Global Conservation Starts with the Greening of Developed Nations

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I Introduction

The ever-increasing impact of human activities on the environment makes the conservation of natural resources, including biological diversity, an urgent and critical task.

According to the State of the World's Forests of the FAO, forests harbor most of the terrestrial biodiversity of the earth and provide habitats for 80% of amphibian species, 75% of bird species, and 68% of mammal species. The Global Tree Search database records more than 60,000 species of trees, more than 20,000 of which have been included in the International Union for Conservation of Nature Red List and over 8,000 of which are assessed as globally threatened. Approximately 60% of vascular plants are found in tropical forests[i].

Developed nations negotiated the Convention on Biological Diversity in 1992 with the original purpose of nature conservation and the limitation of environmentally damaging development in developing countries.

However, developing countries fiercely opposed the convention characterizing it as a revival of colonialism in a different form. The opposition centered on the willingness of developed nations to interfere with development and regulate land use in developing countries. As a result of this opposition, the content of the convention was revised to stand for the proposition that each nation determines its own level of conservation of biological diversity.

The implications of this revision meant that advocating global nature conservation becomes considerably difficult. Rather, nature conservation was regarded to the sovereignty of individual countries.

Under such circumstances, a paradigm shift is necessary to expand nature conservation on a global scale.

Lifestyles in developed nations must change to allow coexistence with nature, especially forests, in cases where communities exist in the vicinity of a forest to conserve nature worldwide. Therefore, developed nations should undertake efforts to reforest land that has been previously appropriated while simultaneously conserving and growing their domestic forests.

II Global Deforestation

1 Failure to Reach an International Consensus on Controlling Deforestation

Conserving forests protects forest fauna, preserves natural environments, and prevents global warming through the sequestration of CO_2. Forests are heavily impacted by human activities and are rapidly declining worldwide. The rate of deforestation has been significant since the 1970s, and the rapid disappearance of the forest cover has caused international concern. The desire to arrest this global trend

and slow the pace of deforestation reflects the need for an international framework to enable the international monitoring of domestic laws and enforce countermeasures to actions that are harmful to forests.

The United Nations Conference on Environment and Development (UNCED), which was held in 1992[i], attempted to create a forest conservation treaty and adopted the Rio Declaration on Environment and Development, the United Nations Framework Convention on Climate Change, which addresses global warming issues, and the Convention on Biological Diversity. The UNCED also established the concept of sustainable development and laid the foundation for the Sustainable Development Goals (SDGs) of the United Nations (UN).

Nonetheless, a legally binding treaty to protect forests, one of the major goals of the conference, was not achieved. Developing countries emphasized the role of forests as a natural resource and wanted to use and develop them without outside constraints. These nations were opposed to legally binding agreements that would stop deforestation in the tropics and elsewhere[ii].

Developing countries took the position that restricting forest use would challenge their sovereign right to develop their resources, citing international law and the Stockholm Declaration. These nations insisted that deforestation had occurred worldwide to support the economic development of European and other countries since the industrial revolution. This conflict between developing and developed nations precluded the UNCED from ratifying a treaty. Nevertheless, the Rio Declaration on Environment and Development changed the concept of nature conservation in the UN.

The earlier concept was embodied in the World Charter for Nature[iiiii], which was adopted by the UN in 1982. It stressed that harmonizing nature conservation with economic development, while protecting natural ecosystems to the maximum degree possible, required the examination of likely human economic development activities, the assessment of environmental impacts before engaging in development activities, and only proceeding with development that fulfilled strict screening criteria.

However, an environmental assessment before beginning any economic development activity is a huge burden; therefore, the 1992 Rio Declaration on Environment and Development introduced the concept of sustainable development. This concept included the idea that economic development is freely permissible as long as it does not have an irreversible detrimental impact on the natural environment. This compromise allows economic development to proceed without an environmental assessment and signals a lowering of UN standards from conservation restrictions that are common in developed countries.

