund, examined the contribution of ecotourism to the local economies around protected areas, and to the national economy. The study focused on the contribution by foreign tourists to the Belize economy.

The study looked at two local economies, concluding that the protected area of Cockscomb Sanctuary was providing tourist income via the local craft shop, and through income flows to the fifteen households living at the adjacent settlement called the Maya Centre. The Maya Centre was established to house families displaced by the establishment of the sanctuary. Among the fifteen households, some 67 percent benefited from tourism. The investments required to participate in the tourism activities were small (for example making craft goods), and no other income sources needed to be given up. It was thought that much of the income was being retained in the local economy. This information was elicited by surveying the local area, to gauge involvement in the tourism industry. The information indicates that the Cockscomb example provides small-scale economic development opportunities for an otherwise remote area, with participation spread across a wide selection of the community.

industries, the ecological infrastructure needs to be at least in optimal size and condition. If it (ecological infrastructure) is less than optimal, the economy will not be able to achieve its best performance, ie if nations have less than the right amount of conservation their economies will suffer. This report monitors the economic input of a key part of the national ecological infrastructure – which are, of course, protected areas.

Each protected area is likely to contribute a unique package of goods and services to the economy. This is likely to be true in all economies – whether agrarian, industrial or post-industrial. The only way to understand the micro-economic interaction between protected areas and the economy is to assess each area individually, identifying and then valuing the physical activities which lead to transactions in the economy. Observation of the micro-economic interaction will lead to suggestions for microeconomic reform in the 'ecological' sector. For instance, the need for more marine sanctuaries to lift fishing industry output, and bigger protected

catchments to improve water production.

The long-term trends for natural resources imply diminishing supply and increasing demand. The global tourism industry is experiencing a major expansion. This expansion will not be limited to the Asia-Pacific region, but will be global. The tourists need somewhere to visit, but many of the places they have previously visited are now in the throes of development – simply because the economic significance of the natural indigenous landscape was not sufficiently appreciated in the first place.

The framework provides categories of physical activities that have been associated with protected areas. The categories of physical activity include:

1. Tourism and recreation
2. Natural services
3. Water production
4. Mitigation of natural disasters
5. Fish breeding and spawning
6. Food and fibre hunting and gathering
7. Commercial activities in the protected area
8. Financial cost of PA administration
9. Natural phenomena causing damage
10. Displaced economic activities

The report provides the 'valuation modules' which enable park authorities and economists to begin the process of valuing the full economic impacts of protected areas.

It is recommended that assessments of the economic impact from PAs be conducted on a park basis and extending nationwide. It is suggested that all protected areas could be assessed for their aggregate contribution to

BIG MONEY IN BRITISH COLUMBIA

The British Columbia Ministry of Environment, Lands and Parks hired Coopers and Lybrand to assess the economic benefits of the provincial park system.

The report found that the parks system produced 5 300 jobs directly and 4 000 jobs indirectly, in comparison with the coal mining industry which produced 3 000 jobs, metal mining which produced 3 800 jobs and newsprint which produced 4 200 jobs. In addition they reached other conclusions:

- the provincial parks system contributes about $400 million to the provincial Gross Domestic Product;
- provincial parks are the equivalent to a major export industry as one third of park visitors are from outside of British Columbia;
- the economic benefits of parks are widely distributed across British Columbia;
- for every dollar spent on park operations about $9 was spent by visitors; and
- the parks generate about $160 million in tax revenue.

the economy, probably using a 'national accounts-style' approach. Such statistics could be compared against other national economic indicators within the national accounts framework. This could be an annual exercise that would assist in monitoring the microeconomic conditions in the tourism, water and other industries dependent on protected areas.

The increasing relative scarcity of natural resource supply together with the long-term increase in tourism demand provides opportunities for economic growth. Central to achieving that growth will be the conservation of large areas of natural landscapes, both in and outside protected areas. It is therefore high time that continued 'growth' in protected areas is recognised as a true and feasible corollary of growth in the economy. To neglect one is to neglect the other.

1. Driml, 1994 2. Coopers and Lybrand (1995). 3. McNeely, (1995:2): the reference to biosphere people and ecosystem people inspired this discussion.