Estimating Expenditure on Biodiversity Conservation in Papua New Guinea

Contents

1. Introduction

Using the UNEP Guidelines for Country Study[1], the 1994 Papua New Guinea Country Study on Biological Diversity[2] was one of the few country studies that have undertaken an extended effort to map expenditure on biodiversity conservation. The sources of such expenditures include the national and provincial governments (assisted by bilateral and multilateral donors), non-governmental organizations (again with international donor assistance), and private-sector mining companies.

2. Definition and classification

The UNEP Biodiversity Country Study guidelines state that only those expenditures directly related to biodiversity conservation should be considered for the purposes of the study, as "using [the] total budgets of Ministries or nongovernmental organisations would result in an overestimate of biodiversity related expenditure". However, it is often very hard to differentiate between *pur sang* biodiversity related expenditures, and expenditures that are only partly related to the objectives of conservation management.

1). Distinction between general renewable resource management and biodiversity conservation:

Rural development is a conservation management tool. A number of integrated rural development projects have social and economic development as their core business, but few of these projects have met biodiversity conservation objectives. Unless projects are structured in ways which specifically link interventions to biodiversity conservation (by invoking active biodiversity conservation management; through awareness building; by establishing moral incentives for conservation; and by imposing conservation conditionalities on development interventions), they are unlikely to establish conservation incentives. To isolate conservation expenditures from expenditures undertaken to meet other goals and objectives, it is necessary to distinguish between the multiple objectives of projects and programs. Because of time and human resource constraints, the Study inserted a separate entry in its matrix for general environment related overheads, and did not attempt to further disaggregate data.

2). Distinction between environmental protection, the protection of traditional rights to landownership, and basic human rights. For some non-governmental organizations, the three issues cannot be separated as they all relate to the process of empowerment (to achieve integral human development) at a grassroots level. Without basic human rights, the traditional right to land becomes meaningless, and without the right to land, the incentive to care for the natural environment is lost as well. Additionally, the awareness and extension programs of many non-government organizations generally focus on a

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[1] UNEP (1993). Guidelines for Country Studies on Biological Diversity, Technical Annex, p. C-46, UNEP/Bio.Div./Guidelines/CS/Rev. 2, Nairobi, 1 October 1993

[2] Papua New Guinea (1995). Papua New Guinea Country Study on Biological Diversity, edited by N. Sekhran and S. Miller, a study prepared by the Department of Environment and Conservation, Conservation Resource Centre, and the Africa Centre for Resources and Environment

number of areas including health, the environment and women's rights. It is difficult to separate expenditures on these various items, as they are usually presented under a single heading.

3). Lack of response from different agencies, predominantly the non-governmental organizations to surveys, for such reasons as lack of mutual trusts, format of the questionnaires.

4). Lack of financial data both within the National Department of Environment and Conservation and the non-government organizations. The most complete data with regard to public expenditures were available from the budget papers which the Department of Finance and Planning compiles as part of the annual budget process, but these data are rather general in nature. The Study thus classified expenditure on a project or program basis rather than breaking the data down by activity. Other data were collected from project documents and statements of accounts.

Owing to these and other difficulties in classifying expenditure, the Study decided to provide an overview of all expenditure on environmental protection including both biodiversity conservation and renewable resource management rather than singling out biodiversity related expenditure only. This provides an idea of the relative size of both types of environmental expenditure incurred in Papua New Guinea.

The expenditure matrix is divided into four blocks, with the following headings:

• 	Overheads;

• 	Biodiversity Conservation;

• 	Renewable Resource Management; and

• 	Total Expenditure Summary.

Block 1 deals with the general overheads that a department, organization or company may incur in planning and managing environmental projects and programs. This block includes institutional capacity building, general policy planning and analysis, information systems, and data management. These expenditures focus on the general administration and planning of environmental protection activities, including biodiversity conservation.

