

## DO FOREST ECONOMISTS MAKE A DIFFERENCE?

We advise governments, undertake analyses for industry, work with private woodland owners, and teach forestry students. We participate in negotiations, prepare and review reports, contribute submissions, publish academic works, and talk to almost anyone who will listen. But do all these efforts make any difference?

The importance of forest economics as one argument in decisions is widely accepted, but can we say that our contributions actually make any difference to the community? Consider the problem of the unpriced benefits of the forest. The management of many public forests can only be justified by the benefits from their non-timber uses of soil conservation, water conservation, carbon sequestration, and biodiversity protection. The community increasingly demands more of these services from the forest, but their benefits still lack conventional market prices and so their value cannot easily be measured. Many forest economists have worked in this area for many years, and most of us have had to resolve issues that involve unpriced benefits and costs. But have all these efforts made a difference?

In 1979, Al Worrell and I published *Unpriced Values: Decisions Without Market Prices* to draw together the concepts, valuation methods, and decision-making principles for these unpriced benefits and costs. Al was Edwin W Davis Professor of Forest Policy at Yale University. What has happened in the last 22 years? And more importantly, have the efforts of economists in this area made a difference?

A first and crucial criterion might be phrased as a question. Have any decisions on forest and resource management been made on the basis of valuations of unpriced benefits and costs? A single decision can rarely be traced to a given input, but I'm sure many decisions have been based on such valuations. Nevertheless, the decisions that have ignored the valuations have often gained more publicity. Contingent valuation is, of course, one of the methods to assess the values of unpriced benefits. It achieved prominence in Australia with its application to assist three contentious national policy issues, namely the manage-

ment of forests on Fraser Island in Queensland, the allocation between production and preservation of the South-East Forests (on the New South Wales and Victorian border), and the management of the conservation zone surrounding Kakadu National Park. However, none of these three applications of contingent valuation was given any significant weight in the reports that followed or in the subsequent government decisions.

Second, has the attitude of any other kinds of resource managers changed? They have changed, as two Australian examples will illustrate. The Roads and Traffic Authority in New South Wales now regularly measures the cost of noise and amenities through changes in the values of houses. The Environmental Protection Authority of New South Wales published and regularly revises "ENVALUE", a review of studies of valuation. The book covers a wide range of fields including forest management, highlights the monetary values estimated for unpriced benefits and costs, and discusses their strengths and weaknesses, in an explicit attempt to encourage the use of valuation methods and the values themselves.

A third criterion might concern progress within the field of valuation itself. For example, have any new methods been devised? Choice modelling is a relatively new version of contingent valuation, although it was long used under the name of the "Budget Allocation Method". Procedures and protocols are being developed to transfer values from location A to location B, under the methodology of "Benefit Transfer". The use of non-monetary indicators in allocation, such as expenditure of time or energy, is steadily finding a place. For example, the expenditure of energy to collect wood or reach recreation sites is being used to address questions of forest policy. Decisions are being analysed to infer the benefits and costs that are implied in the choices — although this method has been intermittently applied over at least three decades.

As forest economists, we seek monetary prices that would form if the good or service were traded in a competitive market. These monetary values can still only be estimated by the travel-cost method, hedonic pricing, various kinds of production function analysis, (such as the dose-response method of health economics), and contin-

gent valuation and its derivatives — as was the case 22 years ago. There are also methods to assess partial values, such as replacement costs and defensive expenditures and these are steadily finding roles. But overall, progress in the development of new methods appears to have been limited.

In contrast there has been considerable advance in the presentation of information for policy choices that are dominated by unpriced values. Consider the following different examples, all contributed by forest economists or economists working on forestry problems. We devise policies that reflect the relative values of market and non-market goods. In exchange for protecting the forest from fire, communities in developing countries are sometimes granted rights to collect fuelwood and medicinal plants. We present arguments for the several kinds of way in which unpriced values are traded off as wood products increase — the relationship is by no means always competitive.

But more fundamentally — how do we tell if we've actually made a difference? There are other measures of success than the instrumental effects of values in a decision or the adoption of our approaches by a related profession. These other measures rest on the role of the "soft information" we use and produce, as opposed to hard data of the monetary values themselves. For example:

- Have we raised the level of debate?
- Have we increased public awareness?
- Have we promoted a better understanding of the problems?
- Have we encouraged the community to ask the right questions?

Assessments of unpriced values may sometimes assist particular choices but will more usually promote a broader understanding of the problems of resource allocation concerning unpriced goods and services. In this latter role, the contingent valuations for the forests of Fraser Island, the South-East Forests, and Kakadu National Park, all brought the unpriced issues to the popular press. The media and the public were asking, were the unpriced benefits really worth as much the estimates from the

valuations? What is the real nature of the unpriced values, and how are they generated and exchanged? Are substitutes available and at what cost? The popular media in Australia offered article after article and printed letter after letter on such questions. This is evidence of a major contribution to a better understanding of these problems, and it arose from attempts to assess specific unpriced values, by forest economists and other resource economists.

In a similar way, the main task for the forest economist in this area may be to help the community understand how economic signals and incentives work in the provision of unpriced goods and services — rather than to estimate the values themselves. This contribution will help people understand how poor incentives can lead well-intentioned individuals to use forests, watersheds and rangelands, in ways that harm the output of unpriced values for the community. In this role, we will be using our soft information to promote an understanding of processes and problems, rather than estimating values or determining solutions.

The concept of making a difference can therefore be taken broadly. We can always hope that our hard data on the actual values of unpriced benefits will be useful. But in the long run, we can be sure that our soft information on perspectives, principles, processes and understandings, will contribute to resolving community problems. In these terms, we may have made a broad and fundamental impact.

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