

HANDBOOK OF MARKET CREATION FOR BIODIVERSITY

ISSUES IN IMPLEMENTATION

EXECUTIVE SUMMARY

This Handbook provides a conceptual guide, with practical examples, to creating markets for the sustainable use and conservation of biodiversity. It outlines many of the issues that policy-makers and practitioners should take into consideration when developing agendas for making biodiversity-related policy more compatible with economic development. Market creation is effective because it is often the most direct approach to solving the problem of biodiversity decline. Market creation may take many different forms: markets in land, markets in uses of land, markets in specific flows of biodiversity, markets in things associated with biodiversity. The fundamental elements of market creation concern taking the steps to establish the desired market, and then taking the steps needed to address the remaining imperfections within that market.

The problems that cause valuable biodiversity-related goods and services to go un-provided have been detailed previously in OECD (2002) and OECD (2003). A brief review is provided in the early chapters of this Handbook to give context to the discussion. These problems are associated with various types of *market failures*, which are often caused by the existence of externalities, and imperfect information, as well as, and the “public” nature of some goods and services. The latter, public good, source of market failure has its origins in the *non-excludability* or *non-rivalry* of some goods or services. The implication of these problems is that there are goods and services that are not easily marketable. The policy-maker is faced with the problem of addressing market failures in order to provide for the existence of the valued good or service.

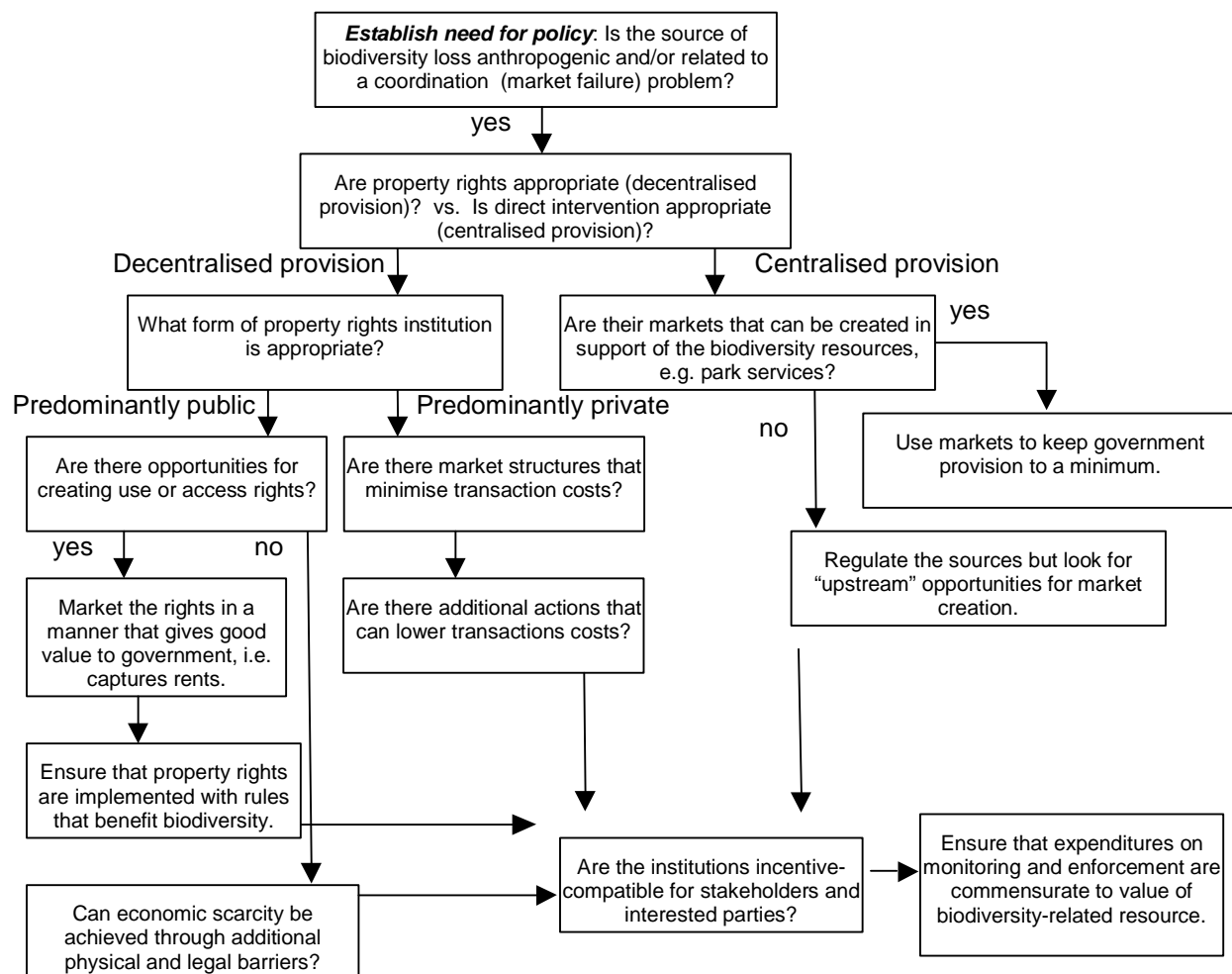
Understanding the nature of the good or service of interest to the policy-maker, and the reason that it is not readily marketable, is an important and difficult first step in addressing market failure. It may then be possible for public intervention to establish the conditions under which the good is supplied by the market itself, rather than by the public sector. This may be viewed as both a more direct approach to the provision of the valued good or service, and one that can involve lower levels of government expenditure in the long-run. Alternatively, public intervention may have to be more involved in supplying the biodiversity-related good when the source of the problem is particularly strong.

