



“Summary of article by Vandana Shiva: Biodiversity: A Third World Perspective” in Frontier Issues in Economic Thought, Volume 6: A Survey of Sustainable Development. Island Press: Washington DC, 2001. pp. 98-101

**Social Science Library: Frontier Thinking in Sustainable Development and Human Well-being**

### **“Summary of article by Vandana Shiva: Biodiversity: A Third World Perspective”**

The subject of biodiversity has become one of the focal points of North-South tension in world trade debates. Northern representatives have insisted on the incorporation of intellectual property rights into trade agreements. Such rights would include the patenting of life forms, such as plant germ plasm. Because much of the planet’s remaining biodiversity resides in the global South, Southern critics have countered that such an approach both fails to preserve diverse ecosystems and amounts to a license to Northern corporations to profit exclusively from the South’s biological resources. This chapter explains the Third World argument for a different approach to biodiversity.

#### **The Crisis of Diversity**

“Diversity is the characteristic of nature and the basis of ecological stability.” [65] While societies have evolved over time in ways that both preserve and derive livelihoods from nature’s diversity, today many of those societies and the ecosystems with which they have coexisted are under threat of extinction. Diversity is eroding dramatically with the loss of forest cover, where roughly half of the world’s plant species reside. In marine ecosystems, biological diversity is being lost, with coral reef destruction comparable to deforestation rates. This has produced a decline in the fisheries base in many coastal regions.

The “Green Revolution” in agriculture has dramatically reduced the number of living crop varieties, supplanting diverse indigenous seed varieties with a small number of wheat and rice strains bred in Northern-dominated research institutes. Such monocultures increase susceptibility to pests. Livestock populations are being similarly homogenized. Jersey and Holstein Cows are being systematically substituted for carefully evolved pure breeds in India, which had been locally bred for the specific eco-niches in which they had to survive. Flora and fauna have also gone extinct in agricultural areas, as chemical fertilizers and pesticides replace the diverse evolution of bacteria, fungi, pest predators, pollinators, and seed dispersers that have sustained agricultural production for centuries.

“The crisis of biodiversity is not just a crisis of the disappearance of species which have the potential of spinning dollars for corporate enterprises by serving as industrial raw material. It is, more basically, a crisis that threatens the life-support systems and livelihoods of millions of people in Third World countries.” [68]

There are two primary causes of biodiversity destruction. The first is habitat destruction caused by internationally financed mega-projects, such as dams, highways and mining operations in forest areas. Such projects have destroyed countless species and caused entire habitats to disappear. The second is the push to introduce homogeneity in forestry, agriculture, fisheries and animal husbandry. “The irony of plant and animal breeding is that it destroys the very building blocks on which the technology depends.” [70] The dominant paradigm of production calls for uniformity and monocultures, where plant improvement is based on the very biodiversity which it uses as raw material.

The dominant approaches tend to ignore these primary causes of biodiversity loss, preferring to focus instead on secondary causes such as population pressure. If societies are not displaced by dams, mines, factories, or commercial agriculture, populations will grow in harmony with their ecosystems. Thus, population pressure on biodiversity is a second-order effect of such displacement.

Biodiversity erosion creates both ecological and social vulnerability. Ecological vulnerability is well-known, as monocultures become a mechanism for fostering pests and weakening resistance to disease. Social vulnerability involves the disruption of the self-regulated and decentralized organization of diverse systems through the introduction of external inputs and external and centralized control. Where diversity ensures diverse livelihoods, homogenous production systems disrupt communities, displace people from diverse occupations, and create dependency on external inputs and markets. With a production base that is ecologically unstable and with unstable commodity markets, social vulnerability increases.

### **First World Bio-imperialism**

European colonists enriched themselves by transferring biological resources from their colonies and introducing monocultures of raw material for European industry. Today, such dynamics have the same substance, even if they take a different form. The US accuses Third World countries of engaging in “unfair trading practices” for refusing to adopt patent laws that grant corporations monopoly rights in life forms. Yet the US has freely taken germ plasm from the Third World and turned it into millions of dollars in profits, none of which has been shared with Third World countries. In addition, corporations, governments and aid agencies in the North are creating legal and political frameworks, under international agreements like the General Agreement on Tariffs and Trade (GATT), to ensure free access to Third World biological resources.

Unfortunately, most Northern approaches to biodiversity conservation are blind to the North’s role in destroying Southern biodiversity. One example is “Conserving the World’s Biological Diversity,” a study by the World Bank, the World Resources Institute, the International Union for the Conservation of Nature Resources, and the Worldwide Fund for Nature (need reference). These groups neglect the primary causes of destruction. They fail to address the crisis of diversity in “production” spheres – forestry, livestock and agriculture – problems caused by Northern development models and promoted by Northern governments and multilateral institutions. Instead, they focus on secondary causes: forest clearing and burning, overharvesting of plants and animals, and overuse of pesticides.

The northern bias in this report is also clearly evident in how it chooses to value biodiversity. While recognizing that indigenous farmers and tribals are the original producers of the wealth of genetic diversity through generations of resource management, the authors fail to acknowledge that northern corporations and scientists are primarily *consumers*, not producers, of this wealth. Instead, they divide biological resources into the following categories of economic value:

- “consumptive value” -- products such as firewood, fodder, and game meat, which are consumed without passing through a market;
- “productive use value” -- products exploited commercially;
- “non-consumptive use value” -- indirect ecosystem functions, such as watershed protection, photo-synthesis, etc.

This framework defines those deriving their livelihoods directly from nature purely as consumers, while crediting commercial interests with being the producers. The logical conclusion is that Third World consumers are largely responsible for biological destruction, while the North alone has the capacity to conserve biodiversity. This obscures the true political economy underlying the destruction of biological diversity.

“Defining production as consumption and consumption as production also matches the demand for intellectual property rights of the North, and denies the intellectual contributions of those in the South who are the primary producers of value.” [86]

This economic bias reduces conservation efforts to financial values on the market, based on the biotechnology which transforms the planet’s genetic resources into raw material for commercial enterprises. It justifies conservation only in “set-aside” areas where biodiversity is seen to serve those commercial interests. Conservation areas and *ex situ* preservation of germ plasm in high-tech gene banks may be an efficient way to preserve known, existing germ plasm, but it allows the continued destruction of the habitats within which such diverse life forms can further evolve and adapt.

### **From Bio-imperialism to Bio-democracy**

The only sustainable and just approach to conserving biodiversity involves halting the primary threats to biodiversity, which are in the North, and strengthening those who produce based on biodiversity. Such an approach would involve:

- Stopping aid and incentives for habitat destruction by centralized and homogeneous systems of production in forestry, agriculture, fisheries and animal husbandry.
- Recognizing community rights to biodiversity and valuing farmers’ and tribals’ contributions to its evolution and protection.
- Ceasing to finance biodiversity conservation by a small percentage of profits generated by biodiversity destruction.

- Recognizing the injustice of Northern demands that the South's biodiversity be treated as the "common heritage of mankind," as current GATT, World Bank, and other intellectual property proposals assert. This results in the South's biological wealth being patented, priced and treated as the private property of Northern corporations.

The current regime based on bio-imperialism must be replaced with one based on bio-democracy, which "involves the recognition of the intrinsic value of all life forms ... and the original contributions and rights of communities which have co-evolved with local biodiversity."  
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