Linking Sustainable Forest Management to Sustainable Development

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ABSTRACT

Forestry has been challenged not just with the need to achieve sustainable management, but the need to link it with sustainable development. The agencies involved will have to first define sustainable forest management and then further explore the means to enhance sustainable development. This paper looks at the individual components of the two initiatives and attempts to identify the common elements they embody. In the process, the weaknesses in the concepts and problems associated with the contribution of forestry to the communities will be outlined.

INTRODUCTION

Humankind is now in a very strange situation. While the development of science and technology has filled the world with many opportunities, it has also created great risks. The trends in the world now oppose each other with great force. The rapid economic growth in Asia and other parts of the world is generating a huge demand for social and material demands from the forests, and the wealth creation brought with economic development is far from universal. As some parts of the world grow richer, people become even poorer due to the degradation of the environment in pursuit of economic development. The scale of the environmental damages resulting from human activities is now global. With the greenhouse effect come attendant increases in water levels, flooding, fires (particularly forest fires), and the loss of biodiversity.

WOEFUL CONSEQUENCES OF DEFORESTATION

Slightly more than 50 years ago when the Food and Agricultural Organization (FAO) was established, the first Director-General Sir John Boyd Orr wrote that "The tie between forests and the good things of the earth runs back through history." Now this tie may be broken. When humankind fails to respect and manage the forests properly, the forests themselves can reverse the conditions for our existence.

In 1997, an incident in Malaysia filled many people with great fear. For reasons no one could explain, agricultural laborers working in a major pig farming area suddenly began to die. By the time the death toll rose to 150, the farmers decided that the only way to stop the deaths was to kill all of the approximately one million pigs in the area. Two years later, a scientific investigation uncovered the whole story. When forest fires took place in Kalimantan and Sumatra, fruit-eating bats in these areas migrated to fruit orchards nearby the pig farms in Malaysia. When the pigs foraged on the forest floor, they picked up bat droppings infected with the Nipah virus, whereupon mosquitoes transmitted the virus from the pigs to humans. If humankind continues to damage the forests, similar problems are very likely to develop in the future.

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Deforestation is clearing the world's forest at a rate of nearly 15 million hectares a year, much of it in the tropics. Only about one-half of the 6 billion hectares of forestlands that originally covered this planet still remain, and the condition of the remaining half is deteriorating rapidly. The secondary effects are inestimable. Besides wiping away a tremendous amount of genetic diversity, mismanagement of the forests incurs a loss of nearly US$ 45 billion each year.

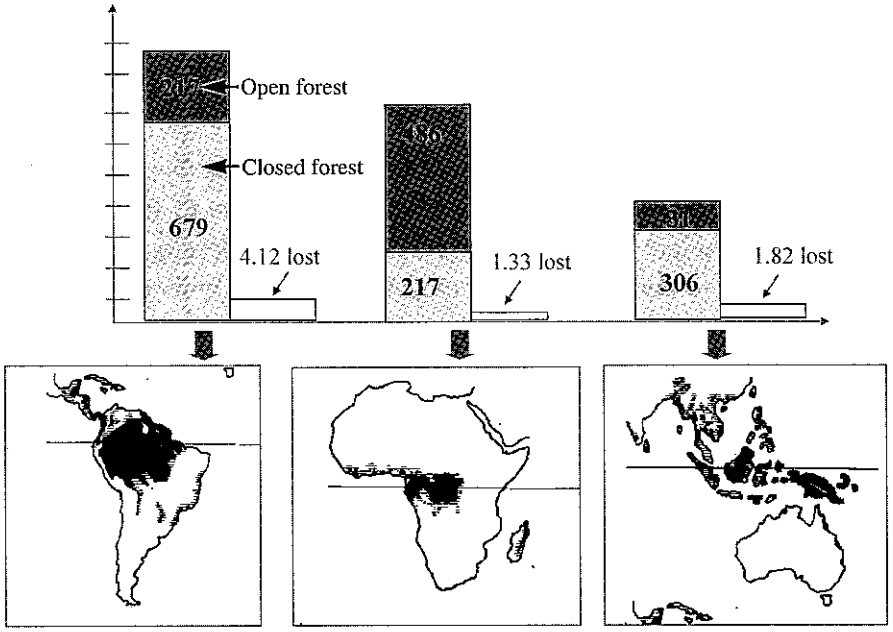

Fig. 1. Configuration of major tropical forest areas

SUSTAINABLE FOREST MANAGEMENT

The concept of sustainability so prevalent today actually took roots in forestry. In seeking remedies for the badly damaged forests of Central Europe in the late 18th and early 19th centuries, foresters of the day took up the practice of clear cutting, that is, cutting away a section of forest, waiting for regrowth, and then returning to cut again. Clear cutting worked very well, but it failed to take into account the other ecological aspects. In time, researchers developed the concept of 'sustainable yield management' as they came to realize that forestry entailed far more than simply cutting a tree and returning 50 to 100 years later to cut again. A host of biophysical aspects such as site productivity, improvement of genetic quality to improve yields, and harvesting based on productivity (harvesting what nature can provide) came into play, together with fundamental ecological aspects such as water, insects, and animals. Still later, when researchers realized the need to additionally consider the social and economic aspects of the environment, the concept of sustainable yield management evolved into the equivalent of what eventually would be called 'sustainable forest management' in the 1990s. Out of the concept arose certification, criteria and indicators, and a host of other components that came to be applied in the management of forests on a sustainable basis.

