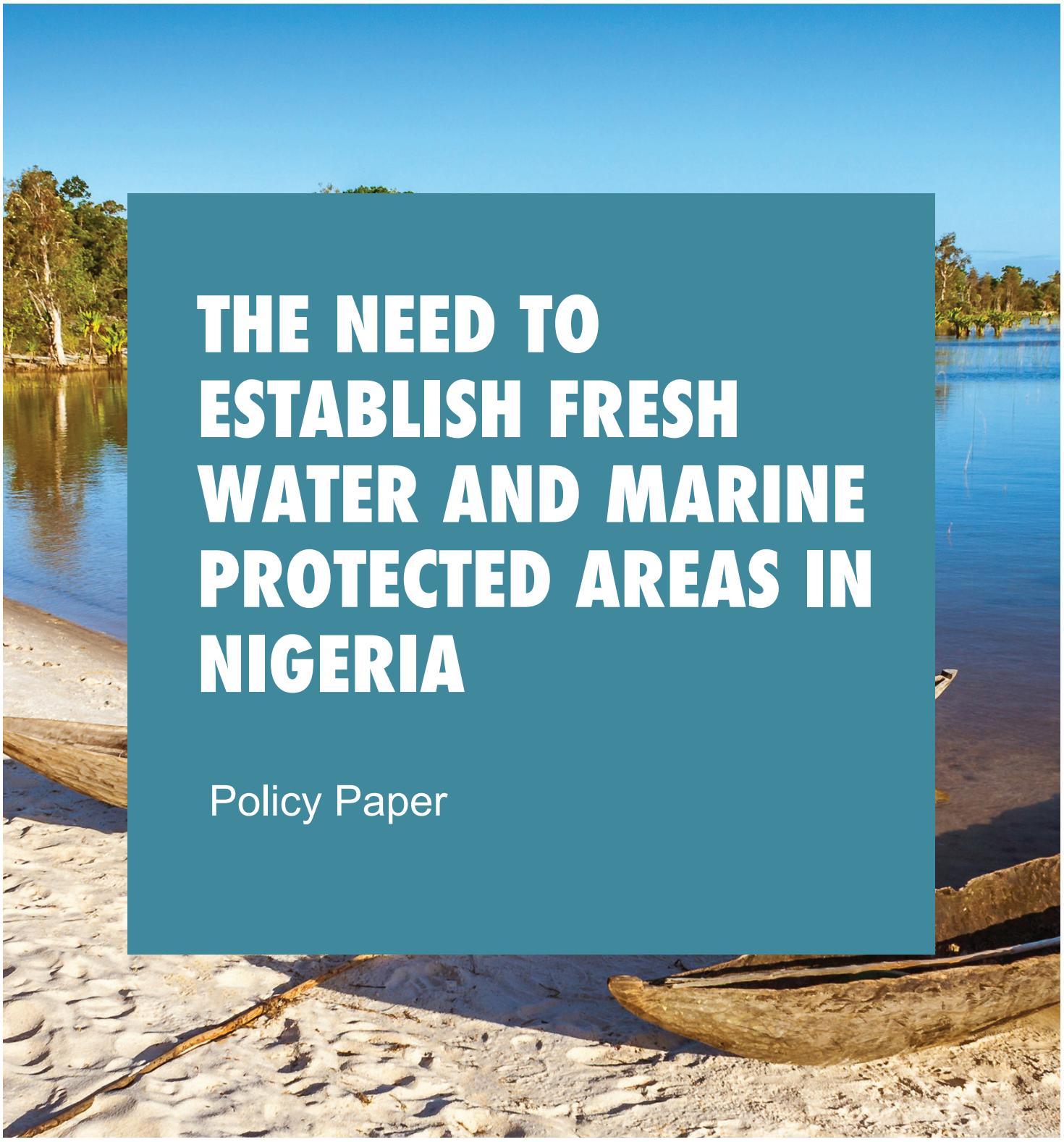

THE NEED TO ESTABLISH FRESH WATER AND MARINE PROTECTED AREAS IN NIGERIA

Policy Paper

HOMEF
HEALTH OF MOTHER EARTH foundation

Acknowledgments

We acknowledge the work of small-scale and artisanal fishers and cocmmunities that depend on aquatic ecosystems. It is our hope that this policy paper will add to their advocacy toolbox as we all push for the creatyion of a people responsixe and ecologically sensitive marine and freshwater protected areas.

While this paper focuses on Nigeria, it can easily be adapted (with proper referencing) for use in other countries especially in the Congo Basin and the Gulf of Guinea.