Block 2 deals with so-called biodiversity conservation expenditure. This relates to direct expenditure aimed at preserving areas, site and species management, and also incorporates public awareness, extension and education activities with a biodiversity conservation focus. It may include salaries and operations, capital goods, data collection and extension and awareness.

Block 3 deals with renewable resource management. This includes soil conservation measures under the North Simbu and South Simbu Integrated Rural Development Projects, the monitoring of mine effluents in the Fly River, the rehabilitation of forest after the closure of mine sites and so on. It has been divided into forest, mine, farm, and fisheries management. The categories are subdivided into planning and monitoring efforts, extension and awareness and, where applicable, rehabilitation. Extension and

awareness that is not aimed at biodiversity conservation per se, but more at environmental management issues, is incorporated in this last block. It also includes a category for university research and teaching (It was exceedingly difficult to determine the share of teaching and research funds allocated by the universities for conservation enabling programs (as opposed to broader environmental management programs)) in the ambit of environmental management, as well as the ex-situ conservation efforts of the Department of Environment and Conservation.

Block 4 summarizes the data from the three previous blocks and provides an annual grand total per source of environmental expenditure.

3. Economic incentives

The UNEP guidelines suggest presenting the costs of economic incentives/disincentives for conservation. Although economic policies have important implications for the conservation of biodiversity, it is extremely difficult to assess in what way and how far macroeconomic policies and subsidy regimes in Papua New Guinea impact on biodiversity. One could, for example, argue that the hard kina policy (in place prior to the recent devaluation) led to lower incomes from logging operations than would otherwise have been the case, and that this reduced the incentive to log, with a positive conservation spin off. By the same token, however, one could argue that with a higher [foreign currency – kina] exchange rate, landowners could fulfil their aspirations (for income) with far smaller logging operations and consequent impact on the environment. In addition, one could argue that with a more competitive kina, Papua New Guinea would have been able to diversify into more environmentally benign income-generating activities.

With regard to subsidies, the Papua New Guinean Government has supported tree crop (coffee, cocoa, copra and oil palm) prices for the past few years at considerable cost to the national budget. Data on whether this policy has led to additional clearing of forest land than would have been the case without these subsidies are simply not available. It seems likely that the subsidies have maintained a higher level of production of existing plantings, and that there has been relatively little additional clearing of forests than would otherwise have been the case.

4. National Government and Donors

Environmental expenditures are incurred by a number of government institutions including the Departments of Environment and Conservation, Agriculture and Livestock, Fisheries and Marine Resources, Lands and Physical Planning, the National Forest Authority, and the universities. The costs of many of the activities of these agencies are, in part, underwritten by foreign donors.

5. Non-government organizations

Only a few non-governmental organizations opted to participate in the survey, despite repeated requests for assistance. In addition to the information received from those nongovernment organizations that responded, however, the Study has incorporated the financial support provided by the MacArthur Foundation to several NGOs that did not reply. This provides a fuller picture of NGO expenditures than would otherwise-have been the case. The aggregate statistics provide a reasonable

indication of the level of funds channeled through NGOs in Papua New Guinea to conservation activities, although the level of detail is much less than is the case with the public and donor expenditure.

6. Mining companies

The Study has surveyed a number of mining companies to obtain an estimate of their expenditure on biodiversity projects and programs. Many of them support a number of small research projects by providing transport, telecommunications, and the like. Others commission studies on wildlife in areas proposed for mining development. In total, the Study managed to collect information on three mining companies. This is certainly not complete in terms of renewable resource management, but includes those mining companies most actively supporting biodiversity conservation and research efforts. The statistics provided by these three mining companies show that their total expenditure in terms of renewable resource management and environmental monitoring is as high as the total national budget for the Department of Environment and Conservation, It is quite clear that the mining companies in Papua New Guinea are very large players in the field of environmental management. This is justified, given the size and risks of their operations. Although direct expenditure on biodiversity conservation projects is limited, there are spin-offs from the large renewable resource management expenditures that some mining companies make.

