A CRITICAL ANALYSIS OF THE CAUSES AND EFFECTS OF ENVIRONMENTAL DEGRADATION: EVALUATING THE STRATEGIC WAYS OF MANAGING NATURAL RESOURCES IN AKWA IBOM STATE.

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Abstract

This study critically analyses the primary causes of environmental degradation, including deforestation, pollution, industrialisation, overpopulation, and climate change. The study explores the prevalence in tropical regions and urban areas of how these activities disrupt ecosystems, contribute to climate change, diminish biodiversity, and jeopardise human health and livelihoods. Furthermore, it evaluates the effect of environmental degradation on natural resources, particularly in developing regions that rely heavily on natural resources for survival. In addressing these issues, the study highlights the strategic ways to mitigate the adverse effects of environmental degradation. Approaches such as integrated resource management, sustainable practices, engagement of local communities, and collaborative partnerships are examined. In carrying out the study the descriptive survey design was adopted. The study was carried out in Akwa Ibom State and the targeted population for the study comprised Environmental Scientist in Akwa Ibom State. A stratified sampling technique was used to select 15 Environmental Scientist from each of the 4 local government areas of the three senatorial districts each and it gave a which gave a total of 180 respondents used for the study. The instrument used for data collection was an Environmental Degradation Questionnaire (EDQ). Face and content validation of the instrument was carried out by an expert in test, measurement, and evaluation in order to ensure that the instrument has the accuracy, appropriateness, and completeness for the study under consideration. The reliability coefficient obtained was 0.78, and this was high enough to justify the use of the instrument. The researcher subjected the data generated for this study to appropriate statistical technique such descriptive statistics to answer research questions. It was observed that climate change was the highest cause of environmental degradation, while pollution was the least. The results also proved that "Habitat destruction and ecosystem services" was the highest effects of environmental degradation on natural resources, while "Resource Stress" was the least. Finally, it was observed that "The establishment of collaborative partnerships" was the highest strategic way of managing the affected environmental degradation, while "The establishment of strong regulatory frameworks" was the least. The study concluded that effective strategies are essential to mitigate degradation and ensure ecological sustainability, balancing economic development with the long-term health of ecosystems. One of the recommendations provided was that governments and industries should adopt sustainable resource management practices that focus on the conservation of natural resources which include implementing policies that promote responsible forestry, efficient water use, and sustainable agricultural practices.

Keyword: Environmental Degradation, Causes, Effects, Strategic and Natural Resources

Introduction

Because of its extensive consequences for both ecological sustainability and human well-being, environmental degradation has gained the attention of academics, environmentalists, and governments worldwide. Environmental degradation, which is characterised as the loss of biodiversity, pollution, habitat destruction, and natural resource depletion, poses serious threats to ecosystems and populations around the globe. According to Pradip (2020), this phenomenon is driven by a complex interplay of human activities and natural factors, leading to severe consequences such as climate change, soil erosion, deforestation, and water scarcity. The rapid increase in industrial activities and urbanisation has further exacerbated these effects, leading to the need for urgent and effective interventions.

Anthropogenic and natural factors are among the many causes of environmental deterioration. Ecosystem deterioration is accelerated by human activities including mining, overfishing, deforestation, and industrial pollution. The unsustainable exploitation of natural resources is a result of the expanding need for energy, raw materials, and land to support economic expansion. For instance, Wang and Qiu (2017) and Bodo, Gimah, and Seomoni (2021) argue that deforestation for agricultural expansion and urban development significantly contributes to biodiversity loss and soil degradation, particularly in developing countries. Furthermore, the excessive use of fossil fuels in transportation and industries has increased the concentration of greenhouse gases in the atmosphere, resulting in global warming and climate change.

The effects of environmental degradation are far-reaching, impacting not only the environment but also the social and economic structures of societies. One of the most evident consequences is climate change, which has led to extreme weather conditions such as droughts,

floods, and hurricanes (Bolan, 2023). These events have disrupted agricultural productivity, causing food insecurity and exacerbating poverty, particularly in vulnerable regions. Furthermore, because of pollution and the spread of illness, environmental deterioration has resulted in community relocation, loss of livelihoods, and increased health concerns. Further endangering human life is the capacity of ecosystems to offer basic services like clean water, air, and fertile soil, which is compromised by environmental deterioration.

