# Conservation Strategies of Forest Resources: A Path to Sustainability

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KEYWORDS

*Forest resources,*
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ABSTRACT

*Forests around the world have been and continue to be threatened by uncontrolled degradation and conversion to other types of land uses, influenced by increasing human needs such as; agricultural expansion and environmentally harmful mismanagement. The current situation necessitates immediate and consistent action to conserve and sustain forest resources so as to maintain ecological balance for supporting life, preserve different kinds of species (biodiversity), make the resources available for present and future generations and ensure the survival of human race. To safeguard this, conservation practices around the globe are shifting away from the indigenous conservation method, emphasizing on the management of natural resources in a manner that ensures higher flow to every stakeholders, particularly rural community members. As a result, conservation strategies that can aid in the development of goals and action plans for the sustainable use of forest resources are been emphasized on, typically by seeking broad-scale consensus through comprehensive consultations. This article therefore reviews the need for conservation of forest resources and conservation strategies in Nigeria.*

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## INTRODUCTION

Forest resources include timber and other products that can be extracted privately while also providing widely disseminated benefits in terms of climate and atmospheric conditions that are shared by all. Ucar *et al.* (2020) confirmed that the forest, a tangible symbol of the environment, contributes significantly to human health and environmental quality by providing ecological services (energy savings, improved air quality, aesthetics, health benefits, wildlife habitats, and recreation opportunities), economic (productivity, quality, and quantity of forest resources), and social (employment and health safety). However, despite all of these numerous benefits, destructive anthropogenic activities continue unabated.

Conservation has been defined by many researchers, including Farm Bill (2014), Hobfoll *et al*. (2017), and Lichtenfeld *et al*. (2019), as the appropriate management of natural resources to avoid its exploitation, damage, or degradation. According to Bisong (2001), conservation practices around the globe are shifting away from the local conservation method, emphasizing the management of forest resources in a manner that ensures higher flow to every stakeholder, particularly rural community members. Bamberger (2006) reported that many African countries have shifted from "top-down" (expert-led) approaches and to more inclusive "bottom-up" (community-led) methods. The shift in emphasis is informed by the fact that local communities are inextricably linked to their cultural resources, whether used as a source of food, medicine, fuel, or for maintaining ecological balance; thus, local cooperation, participation, and management are critical to achieving both short-term development results and long-term sustainability (Bisong, 2001). Thus, sustainable natural resource management necessitates further comprehensive measures that involves empowering rural community group, technological abilities, and garnering support for sustainable resource utilization from larger community groups (Food and Agricultural Organization, FAO, 2005).

As a result, conservation strategies that can aid in the development of goals and action plans for the sustainable use of forest resources are required, typically by seeking broad-scale consensus through comprehensive consultations. Conservation strategies, as opposed to many traditional planning exercises that are uni-sectoral or focus solely on land-use planning or economic planning, can include environmental, social, and economic objectives. Thus, conservation strategies must be viewed as a process as well as a product. Because the method of development generates buy-in from the partners who will put the strategy elements into action, the method of development is almost as important as the strategy's contents.

**Need for Conservation of Forest Resources**

According to the United Nations (1992), forests around the world have been and continued to be affected by unregulated degeneration as well as transformation to other land use type, which is impacted by expanding public demands; agricultural intensification; as well as environmentally hazardous mishandling, such as absence of appropriate woodland-fire regulation and anti-poaching approaches, unsustainable timber harvesting, overgrazing and uncontrolled grazing, detrimental consequences of air contaminants, and economization. The current situation necessitates immediate and consistent action to conserve and sustain forest resources so as to:

• **Maintain ecological balance for supporting life:** Forests play an important role in preventing global warming and building sustainable societies. Carbon dioxide's direct effects on vegetation contribute to global warming. Through the pores called stomata in their leaves, trees and plants take in carbon dioxide from the atmosphere that they use for photosynthesis. They then give off water through the stomata in a process called evapo-transpiration which cools the plant just as perspiration cools human beings. Forests serve a variety of functions, including land conservation, securing water sources, climate change control, and the creation of natural environments necessary for human survival.

• **Preserve different kinds of species (biodiversity):** Forests house a large portion of the Earth's ecosystem, species, and genetic diversity. Many forest tree species have high genetic diversity, and its loss, while often unnoticed, may have far-reaching consequences. Thus, the need to conserve forest resources cannot be overemphasized.