With the concept of sustainable development, the level of nature conservation in developing countries became the standard. Instead of developed countries playing a leading role in the UN and driving nature conservation globally, developing countries gained as strong a voice as the majority. This shift resulted in a major emphasis on assisting the economic development of developing countries in terms of environmental policies, such as the SDGs. This background has made it difficult for the UN to

play an effective role in protecting the global ecology.

2 Deforestation after the UNCED

The world's forests continue to be logged, exploited for other uses, and devastated by large-scale fires associated with global warming even since the 1990s when the UNCED was held. The average annual rate of deforestation worldwide decreased from 0.19% during 1990–2000 to 0.12% during 2010–2020[iii]. Evidently, the pace of forest conversion to other land uses has slowed down. Nonetheless, these data include information from China. The Chinese are promoting tree planting to counter desertification. Afforestation projects in China have encountered difficulties, and deforestation continues in developing countries. When figures from China are excluded, the average rate of deforestation worldwide was still high at 0.16% between 2010 and 2020. Large-scale deforestation is occurring in the tropics and in regions, such as Africa, South America, and Southeast Asia.

According to calculations based on data from the Global Forest Resources Assessment (FRA) 2020[iv] by the Food and Agriculture Organization, continuing deforestation at the same rate as it occurred during 1990–2020, the number of years that it will take for the forests to be annihilated is 333 years for Brazil, where 17% of the forests were lost over the past 50 years, 128 years for Indonesia, a treasure trove of nature that ranks on par with the Amazon, 37 years for Cambodia, 120 years for Congo, and 52 years for Paraguay.

The rate of deforestation in countries with an abundance of natural tropical forests is extremely important for protecting forest biodiversity and preserving the natural biomes of the earth. Forests play a key role in global conservation and ensure the survival of our socioeconomic systems. Stopping deforestation and forest degradation is a global challenge that nations, relevant international institutions, and non-governmental organizations (NGOs) must work together to address.

III What Developed Nations Must Do to Stop Deforestation in Developing Countries

1 The Logic Behind "Developed Nations Are Responsible For Global Deforestation"

At the UNCED, developing countries have opposed negotiations to establish a legally binding international treaty that would unilaterally stop deforestation and have insisted that developed nations should lead the way through afforestation and the greening of their land. Recently, the Bolsonaro administration of Brazil has allowed the active development of the Amazon rainforest and has permitted large-scale forest fires to burn without control. The comments of the NGO on internal affairs in the Amazon have been an infringement on the national sovereignty of Brazil[iv]. This logic is the same as that employed by developing countries to prevent the ratification of an international treaty to curb deforestation at the UNCED in 1992.

2 Deforestation as a Major Cause of Global Warming

Global warming is caused by the increase in greenhouse gas emissions—mainly CO_2—on a global

scale. The Law Concerning the Promotion of Measures to Cope with Global Warming identifies the reduction of greenhouse gases as a common problem that can only be addressed cooperatively if global warming is to be slowed or stopped.

CO_2 emission volumes are exceeding the sequestration capacity partly because forests that are not meant for human habitation are being destroyed. The cutting of forests reduces the size of carbon sinks. Moreover, lands that have been formerly forests are converted into areas of human occupation, with a consequent increase in the consumption of fossil fuels, a decrease in CO_2 sequestration, and a further increase in CO_2 concentrations in the atmosphere. Hence, a direct causal relationship exists between deforestation and the increasing levels of greenhouse gases—mainly CO_2. Deforestation and forest degradation by humans are the major causes of global warming.

3 What Developed Nations Must Do to Stop Deforestation in Developing Countries

Developed nations that have largely developed their forests interfere with the use and development of forests in developing countries, and it is not due to egoism or an intent to fix the economic gap between developing and developed nations. Developed nations must take action to neutralize the excuse utilized by developing countries that global deforestation is the responsibility of developed countries to encourage the developing countries to initiate global forest conservation activities. Nature conservation requires restrictions on the use of natural resources and, therefore, comes with a social cost. Bearing this cost and protecting the global environment require each nation to have enforceable and enforced environmental laws to minimize the actions that would violate global conservation efforts.