With the large number of sources of pressure and potential solutions, there will be numerous ways of fixing the problem that is causing biodiversity loss. Only one, however, will generally minimise the associated cost. The ability of the policy analyst to sort through the problems and solutions will be the determining factor in how close the policy comes to achieving the best solution. Since results that are costly in one policy area can negatively influence an overall policy agenda by depleting government resources and even causing a “discouragement effect”, achieving the best outcome with each implementation of policy is imperative.

The Figure below provides the conceptual outline that underpins this Handbook. It does so in the form of a ready-guide to some of the important questions and approaches that are part of the solution to market failures which are impacting biodiversity. Underlying this schematic is an

economic foundation that suggests that when market activity is undertaken with a *full* accounting of the costs and benefits of using resources, those markets will result in resource uses that achieve the best outcome. A first step in that accounting is to identify the source of the biodiversity loss, so a decision can be taken as to whether or not policy intervention is warranted.

Figure 1. **Schematic conceptual outline**



What elements of biodiversity are being lost: are the causes of biodiversity loss human-induced or natural?

Extinctions caused by humans are an important source of biodiversity loss (see Gibbs, 2001, for a non-technical review). However, changes on geological, climatic and even local scales have also occurred in the past that have led to significant changes in the composition of species (MacDougall, 1998). Identifying the underlying source of biodiversity loss is, therefore, important because the goal of policy is not purely to prohibit further loss – the goal is to ensure a sustainable use and level of conservation that benefits everyone. To that end, biodiversity policy must achieve a balance between gains in well-being (that includes the use and conservation of biodiversity) and losses in biodiversity.

How far can property rights go in fixing the problem?

Addressing the perceived loss also requires a clear understanding of how it is occurring from a policy perspective. A public good requires intervention because, either someone's use (direct or indirect) of a good or service does not diminish it for others (non-rivalry), or others cannot be excluded from using it (non-excludability). In either case, marketability is weak because the provider can not be certain of recovering any costs that might be incurred in developing the good or service – even when those costs may be small.