• **Make the resources available for present and future generations:** Conservation of forest resources addresses the principle of intergenerational equity and sustainability, which is concerned with ensuring that today's resource use does not jeopardize the availability of resources for future generations.

• **Ensure survival of human race:** Forest resources support the livelihoods. These resources provide food, fuel, medicine, shelter, and other necessities. According to Millar and Stephenson (2015), humans rely on healthy forests for energy, building materials, food, and a variety of ecological and environmental services such as carbon storage, biodiversity, and climate control.

**The World Conservation Strategy**

World Conservation Strategy (1980) stated that until recently, many conservationists took an "anti-development" stance, arguing that resources, wilderness lands, and habitat should be protected from all human use. This stance made conservation appear to be a very unappealing option for many developing countries that rely on resource use to generate economic growth, as complete protection would effectively preclude large areas from future use. Furthermore, many countries could not afford to establish protected space programs, as well as to clear settlement from designated areas and establish protection and management for them.

As the global environmental crisis became more pronounced in the 1970s, the tension between preservation and development grew, and it became clear that the international community needed to find a way to reconcile environmental protection goals with economic development goals. A solution appeared to be found in an approach that incorporated both preservation and development into a broader conservation framework. The World Conservation Strategy (WCS) was published in 1980 with the intention of bringing about such reconciliation.

The World Conservation Society (WCS) aimed to provide a framework and policy guidance for resource conservation. The WCS was founded by the International Union for Conservation of Nature (IUCN), the United Nations Environment Program (UNEP), and the World Wildlife Fund (WWF). The WCS is aimed at government policymakers, conservationists, resource managers, and development practitioners, including NGOs (non-governmental organizations), donors, private sector, as well as labour organizations. As a document, it provides information while also establishing clear action priorities. To address these priorities, the WCS have served as the foundation for action at multiple scales.

It represented a significant departure from tradition, by redefining conservation to include human use and development activities explicitly: "the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs of and aspirations of future generations" (World Conservation Strategy, 1980). Resource conservation, then, became a development strategy, rather than a barrier to development. At the same time, it is recognized that protection of specific species and ecosystems may also be critical to any overall conservation program.

Thus the creation of protected spaces becomes one of the strategies available to those who would implement an overall conservation strategy.

**The WCS identifies three critical objectives for conservation:**

- to maintain essential ecological processes and life support systems through rational planning, allocation, and management of resources;
- to preserve genetic diversity through the collection and banking of genetic material, and ecosystem protection; and
- to ensure the sustainable utilization of ecosystems, through knowledge and understanding of the productive capacities, and measures to ensure that utilization does not exceed those capacities

The strategy provided a comprehensive discussion of major issues relating to these objectives and established conservation targets. It also identified key problem areas with respect to achieving each of the three objectives.

**National Conservation Strategies**

The WCS challenged individual nations and the wider international community to face the crisis of resource depletion by integrating conservation and development. While it clarified threats to the environment through irrational and unmanaged resource use and allocation, it did not layout specific solutions. Instead it offered a process through which nations could respond to the priorities cited in the WCS to create their own national and regional conservation strategies.

The aim of the national or regional conservation strategy is to provide a framework for reviewing conservation priorities and obstacles, and to identify means to integrate conservation objectives into the mainstream of national and regional planning. As well, such strategies typically provide the means to co-ordinate the efforts of government agencies with conservation and social organizations to achieve shared objectives. Each national conservation strategy is a unique expression of that country's needs and objectives.

However, most strategies aim to fulfill three common functions, deriving from the WCS priorities:

- to establish priority requirements for achieving the three conservation objectives;
- to identify obstacles to meeting these requirements; and
- to propose cost-effective means of overcoming these obstacles (World Conservation Strategy, 1980).

A nation's conservation strategy is best viewed as an operational document, setting policy directions and actions for achieving the three conservation objectives. Yet, the process by which the strategy is developed is also very important, and the WCS offer guidance for the planning and analysis through which conservation strategies are formulated. The process of developing a national conservation strategy begins with three steps: strategic review, analysis, and action planning.

It is important to note that conservation strategy process of all relevant stakeholders for participation in providing the framework for implementing change. Consultation plays an important role in the process of developing conservation strategy, both at the national and sub-national levels. Most of the issues addressed by conservation strategies go beyond the scope of anyone sector of national life, or anyone department within an enterprise. When reviewing conservation objectives against development activities, it soon becomes clear that there are stakeholders and resource users among all sectors and strata of society. Including stakeholder groups in the conservation strategy process will enrich the process in several ways.