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Executive Summary

Marine protected areas (MPAs) are important and powerful tools for biodiversity conservation and management of aquatic ecosystems and balanced cycles. Unfortunately, Nigeria has no formally established marine or fresh water protected areas and is not engaging in constructive mangrove restoration programmes. Also, there is no nationally designated marine park in Nigeria.

The country is highly endowed with coastal and marine resources and has several water bodies which serve as habitat to several biological species including fish, aquatic mammals, reptiles, and other freshwater resources. However, the coastline is faced with numerous challenges (such as climate change, flooding, overfishing, and pollution from industrial, domestic and agricultural effluents) that have predisposed it to rapid and ill- managed degradation. Diverse activities carried out in the coastline includingoil and gas exploration and exploitation, shipping, agriculture, transportation and tourism impact negatively on the marine environment and therefore, marine and coastal ecosystems are not delivering the full suite of ecosystem services upon which humans (especially the coastal communities) rely.

Already, experts and villagers have started noticing rapid decline in fish, planktons, shrimps, tortoise, crabs, crayfish and other species in the Niger Delta coastal territories of the Atlantic Ocean due to unprecedented levels of oil spills caused by inordinate exploitation and exploration of petroleum resources in the region. Environmental pollution in the Niger Delta coastal zone has caused eutrophication and oxygen depletion in lagoon systems, particularly around urban centers, resulting in decreased fish reproduction levels and waterborne diseases.

There is need to develop institutional framework and an all-inclusive fresh water and marine protected areas policy to protect the aquatic ecosystem against destructive and extinctive practices. Although there are no official gazettes of fresh water and marine protected areas in Nigeria, community people through cultural and local knowledge have led and managed the creation of protected areas, protection of some aquatic animal species and even scheduling of fishing periods.

Apart from biodiversity conservation, fresh water and marine protected areas are tools to curb overfishing and the threat of stock collapse which can exacerbate by-catch problems—such as the unwanted interaction with other fisheries, turtles, and even birds while fishing—which lead to waste and increased fish and marine life mortality as non-target species are caught and then discarded .

This policy paper calls for the mapping out and creation of fresh water and marine protected areas in Nigeria, especially in the Niger Delta region. It outlines the need for and benefits of such areas, sources of inputs and steps in their establishment, and the associated legal institutional and policy fameworks. This paper can well be adapted and replicated for use across the Congo Basin and the Gulf of Guinea.

Fresh Water and Marine Protected Areas in Nigeria

Background

Nigeria has a landmass of about 923,770km and the country's entire southern border is with the Atlantic Ocean covering about 857 km from the west at the border with the Republic of Benin to the east at the border with Republic of Cameroon.[1] The country's coastline lies between latitude 4o 10' to 6o 20' N and longitude 2o 45' to 8o 35' E.

The Nigerian coast is composed of four distinct geomorphological formations namely the Barrier-Lagoon Complex; the Mud Coast; the Arcuate Niger Delta and the Strand Coast.[2] Nigeria accounts for about half of West Africa's population and twenty-five percent of the country's population is found in the coastal states.[3] Nigeria has an abundance of natural resources such as tin, iron ore, coal, lead, zinc, limestone, niobium etc. It is Africa's biggest oil exporter and has the largest natural gas reserves on the continent. [4]

Nigeria is highly endowed[5] with coastal and marine resources and has several water bodies which are distributed as freshwater (rivers, creeks, creek-lets, ponds, lakes and streams), estuarine (fresh and saltwater interphase) and marine/salt water.[6] The Nigerian aquatic ecosystem serves as habitat to several biological species including fish, aquatic mammals, reptiles, aquatic insects, some species of snails, freshwater shrimps, snakes, algae, water lilies, water hyacinths and lettuce found in Bayelsa State, for example. In flowing water bodies such as rivers, several species of fish and macrophytes are found. Animals including sharks, whales, dolphins are some diversity found in the marine ecosystems in Nigeria.[7]

The coastline is faced with numerous challenges (such as climate change, flooding, overfishing, and pollution from industrial, domestic and agricultural effluents) that have predisposed it to rapid and ill- managed degradation. The coastline serves diverse purposes including use for fisheries (artisanal, industrial and aquaculture), oil and gas exploration and exploitation, shipping, agriculture, transportation and tourism. These activities impact on the marine environment and therefore, marine and coastal ecosystems arenot delivering the full suite of ecosystem services upon which humans (especially the coastal communities) rely.[8] Activities such as shipping, oil exploration and exploitation, ports/harbours constructions, fishing and other conflicting issues are directly damaging most valuable components of marine ecosystems.[9]