Dealing with these sources of pressure on biodiversity will lead to decisions regarding provision of biodiversity-related resources: should they be provided in a centralised or de-centralised manner. When de-centralised provision works best, it will be a matter of establishing the correct regime of property rights. This is not to say that it is a simple question of turning things over to the private sector. Property rights come in many forms, and engage complicated legal and institutional dimensions. Often they require direct support or intervention by the government. Once the appropriate form of property right has been developed, there will also be considerable additional effort needed to ensure that supporting functions by government and other participants are forthcoming.

When centralised provision is expected to work best, the involvement of government will be greater but there will still be opportunities for engaging markets. Since governments have numerous demands on their resources, finding the means to create self-sustaining services, even when centrally provided, will be an important objective. Creating secondary industries, or even support for them, can help achieve that goal. Examples include providing support for activities such as guided tour operators or accommodation that is privately provided (but is made to contribute to the maintenance of the biodiversity-related resource).

Who are the stakeholders? How are they likely to be impacted?

The process of developing (biodiversity) policy sometimes impinges on pre-existing implicit or explicit rights. In general, this is done for the benefit of a larger group – it is often said that the costs of conserving biodiversity are local, while the benefits are global. Such policy is clearly redistributive, since one group is benefiting at another's expense: a local group loses while the global community gains. Market forces, however, will not ensure that the benefits accruing to the larger global community are shared with those directly impacted by policy. The implicit (or sometimes explicit) redistribution thus has some obvious ethical implications that need to be addressed. Perhaps more importantly, the redistribution has the potential to create obstacles which can ultimately undermine the market creation if the affected individuals experience significant impacts.

Monitoring and enforcement

Monitoring the success of a policy after it has been implemented is an integral part of a biodiversity strategy. Corrections that may be needed can only be implemented if there is a subsequent review to uncover unforeseen problems. In ensuring that objectives have been met, goals have to be quantifiable in one form or another. Results-oriented goals specify quantified targets that need to be met, whereas process-oriented goals state that certain criteria should be met for how the system will work. In general, results-oriented goals are more compatible with economic instruments since they are more likely to specify outcomes that can be easily associated with an economic incentive – and leave the details of how to get there to knowledgeable individuals. Monitoring of results-based goals is similarly more easily accomplished, because observing outcomes is easier than observing processes. In either case, however, monitoring usually requires the commitment of sufficient resources to ensure a good

probability of knowing what is occurring. In other words, monitoring effort should be used economically.

Enforcement must also be undertaken to ensure that incentive compatibility is maintained. It should not, however, extend beyond the value of the resource. Since enforcement is always undertaken to dissuade individuals from undertaking undesirable activity, the right level of enforcement is where the incremental expenditure on enforcement is just equal to incremental benefit derived from it.

Creating markets

Creating markets for biodiversity is part of a public policy shift that taps into the same entrepreneurial pool of talent that has produced many amenities of modern life. It attempts to harness the creative power of entrepreneurs and direct it toward enhancing the quality of the environment. While it is recognised that regulatory policies (sometimes referred to as command-and-control) have a place in the policy-maker's toolkit, the need to introduce market creation for biodiversity is compelling. During the past 20 years many economic sectors were reformed to be more market-oriented and the gains are thought to be significant (OECD, 2001). Moreover, it reduces the demand for financial resources from governments faced with other public policy issues, such as health care and pensions.

In *Harnessing Markets for Biodiversity: Toward Conservation and Sustainable Use* (OECD, 2003), an exploration was undertaken of the wide range of areas where markets have been developed and the degree of success they have enjoyed. That work lays the foundation for this Handbook, by providing clear illustrations of the principles that are developed and explored here. This Handbook is written to provide a guide for participants in policy development (including policy-makers, their advisors, and public-policy advocates). It is, however, also intended to be accessible to non-specialists who are interested in understanding how market-based approaches to biodiversity can improve conservation and sustainable use.

In this Handbook, guidance is provided regarding the contexts in which markets work best; that is, which types of goods and services are most amenable to market creation, and what are the institutional characteristics that build successful markets. It is, of course, oriented to a discussion of environmental policy-making (for biodiversity).

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