Broadly based, cross-sectoral involvement will increase the available to the process, helping to clarify the range of values and concerns that need to be addressed. Each sector or group that has a share in the allocation or utilization of natural resources will bring a unique perspective to a review of objectives and requirements. Ideally all departments, organizations, and stakeholders in conservation initiatives can be coordinated so that they are working together to meet conservation objectives. Bringing the various sectors together as the strategy is being developed can foster and strengthen these co-operative relationships. Finally, by involving multi-sector stakeholders in the process, the action plan of the conservation strategy is more likely to be accepted and promoted by a wider number of people (World Conservation Strategy, 1980). Thus, governments cannot implement a conservation strategy alone; public support and participation are crucial if the objectives of conservation are to be met.

**Conservation Strategies in Nigeria**

According to John (2009), a country that incorporates ecological sustainability into a genuinely national strategic development project aimed at drastically reducing food insecurity, developing a stable future, as well as enhancing the development of Nigerian species diversity for the advantage of both the Nigerian local economy in conformance with ecosystems sustainable development and social fairness. Nigeria has shown her dedication to conservation efforts by being members to various multilateral agreements for the protection, preservation and sustainable utilization of biological diversity (Federal Government of Nigeria 2015). As a result, the

country actively participated in all of the negotiations that led to the adoption of the Convention on Biological Diversity, and it was one of the 153 signatories to the Convention at the United Nations Conference on Environment and Development. Following that, the country ratified the convention in 1994 and began the process of developing her Biodiversity Strategy and Action Plan. The Federal Environmental Protection Agency (FEPA) published "A Country Study Report" in 1993, which recorded the state of Nigeria's ecological variety, rules, regulations, and conservation efforts.

The present National Biodiversity Strategy and Action Plan (NBSAP) is a modification of the original proposed file that was created in 1998 as part of Global financial institution aid Environmental Protection Program. Using community-level discussions, eco-regional and nationwide conferences conducted by a Team of Experts, the review dealt with identified deficiencies in the prior publication. It discusses the provisions and spirit of the Convention, as well as the nation's aim for long-term growth (NBSAP, 2015).

The Strategic framework and programme of action goal is to "create a suitable framework as well as program devices for the conservation of Nigeria's biodiversity as well as its sustainable utilization by incorporating biodiversity considerations in the national development planning, policies, and decision-making procedures. The government has performed biodiversity surveys and inventories since the initial draft of the NBSAP, which served as the framework for formulating the National Plan towards Preservation, protection and Responsible Utilization of Species diversity. This approach would be a display of our commitments to coming generations as well as a component of our national obligations under the Constitution.

The Nigerian government has enlisted the help of scientists in government ministries and non-governmental groups to do background research and prepare a paper, which has now been resubmitted to national discourse for amendment and endorsement. The practical way to developing this method is to create an adaptable system that creates national objectives, policies, and structures for dealing with the issues on: Biological diversity protection and preservation; Sustainable utilization of ecosystem goods and services; Equal distribution of benefits; management of agro-biological diversity; Bio-safety; and Biological diversity – Company's border.

The NBSAP was developed and reviewed with extensive involvement from different federal and state government agencies; academics, non-governmental groups, as well as local economies via global and sub-national consultation conferences. Professionals from many industries as well as bridge concerns provided a variety of literature review for the Strategy. The Federal Ministry of Environment formed a Nationwide Working Group as well as a Bio - diversity Technical Group throughout the creation of the Strategy.

Participants at the Workshops agreed that poverty is the greatest danger to the management of Nigeria's biodiversity. It was established that greater than seventy percent of Nigerians live in rural areas and rely heavily on forest products, wild plants and animals for food as well as income supplementation. By tackling the core issue of poverty, the Strategic plan and program of action will seek to secure long-term utilization of biological diversity. It will create a program for rural community involvement that will return a major share of the conservation benefits. The Strategy too has prompted a policy change toward decentralization and local engagement in natural resource management as a more sustainable means of promoting conservation-oriented decision-making and biological diversity protection.

**CONCLUSION AND RECOMMENDATIONS**

Forest resource conservation is a national issue that must be addressed with perfect coordination between the forest department and other departments in the country. Thus, stakeholder's involvement in forest resource conservation is critical. The development of conservation strategies alongside proper implementation of these strategies by various stakeholders will ensure sustainable conservation of these resources. The emphasis should now be on providing support for actual implementation, based on existing best practices and tools as well as monitoring progress on the ground to provide feedback to national and international policy processes.

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