7. Results

The Study presented the total expenditure on biodiversity, 1992-1995 ('000 of kina at current prices):

	1992	1993	1994	1995
Public sector	1240 (87%)	2448 (71%)	4502 (71%)	3178
Non-government	590 (32%)	544 (16%)	581 (5%)	218
Mining companies	20 (1%)	438 (13%)	951 (16%)	1088
Total Expenditure	1850	3 440	6034	4483
Overheads	20%	21%	20%	
Biodiversity conservation	8%	11%	15%	
Renewable resources management	72%	68%	65%	

The Study concluded that the quantity of financial resources available for biodiversity conservation in Papua New Guinea has grown appreciably over the last three years. An increasing number of donors is coming to recognize Papua New Guinea as one of the world's most biodiversity rich countries and they are supporting public projects to assist Papua New Guinea to use and manage her natural resources, while preserving biodiversity (note the caveat to this in our final comments). Non-government organization expenditures have remained more or less constant in budgetary terms over the last few

years. NGOs are likely to play an increasingly important role in upcoming years in supporting extension and awareness initiatives and in providing support for landowner groups confronted by foreign logging companies. The mining companies have so far tended to mainly support scientific initiatives and research on biodiversity.

In interpreting the statistics presented, the Study pointed out the following:

- There have been few attempts to establish conservation incentives and to actively pursue social and economic development as a conservation tool. The failure of landowners to appropriate a value for biodiversity has a number of contra-conservation implications. Thus, although funds may have been allocated to the business of conservation management, they may not necessarily have been well targeted. This is a serious lapse (unless the root causes of ecological degradation are addressed, there can be no stable biodiversity conservation). For example, awareness campaigns aimed at demonstrating the deleterious social and ecological consequences of industrial logging practices are unlikely to meet conservation objectives (in the long term) unless accompanied by positive efforts to provide landowners with other [sustainable development] avenues to realize their social and economic development needs. Few conservation projects take a sufficiently holistic approach, and few conservation interventions are sufficiently long-lasting to make a difference (project cycles typically extend for five years, although projects are unlikely to be successful unless actively supported over a longer period).

- The high cost nature of the Papua New Guinean economy makes the cost of implementing conservation programs high (relative to many other less developed countries, especially in the Asian region). This particularly affects the servicing of remote areas with poorly developed infrastructure. Generally, areas with high conservation values tend to be in remote areas and lacking in infrastructure, thus swelling communications and transport costs.

- There has been little ongoing support (from bath donors and the Papua New Guinean Government) for recurrent conservation activities. Political dictates tend to favor the funding of new programs, rather than investment in existing conservation programs that lack ongoing support. This threatens the sustainability of specific conservation interventions, and works against the realization of long-term conservation achievements.

- Achieving conservation objectives in the Papua New Guinean context is extraordinarily difficult. There are no accepted models and little institutional capacity to implement conservation programs. All conservation projects face a steep learning curve, and this affects the cost of program implementation. For example, there have been few feasibility studies and market investigations of alternative income-generating opportunities, and current Integrated Conservation and Development projects must perform these analyses (from scratch, at considerable expense).

- The financial resources that can be leveraged for conservation are minuscule relative to the resources that can [immediately] be secured for exploitative development. In addition, conservation monies are rarely quick disbursing. Donor projects can often take several years to come on stream.

-        Conservation initiatives are constantly being compared with the high return from short-term ecologically exploitative industrial activities, and there is a strong political impetus for current large-scale development. The inability to leverage immediate funds to counter development threats to specific sites of conservation importance is a major concern, and creates an uneven playing field (for conservation relative to exploitative development).

-        Donor procedures (for donor funded programs) tend to be very cumbersome and such programs are often expensive to administer. This absorbs financial resources that otherwise would be available for on-site conservation activities. A large proportion of donor funding is spent offshore.