The burden of controlling deforestation and protecting natural environments must not be imposed on developing countries alone. Rather, developed nations must bear more than their share of the pain associated with conserving forests; thus, conservation efforts must be shared.

The Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation, and Sustainable Development of All Types of Forests (known as the “Forest Principles”) was adopted by the UNCED in 1992 as a substitute for a legally binding forest treaty. The Forest Principles urge all nations—particularly developed nations—to take positive and transparent actions for reforestation, the establishment of new forests, and the prioritization of forest conservation. Additionally, developed nations are expected to channelize their efforts into maintaining and recovering their domestic forest lands.

IV Afforestation in Developed Nations

In the absence of human intervention, land tends to be occupied by forests or grasslands depending on the availability of water. Efforts must be taken to revive the former ecosystems by restoring the lands that have been disturbed by human intervention to their original state of forest or grassland depending on the availability of water.

Because forests have been decimated to make space for agriculture and dwellings, reforestation of such land should be considered, especially for abandoned and devastated farmlands and cities where people live.

Farmland is a natural environment that has been artificially altered for the purpose of producing food. However, even if it is currently used as a farmland, if it used to be a forest, reforesting it to achieve a diverse ecosystem is appropriate. The conversion of forests and grasslands into farmlands alters the biotic community not only through the spraying of chemicals but also by depriving wildlife of habitat. In addition, it changes the water cycle and causes climate change, and the significant impact of monocultures or polycultures on the global environment and specific ecosystems should be reconsidered.

In the 17th century, half of the Eastern United States was covered with primary forests[v]. Reverting the current land to its former natural state has far-reaching implications on the global environment. Hence, regarding former old-growth forests that have been turned into farmlands with low productivity, a system could be established whereby the government purchases the land for the purpose of reforestation or provides subsidies for reforestation.

More specifically, the government provides subsidies for sustainable forest management and support for farmland reforestation in accordance with environmental protection standards and guidelines. The objective is to create forests mainly comprising broad-leaved trees to improve the landscape, creating new habitats for wildlife, providing sporting opportunities, and increasing lumber production.

V Afforestation on a Global Scale

Developed nations should take the lead in worldwide forest conservation and take efforts to revert their land to forests by focusing on the greening of rural and urban areas.

Although rural areas generally seem abundant and green, much land that has previously been logged or farmed has become a space for humans but is not actually used or is utilized infrequently. The state or local government could engage in reforestation projects to regenerate wildlife by buying abandoned farmland and land without ownership due to the aging of farmers. If a farm was formerly a forest, efforts should be made to reforest farmland on the condition of the agreement of landowners.

Similarly, urban areas can be made greener, which is something that developed nations should focus on. Urban greening is considerably more expensive than rural greening. However, leaders who engage in forest conservation and the renaturalization of urban forestation while disregarding the cost of urban forestation can demonstrate their determination globally, including developing countries.

VI Urban Greening

1 Environments that Allow People to Live in Close Proximity to Forests

A paradigm shift is necessary to expand forests on a global scale. Our lifestyles must be aligned with the principles of nature to ensure coexistence with the natural environment of forests, both in developed

and developing countries. To achieve this goal, environments that allow people to live in proximity to forests must be created.

Reforesting an urban area that has previously been a forest is extremely valuable. Many densely populated areas with the ongoing loss of vegetation are the outcome of past logging. If the land was formerly a forest with a rich ecosystem, then it is capable of returning to its original state.

2 Creation of Forests in a City

One consideration when regenerating a forest in a city is to retain the functions of the city, such as those of residential areas, and the functions of the forest.

