

Enabling Biodiversity

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The Earth Summit in Rio de Janeiro, Brazil in 1991 led to an international recognition that the preservation of biodiversity was the responsibility of every government and, ultimately, of every individual person in each nation. A fine sentiment, indeed. But the words ring hollow, especially when they come from nations faced with bearing more than an equal share of the burden of preservation. The question is not whether we should preserve biodiversity, but for whom we should do so. When that is clearer, it will be easier to see who benefits from biodiversity and, therefore, easier to see who should pay.

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At present, the message among "concerned" people in the most highly developed nations seems to be that everyone benefits from biodiversity. That same group believes, for example, that maintenance of, or sustainable management of, the rain forests will occur as a matter of course because everyone—everyone in the highly developed nations anyway—wants it to. It is the way—so the message goes—to guarantee both a better quality of life (for everyone) and effective control of our tropical forests.

This belief is a false one. From a vantage point outside the developed nations, it seems clear that biodiversity preservation is not something that will just happen. It will only happen if there is something in it for developing countries which, through geographical accident perhaps, are the de facto guardians of biodiversity. The diversity of living organisms is not evenly distributed: Although tropical rain forests occupy only seven percent of the Earth's surface, they contain more than half the species on the planet. In general, the rain forests are in developing nations, and the genes pool that will fuel the crop improvement both by traditional breeding processes and by genetic engineering are in those nations, too.

Developed countries, in turn, are poor in biodiversity but have invested heavily in technology, including biotechnology. The capital and techniques necessary to exploit genes are concentrated in the developed countries. This has not happened entirely by accident: The intellectual property system is self-perpetuating. Both the patent system and variety protection for animal and plant breeding ensure that innovators reap rewards for their investments. These rewards help innovators, both corporate and individual, invest further in innovation.

There is, however, no analogously autocatalytic mechanism to encourage the protection of biodiversity—by anyone. Encouragement is probably too patronizing a term: Rooted in latent colonialism, encouragement implies a view holding that

colonizers are in some way superior to indigenous peoples such as those who live in rain forest areas. A better term might be enablement. A capitalist world needs a fair system of reward that enables the preservation of biodiversity.

Right now the negotiations that started in Rio are heading for an impasse. The concentration of genetic resources in the developing countries of the Southern Hemisphere is a cause of great angst to the corporate representatives of the North. Developed countries are keen to negotiate with the Southern nations, fearing that partial or total restriction of access to the genetic inheritance could restrict the potential of recombinant DNA technology. At the same time, however, the North seems peculiarly unwilling to attach any economic value to that biodiversity or to its protection.

At the same time, ironically, multinational companies are particularly keen to protect their own investments in technology by asking for royalties on "their" products or processes. This is equivalent to nothing less than the appropriation of the South's genetic resources: Certain countries will have to pay to use their own genetic inheritance. As things stand, it seems that biodiversity is being preserved primarily for the benefit of biotechnology.

We need to create an equitable international compensation system geared to helping developing countries meet the costs of biodiversity preservation. The system must have mechanisms involving not only financial reward (any agreement limited to this aspect is inefficient) but also the exchange of technological and scientific information, procedures for which have been proposed by the United Nations Food and Agriculture Organization (Rome, Italy). All countries should take steps to stimulate the development of both the institutions and the people necessary to make use of biotechnological potential. At the same time, national policies should be implemented to allow the use of those resources needed for the rational development of each nation's genetic potential. There must be adequate regulations and control systems recognizing the rights of countries that possess biological diversity. Those rights must include access to cultivated natural resources and access to the technology that has been developed to exploit them.

Brazil's Industrial Property Bill, which aims to protect genetic resources and regulate their use, is now under discussion in the Brazilian Congress. With this bill, Brazil has an opportunity to create the kinds of compensatory mechanisms that might be used as models elsewhere. We hope Brazil can use this opportunity to its, and the world's, greater advantage. ///