

Instruments for conserving biodiversity

In earlier chapters, we have investigated the causes and consequences of the decline in biological diversity. The Convention on Biological Diversity, one of three international environmental treaties signed at the UN Earth Summit in 1992, came into force in December 1993, and by 1995 had been ratified by over 130 countries. This calls for the conservation of biological diversity, the sustained use of its components and an equitable sharing of its benefits.

Which instruments might be used to reduce the rate at which biodiversity is being lost? In order to answer this question, it is worth recalling a distinction we made previously, between the proximate and the fundamental causes of loss of biodiversity. The instruments which economists recommend to conserve biodiversity are essentially concerned with the fundamental causes, and typically make use of the price system and market mechanisms to create appropriate patterns of incentives.

Following the framework adopted in OECD (1996), we can distinguish between four categories of incentives:

- Positive incentives: grants, subsidies, cost sharing agreements and the like, which create incentives to use resources in a conservationist manner.
- Disincentives: fees, tariffs, fines, legal liabilities and the like which penalise those whose behaviour directly or indirectly results in biodiversity decline.
- Indirect incentives: creation of property rights or markets where these were previously missing, or adoption of measures that improve the operation of markets.
- Removal of perverse incentives: such incentives often arise as unanticipated side effects of policies with different, and apparently independent, objectives. This implies the need for policy integration where the instruments used to attain particular targets have spillover effects on other objectives.

A listing of instruments for conserving biodiversity, classified according to these four incentive types, can be found in OECD (1996), and is reproduced in Table 7.7. A detailed description of each instrument can be found in the original reference.

Table 7.7 Instruments for the conservation of biodiversity

Positive incentives	Disincentives	Indirect incentives	Removal of perverse incentives
Agricultural land set-aside (retirement) schemes	User fees	Individual transferable fishing quotas	Reduction and restructuring of agricultural support harmful to biodiversity
Public or grant-aided land purchase	Non-compliance fees	Marketable development rights	Agricultural conservation compliance measures
Wetland reserves	Fines for damages	Property-rights mechanisms	Reform of public forestry concession pricing, license fees, reforestation fees and royalties
Covenants / conservation easements	Environmental liability	Species commercialisation	Full appraisal of forestry benefits
Cost-sharing / management agreements with payments for biodiversity maintenance.	Performance bonds	Biodiversity prospecting deals	Discontinuation of below-cost timber sales
Species enhancement schemes	Habitat mitigation schemes	Forestry offsets	Reform of tax structures
Customary cultivation of biodiversity	Marine pollution liability	Air emission trading	Full-cost pricing for water services
International biodiversity transfers		Effluent discharge trading	Appraisal of biodiversity impacts in transport sector
Incentive payments for organic farming		Marketable water entitlements	Road pricing
Taxation and fiscal measures		Wetlands mitigation banking	Costing of biodiversity loss in energy investment appraisal
		Joint implementation	
		Debt-for-nature swaps	
		International franchise agreements	
		Eco-labelling	

Source: OECD (1996), page 9.