Creating a large-scale forest in a city is fairly feasible. A typical example is Meiji Jingu (Meiji shrine), which was constructed 100 years ago in an area comprising paddy fields and devastated land in Tokyo to commemorate Emperor Meiji and his wife. Today, it is a 70-hectare forest in the center of the capital of Japan. Its origins were the vision of a great broad-leaved forest, 50–150 years in the future, and the planting of approximately 100,000 trees[vi]. Furthermore, it is now home to a rich ecological community, including precious animals such as goshawks.

In addition to creating large forests, land that has been abandoned should be turned into woodland. Public institutions could undertake projects on land that is not owned by any individual (e.g., through inheritance) or whose ownership is unclear because of missing claims to the land title by removing any buildings and reverting it to woodland. Despite land ownership rights that confer usage rights to individuals, land with no successors or no known owners is not needed by anyone. Such land should be returned to the state or local government to be reforested.

Moreover, the construction of underground public transportation systems could be promoted, and these could replace the existing above-ground systems. The reclaimed land can be turned into woodland. All roads should also be lined with trees. Nevertheless, occasionally, parts of residential areas are constructed without adequate rezoning, resulting in winding streets. The promotion of roadside tree planting, thus, should be conducted in conjunction with rezoning, which includes road widening.

Such measures should be implemented in accordance with city planning and zoning regulations. The City Planning Act, which determines zoning, should be employed to create natural environments. The rezoning of public institutions, houses, and roads should be conducted to allocate land for reforestration. In addition, for residential areas, the legal site coverage ratio should be lowered to promote tree planting in gardens for creating urban forests and accompanying favorable lifestyle changes.

3 Reinstatement of Ecosystems in Cities

It is necessary to adopt the following environmental policy measures to reinstate ecosystems in cities.

In cases where urban construction has substantially impacted the natural environment (e.g.,

where land was reclaimed from tidal mudflats or marshes), ecosystems should be restored to their original state or functionally similar ecosystems should be created in other places. Such an approach is known as mitigation, which is carried out to restore the original functions of specific ecosystems and compensate for the impact caused by construction.

In conjunction with public construction projects, such as river bank and road improvement or the development of industrial estates and residential complexes, compensatory environmental measures are implemented sometimes. These measures include creating green reserves and mandating the provision of proportionate areas of natural grassland. The result is the creation of biotopes, which are small-scale ecosystems that comprise natural or semi-natural areas that serve as habitats for various life forms. Because diverse wildlife requires sufficient space, the creation of green corridors that connect such small-scale natural areas (e.g., parks, green belts, and biotopes) would ensure effective wildlife conservation by providing space for migration and movement. Through such measures, the functions of both urban residential areas that were originally forests and forest ecosystems can be ensured.

In the future, moving the living spaces below the ground could create space for forests in former above-ground cities. This concept was promoted by Tadao Ando, the Japanese architect whose visionary work is renowned internationally. His concepts are embodied in the Chichu (meaning underground) Art Museum[vii] and the Awaji Yumebutai (meaning Awaji dream stage) complex.

VII Aligning Human Existence with the Natural Forest Environment

Because developing countries retain more forests than developed nations, their citizens have a lifestyle that is more in harmony with the forest. However, even there, people increasingly aspire to have the lifestyles of developed nations and think that using the land in a way similar to that of developed nations constitutes the “road to development.”

To conserve forests worldwide, the lifestyles in developed nations must change to allow coexistence with nature, especially forests, in cases where communities live in the vicinity of a forest. Developed nations should, hence, undertake efforts to reforest land that has been previously appropriated while simultaneously conserving and growing their domestic forests.

The only way to realize worldwide environmental conservation and prevent global warming is to demonstrate to the world, including the developing countries, that lifestyles in which people coexist with forests in densely populated cities are possible if we invest in the necessary efforts.

Keywords: global environmental conservation, nature conservation, global warming, deforestation, forest conservation, forest fire, Sustainable Development Goals (SDGs), World Charter for Nature, United Nations Conference on Environment and Development (UNCED), the Forest Principles, Convention on Biological Diversity, Global Forest Resources Assessment, zoning regulations

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