Unfortunately, the forestry community cannot claim to have achieved success in managing forests sustainably. Despite all of their efforts, poverty is still rampant, more people are poorer today than ever before, and billions of dollars in donor assistance to parts of Africa and the rest of the world has still not helped us appreciably. If forestry is to be used as a means to bring welfare to the people, we will have to identify the benefits of forests for people, and more importantly, the factors leading to deforestation. The loss

of our forests stems from a host of factors far more complex than the oft-blamed practices of shifting agriculture and the creation of pasturelands. Beyond international practices such as trade marketing, government policies and economic crises are core causes. When rural poverty is rampant, timber prices are good, and governments want to subsidize agriculture, the natural outcome is the harvesting of more forests. At other times, timber revenue offers the fastest escape from economic crisis, as witnessed in Indonesia in 1997. One farmer bemoaning the economic crisis in Central America pleaded, "Buy our bananas! Don't give us aid."

How did the concept of sustainable development come about? Sustainable forest management was not delivering what it was meant to. Sharp differences were encountered in the UN Conference on Human Environment. While the developed countries talked of environmental problems and how they should be addressed, the poor countries of the South countered that no, the environment was still secondary in importance to poverty. This disagreement came to a boil in 1987, when the members of the UNCED conference finally concluded that the solution was not to preserve nature alone, but to reach some compromise, each party giving and taking in small measure. The process was concluded to be complementary: economic development was to be complemented by environmental safety, and into perpetuity. This was how sustainability was first designed: as a process of giving and taking in small measure, resulting over time in what we call sustainable development.

CAN FORESTS PLAY A ROLE?

How are the forests serving the goal sustainable development, and how are they assisting the poor? As early as 1962, an agricultural development researcher from FAO named Westoby started the concept of industrial development. He contended that forestry should be able to drive industrial development. Given that many countries of the West have had that model—including America, Canada, Finland, Sweden—he suggested that Third World countries follow suit. Ultimately industries did develop in some parts of the world as a result, but much of it was concentrated among the wealthy without trickling down to the poor. When this happened in India, the country lost many of its forests, the wealthy became richer, and the poor became poorer still.

These very discouraging developments—the rueful degradation of the forests, the powerlessness to act, the aggravated poverty, and the growing conflicts among the forests, foresters, and people—gave rise to the new phenomenon of social forestry. Benign and insightful forestry agencies concluded that measures had to be taken to save the forests from utter destruction. Their solution, what they called social forestry, was an array of concepts such as communal woodlots, joint forest management, farm forestry, agroforestry, and non-timber forest products. Many of these innovations originated not from the top forestry researchers and agronomists in their institutions, but from the poorer, minimally educated people actually within the forests. We also note that while their ideas were good and useful, their effects were small. While the changes in their lifestyles were surely positive, their scope was limited.

SUSTAINABLE DEVELOPMENT OF FORESTS AT LOCAL, NATIONAL, AND GLOBAL LEVELS

Strategies have been formulated to support the sustainable of forests on many levels. The Global Environment Fund is beginning to test models that combine elements of environmental conservation and sustainable development in projects all over the world. Next comes the Clean Development Mechanism, an energy-related initiative to remunerate foresters based on the levels of carbon that newly planted trees

sequester from the atmosphere. Next come ecological services that forests provide. When the people living in the forests leave the forest resources intact, they lose an important source of livelihood. Can they be given something in exchange, some kind of payment in return for saving resources such as water, for keeping the environment clean, for preventing erosion in the rivers, and for ensuring that the soil is free of soot in order to protect the fisheries in the aquatic and marine areas? The same holds true for the biodiversity that the forests protect. Who are the beneficiaries of biodiversity? How can the people living in the forests be compensated for protecting biodiversity by leaving the forests alone?

Yet many of these issues remain just talk; the road to sustainable development is paved with dialectics. While dialectics are positive and bring results, little money has actually been paid. Fortunately there are many things we can do beyond dialectics, and appreciable changes are already taking place.

On the national level, the days are gone where governments and bureaucrats freely and indiscriminately cut forestlands to convert them into paddies or sugar plantations. Societies are now developing and using participatory processes wherein governments converse and work with local peoples in affected regions to learn and address their concerns and needs. Decisions are based more closely on discussion, and local people are involved in the decision-making.

Another issue is that of property rights. If there is no sense of ownership, some form of belonging of either the land or the resources, then people will not invest their time, money, or energy into conserving them. And, what of the womenfolk and the needs of indigenous people? Governments usually lack the political commitment to protect the interests of their indigenous populations on the national level. Also important are the effects of agriculture such as energy expenditure and the construction of roads and dams, and finally the Krutznerian effect, whereby people stop cutting the forests when they become wealthy because they can reap enough wealth from their farms or industries. All of these are the factors to be taken into account when reflecting on the management of natural resources.

Some benefits can be provided at the global level. Who is going to pay for all of the people conserving biodiversity? A number of strategies are being tested. Debt for nature swaps have been attempted, with limited but tangible effects, as has the Clean Development Mechanism. The International Tropical Timber Organization (ITTO) is doing much for the marketing, certification, and promotion of sustainable management. And FAO, through the National Forest Program, has received money from the European Community to bring about integrated methods of forestry management that come from policy development to implementation. Many things are happening.

Meanwhile, sustainable development research extends into the diverse fields of the environment, biodiversity, economics, policy, local communities, and corporate culture.

Corporate culture requires particularly close attention. Most of the damage and destruction we blame on the large corporations, the powerful entities that we witness moving in, cutting the forests, and destroying nature. How can the world come up with better systems to handle this, enabling corporations to continue to profit while fulfilling their social responsibility to benefit the poor? This is the question that requires our deepest thinking, and workable answers could take us far in solving the world's problems.

Sustainability is no longer a matter of perpetuity, sustaining the environment for future generations forever and forever. Nothing so absolute can be achieved. Sustainable development is more a matter of give and take by the people of the world. In the words of Gandhi, the great humanitarian of the last century, "There is enough in this world to meet everyone's needs, but not enough for the greed of some."

The message is to please share.