Introduction to Combined Summaries

Contents

Boxes

Table

Introduction to Combined Summaries

Policy makers have become increasingly concerned with conservation of natural resources over the past decade. When OTA published its assessment *Technologies To Sustain Tropical Forest Resources [58]* for the U.S. Congress, policymakers in America and abroad were just beginning to appreciate the implications of rapid destruction of the tropical forest biome. Tropical forests provide environmental services and fundamental life support to many of the world's people, and house an estimated two-thirds of the world's plant and animal species. Subsequently, OTA published *Technologies To Maintain Biological Diversity [57]* for the U.S. Congress, addressing specific means to protect genetic, species, and ecosystem diversity. Because of the biological richness of tropical forests, the issues of tropical forest loss and species loss are inseparable.

Since the early 1980s, new estimates of the loss of tropical forests and of biological diversity-biodiversity-have generated increasing alarm. Data on tropical deforestation remain imprecise, but the most recent figures indicate the forest loss rate is at least as high as estimated in the mid- 1980s. By one recent estimate, tropical forest now is disappearing 40 percent faster than a decade ago [3 1]. Data on loss of individual species is yet more difficult to obtain, but populations and their genetic heritage certainly are lost as habitats are degraded. The loss of tropical forests and declining biodiversity have serious implications for human populations. As biodiversity declines, the quest for new pharmaceuticals, renewable industrial feedstocks, and other such natural resource products, and the search for genetic materials to supply agricultural and medicinal biotechnology efforts are less likely to yield results. Further, the role of tropical forests in stabilizing global climate has become better known. For both reasons, the search for policies that will promote conservation of forests and biodviersity and for technologies to implement those policies has become more urgent.

Congressional concern with international environmental protection has increased markedly over the last decade; a key issue in the 1980s was how to help foreign assistance agencies respond to problems of tropical deforestation and loss of species. U.S. foreign assistance programs began incorporating environmental concerns in the late 1970s when a series of amendments to the Foreign Assistance Act defined the Agency for International Development's (AID) mandate in the area of environment and natural resource management. These amendments specifically emphasized promoting efforts to halt tropical deforestation and maintain biodiversity, and led to further congressional actions in the 1980s (box A).

With congressional guidance, AID rapidly increased its investment in tropical forestry and international biodiversity programs. Policymakers for multilateral institutions, other countries' bilateral assistance agencies, some developing country governments, and many nongovernmental organizations (NGO) also moved in this direction. Consequently, international efforts to conserve forests and biodiversity increased rapidly. Significant progress has occurred with institutional commitments and policy developments; technical solutions, however, have been slow to develop.

A few apparently successful conservation efforts suggest that deforestation and biodiversity loss are not wholly intractable problems. However, existing problems largely result from complex institutional, political, social, and technical causes. The international assistance agencies and concerned developing country governments have not yet demonstrated general solutions, nor have they learned how to reverse deforestation and extinction trends. Thus, continued leadership by Congress is likely to be necessary to sustain the momentum already achieved.

OTA's tropical forest and biodiversity assessments indicated that policy and institutional constraints on conservation of forests were more severe than technical constraints. Today, as organizational structures, policies, and funding for ecologically sustainable development are becoming functional, the importance of technical constraints seems to be increasing. To support the amplified congressional interest, and because of the close relationship between maintenance of tropical forests and biodiversity, OTA is reissuing the two assessment summaries in a combined form. This publication incorporates updated information related to these