According to a report by Babagana Abubakar,[10] experts and villagers have already started noticing rapid decline in fish, planktons, shrimps, tortoise, crabs, crayfish and other species in the Niger Delta coastal territories of the Atlantic Ocean due to unprecedented levels of oil spills caused by inordinate exploitation and exploration of petroleum resources in the region. Environmental pollution in the Niger Delta coastal zone has caused eutrophication and oxygen depletion in lagoon systems, particularly around urban centers, resulting in decreased fish reproduction levels and waterborne diseases.[11] The documented impacts of illegal, unreported and unregulated (IUU) fishing are far-reaching; from how it negatively affects ocean ecologies

and habitats, sustainable fishing and food security, to its devastating impact on coastal communities in Nigeria and globally.[12] The need to protect or restore marine biodiversity has led to increasing calls for the establishment of Marine Protected Areas.[13]

Regardless of where we live, all people depend upon healthy ocean ecosystems. The role that fresh water and marine protected areas (MPAs) can play in promoting the health of our rivers, oceans and seas has long been recognized. The World Summit on Sustainable Development, the IUCN's World Commission on Protected Areas, the Convention on Biological Diversity, and the G8 group of Nations called for an establishment of a global system of MPA networks in the year 2012. The challenge has been how to transform these commitments into meaningful action. The global progress on building MPA networks has been slow, in part because they embrace a range of issues greater than conservation alone.[14]

Fresh Water and Marine Protected Areas in Nigeria and the Congo Basin

Unfortunately, Nigeria has no formally established fresh water/marine protected areas and is not engaging in constructive mangrove restoration programmes. There is no nationally designated marine park in Nigeria. The lack of freshwater/ marine protected areas, together with other coastal threats contributes to a large extent, to the decline in wild fish stock in the Gulf of Guinea. It is estimated that 60% of fish caught between the Gulf of Guinea and Angola breed in the mangrove of the Niger Delta.[15]

According to the Marine Conservation Institute, the Wildlife Conservation Society with the support of the Waitt Foundation had proposed in 2014, the creation of a network of marine protected areas covering 23% of the territorial seas along the coastline of Gabon to be known as the Congo Basin Coast-Gulf of Guinea Seascape. As at then, the Congo Basin Coast was largely unprotected, and faced new threats from coastal development, unregulated overfishing, and expanding oil and gas extraction. The planned network of marine parks through the existing parks and creation of new ones included a variety of ecosystems: lagunas, estuaries, coastal waters, canyons and high seas. Sadly this project is yet to be implemented. In 2018, the Nigerian Conservation Foundation (NCF) stated its intention to embark on a project for the establishment of MPAs to protect Nigeria's threatened marine biodiversity.

The organization currently oversees the Osse River Park formerly known as Ifon Forest Reserve which is located in Ondo state, South Western Nigeria, established through a Government Gazette No.2 of 4/1/1951 particularly for the protection of Wild Game. In this paper, we make a case for the urgent establishment of freshwater/ marine protected areas, marine parks and sanctuaries in Nigeria, especially in the Niger Delta, which has been identified as a key conservation zone of the Western Africa Coast on the basis of its huge biodiversity. Also, there is an urgent need for this to be extended to the Congo Basin – which hosts some of the most valuable marine ecosystems on the planet with its rivers, swamps and flooded forests.

Community Fresh Water/Marine Protected Areas

Although there are no official fresh water/ marine protected areas, there are areas protected by communities based on customary and traditional conservation or religious reasons. For example, some communities have aquatic species that are totems and cannot be killed. In Oporoma, Bayelsa State, Nigeria, the people do not eat crocodiles. Others forbid the killing of species like sharks and alligators. Across the Gulf of Guinea, fishing communities have scheduled times for harvesting of fish and even then, they allow only specified net sizes. These protected customary zones are key to species preservation and should be formally recognized and supported by governments. Fishing festivals, such as the Argungu Fishing and Cultural Festival in Kebbi State, Nigeria, help to protect fish species by restricting fish harvesting to specific times.

The Need for Fresh Water/Marine Protected Areas

MPAs have variable meaning from one country to another, depending on the country's national legislation and international agreements. The International Union for Conservation of Nature (IUCN) defines an MPA as "any area of inter-tidal or sub-tidal terrain together with its overlying water and associated flora, fauna and historical and cultural features which has been reserved by law or effective means to protect part or all of the enclosed environment."[16] According to the Food and Agriculture Organization of United Nations (FAO), an MPA is any marine geographical area that is afforded greater protection than the surrounding waters for biodiversity conservation or fisheries management purposes.

There are different categories of MPAs attached to established definitions. These categories are intended to provide guidance relevant to all of them, especially at the interface between fisheries management and biodiversity conservation. IUCN recognizes six different categories of MPAs, classified according to their objectives and ranging from fully protected areas (no-take zones where no extraction is permitted) to multiple-use areas where a range of resource uses are allowed.

The IUCN categories of protected areas are:

i. Protected area managed mainly for science or wilderness protection (Strict Nature Reserve/Wilderness Area)

ii. Protected area managed mainly for ecosystem protection and recreation (National Park)

iii. Protected area managed mainly for conservation of specific natural features (Natural Monument or Feature)

iv. Protected area managed mainly for conservation through management intervention (Habitat/Species Management Area)

v. Protected area managed mainly for landscape/seascape conservation and recreation (Protected Landscape/ Seascape)

vi. Protected area managed mainly for the sustainable use of natural ecosystems (Managed Resource Protection Area)

Source: IUCN[17]

Sources of Input in Establishment of Fresh Water/Marine Protected Areas

There is need to involve the public, especially community people and fishers in planning and establishment of fresh water and marine protected areas. The sources of inputs into the processes should include:

a. **Scientific Sources:** This would involve the use of Geographic Information System (GIS) and remote sensing to identify areas which are of utmost significance for the fishery resources such as usual schooling and shoaling areas; spawning, breeding and nursery grounds; and migration routes, either for food or reproduction. Ecological and biological data from research by the fisheries scientists are very important as they form the base for most of the management decisions that have to be taken for implementation and monitoring purposes. The scientists are important as the ones to ensure the recognition of links in the various processes of establishing MPAs, which include: identifying needs (e.g. identify threatened/rare or imperiled species, habitats, hydrologic cycles) and processing management objectives, planning, designing and evaluation of the MPAs.[18]

b. **Fishers:** Artisanal fishers usually have information on niches and habitats of fish species during particular phases of their growth; hence their input should be sought for through interactive discourse. Artisanal fishers also have close ties to communities and their customs. These, in addition to local knowledge and practices are essential for suitable mapping of areas for MPAs.[19]

c. **Other stakeholders:** This includes professionals in agriculture, flood control, power generation, tourism, mining, transport and land development (e.g. urban and industrial development). Relevant CSOs should also be involved. The needs, goals, contribution and position of the varied resource users and stakeholders should be sought before formulating management objectives. While the ability of scientists to make all stakeholders realize the usefulness of MPAs should lead to agreement for its establishment, it is important to have the informed consent and collaboration of all key stakeholders.[20]

Legal, Institutional and Policy Frameworks for MPAs

A number of international instruments and agreements have been adopted during the last few decades to promote sustainable fisheries and conservation of the environment at national, regional and global levels. Most are voluntary, but some qualify as binding agreements. The more important instruments include:

Hard law: (these are binding instruments)

a. United Nations Convention on the Law of the Sea of 10 December 1982

b. Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (United Nations Fish Stocks Agreement (UNFSA)

c. Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (1995) (FAO Compliance Agreement)

d. Convention on Biological Diversity (CBD)

e. International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 International Convention for the Prevention of Pollution from Ships (MARPOL) and binding resolutions adopted by the International Maritime Organization (IMO)

f. The Convention on Wetlands of International Importance (the Ramsar Convention)

g. Regional instruments: binding resolutions from regional fishery bodies (RFBs) and regional seas conventions

h. Convention on the Protection of the Underwater Cultural Heritage of the United Nations Educational, Scientific and Cultural Organization (UNESCO)

i. IMO and its associated instruments

Soft law: (these are voluntary codes of conduct, non-mandatory provisions and incentive programmes)

j. Code of Conduct for Responsible Fisheries (CCRF) and related IPOAs and other instruments (FAO)

k. Rio Declaration on Environment and Development and Agenda 21 – UNCED,

l. Declaration of the International Conference on Responsible Fishing (Declaration of Cancún)

m. World Summit on Sustainable Development (WSSD) and its Plan of Implementation (WSSD-POI) (United Nations), 2002

"At the national and local level, MPAs need to be embedded in policy and should not be used in isolation, but rather as part of a larger policy and management framework. This could be a fisheries policy, a general marine policy or a policy focused on some other marine use or development. MPAs also require an enabling legal framework and long-term political commitment to be successful. MPAs with multiple objectives may be embedded in several policy frameworks. Policy coherence then becomes important and there should be harmonization of policies, laws and institutions for MPAs as fisheries management tools and as a tool that serves broader conservation objectives. MPAs implemented in inshore areas where local coastal communities are the direct users of the resources generally require a different policy framework than MPAs in offshore areas where users tend to have greater mobility and be less dependent on specific resources. Experience shows that small-scale coastal MPAs need to give due attention to community rights and participation and the institutional and legal frameworks needed to enable this." [21]

Steps in Establishing Fresh Water/Marine Protected Areas.[22]

a. Establish the appropriate legal instruments

b. Identify the necessity and usefulness for establishing such protected areas.

c. Establish specific objectives and goals for the fresh water/marine protected areas, through consultation with various stakeholders concerned with the usage of the ecosystem.

d. Use the specified goals and objectives to design the protected areas.

e. Develop the management approach for evaluating the effectiveness of the protected areas.

f. Evaluate the protected areas so that adaptive management can be developed through the feedbacks from the Monitoring, Control and Surveillance (MCS) unit.

Benefits of Fresh Water/Marine Protected Areas within Fisheries Management

The benefits include:

a. Control of fish mortality

b. For the spillover effect of fish migrating across the boundaries of a fresh water/marine protected area so they can be fished

c. They serve as a source of and/or sink for fish eggs and larvae to improve recruitment

d. They protect habitats, food web integrity and biodiversity

e. They reduce by-catch, discarding and other negative impacts on harvested species, endangered species and other species society wants to protect

f. Reduce competition between user groups and enhance opportunities for certain groups of users (by establishing rights), and act as a potential hedge against uncertainty.

g. Contribute to a nation's economy through lowering harvest variation and improving the fishery rent.

h. Conservation of biodiversity, thereby greatly reducing the chances of species extinction, imperilment or succession.

i. Conservation of natural ecosystems so that succeeding generations will not only read of the characteristics of such communities of plants and animals but be able to see and enjoy them.

j. Establishment of reference points for scientific studies for research and education.

k. Generally, fresh water and marine protected areas offer resilience on the overall ecosystem within its range.

l. Terrestrial components can be attached to coastal protected areas and help limit or prohibit coastal development and shoreline alteration

Source: FAO[23]

Conclusion

Uncontrolled fishing and destructive pollution of fresh water/marine ecosystems through extractive activities are wreaking havoc on aquatic resources in the waters of Nigeria as well as in the Congo Basin. Infrastructure such as dams and industrial installations are injurious to the ecosystems and aquatic lifeforms. Canalization often built by oil or mining corporations to move their equipment from the Atlantic coastline to inward locations have led to the destruction of freshwater ecosystems and the associated species, thereby impacting on the food supply of the communities and the livelihood of fishers and processors. Fishers are also barred from zones with endemic aquatic species ostensibly for security reasons without prior information or consent for such outcomes at the time of establishment of industrial activities in those zones.

Nigeria being a party to a number of international conventions and agreements on the protection and conservation of marine ecosystems, should as a matter of urgency show commitment by establishing a number of protected areas networks across its large coastal territories and habitats. The creation of freshwater/marine protected areas at suitable areas, and in consonance with local knowledge, practices and wisdom, will help preserve and protect species while boosting local and national economies. Institutions such as the Nigerian Institute for Oceanography and Marine Research (NIOMR), Nigerian Maritime Administration and Safety Agency (NIMASA), the Nigerian Conservation Foundation (NCF) as well as the Nigerian Environmental Society and others should provide the backbone for the establishment and management of the freshwater/marine protected areas.

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About HOMEF

HOMEF is an ecological think tank and an advocacy organization promoting environmental/climate justice and food sovereignty in Nigeria and Africa.

Our main thrust is examining the roots of exploitation of resources, peoples and nations. We nurture movements for the recovery of memory, dignity and harmonious living with Mother Earth.

HOMEF believes in the rights of Mother Earth, the need to equip communities to push back oppression and the need for justice for the environment, our food systems and natural cycles at every level of policy engagement.

HOMEF believes in contextual solutions over externally generated and imposed ideas and is firmly rooted in the ideals of solidarity and dignity.

Our Core Values: justice& equity in all circumstances, people and the planet in harmony and free from exploitation, dignity (respect), action (solidarity), and knowledge.

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