A strategic approach to managing natural resources is desperately needed, given the dire consequences of environmental degradation. Sustainable resource management is a set of practices that minimise environmental impacts while ensuring the long-term availability of natural resources. Examples of such practices include the adoption of policies that encourage the preservation of forests, the wise use of water, and the reduction of waste and emissions. According to Paraschiv and Paraschiv (2023), adopting a circular economy model, which focusses on recycling, reusing, and reducing resource consumption, is one effective strategy for managing natural resources. Moreover, investing in renewable energy sources such as solar, wind, and hydroelectric power can reduce dependence on fossil fuels and limit environmental degradation.

Community-based natural resource management techniques are becoming more and more recognised as successful methods of halting environmental deterioration, in addition to technology and legislative measures. Local communities are empowered to take charge of resource conservation initiatives through the involvement of these techniques in the decision-making process. Resource management needs to take a multifaceted strategy since the causes and consequences of environmental deterioration are intricately linked. Strategic measures balancing ecological sustainability and economic development are important as long as human activity persists in straining the environment. Incorporating sustainable resource management techniques,

together with community engagement and technology advancements, may effectively reduce the adverse effects of environmental deterioration and guarantee the enduring well-being of ecosystems and communities. Thus, in order to create solutions that effectively address environmental concerns, a rigorous understanding of these aspects is necessary.

Concept of environmental degradation

The process of the natural environment being jeopardised, which can lower biological variety and environmental health, is known as environmental degradation. Both human activity and natural processes may be to blame. The demise of humankind might result from irreversible environmental degradation. Bentley (2022) explained that environmental degradation occurs when ecosystems are destroyed, wildlife is wiped out, and natural resources like air, water, and soil are depleted. This concept encompasses any environmental change or disturbance that is seen as harmful or undesirable.

The term "environmental degradation" refers to the deterioration of the environment caused by pollution, ecosystem collapse, species extinction, habitat loss, and the depletion of resources including soil, water, and air quality. It is described as any alteration or disruption to the surroundings that is seen to be harmful or unfavourable. Environmental problems have long-lasting effects on the environment, and the process of environmental degradation magnifies these effects. Choudhary, Chauhan, & Kushwah (2015) asserted that environmental degradation is an umbrella concept that covers a variety of issues, including pollution, biodiversity loss & animal extinction, deforestation & desertification, global warming, and a lot more. Environmental degradation is the deterioration of the environment through the depletion of resources such as air, water, and soil; the destruction of ecosystems; and the extinction of wildlife.

Depletion of resources causes the environment to deteriorate; this includes all of the biotic and abiotic elements that make up our surroundings, such as soil, water, air, plants, and animals, as well as all other living and non-living components of Earth. This process is known as environmental degradation. Degradation of the environment is a serious problem that impacts everyone. Its causes might range from natural calamities to human activity, and its consequences can be disastrous. The degradation of the environment can take many various forms, ranging from pollution and ecological destruction to the depletion of freshwater supplies and arable land. Environmental degradation is brought on by erosion and a decline in the quality of the natural environment.

Concept of natural resources

Products of biological, ecological, or geological processes that meet human needs are referred to as natural resources. They may be characterised as the earth's useful raw resources and energy sources for mankind. Examples that are frequently used are metals, soil, sand, and fuel. Natural resources are an essential component of the earth, existing apart from human activity and being essential to the continuation of life as we know it. According to Cena (2023), natural resources are resources that occur on earth and are formed solely through natural processes with no human intervention required. They refer to materials that occur naturally and have the potential to be utilised under various technological, economic, or social contexts, encompassing a wide range of supplies drawn from the earth, including essential necessities such as food, building materials, clothing materials, fertilisers, metals, water, and geothermal power.

Biological, mineral, energy, water, and land resources are the main categories of natural resources. Each of these resources has distinct qualities including economic value, scarcity, natural

origin, and renewability. For food, housing, and other necessities, biological resources include fisheries, forests, and wildlife. Mineral resources are utilised for energy, building, and other uses. They comprise metals, minerals, and fossil fuels. Solar, wind, and hydropower are examples of energy resources that are utilised to power buildings, businesses, and automobiles. The drinking water, irrigation, and other necessary services that rivers, lakes, and seas offer are all provided by water resources. The soil, topography, and landscape elements that sustain ecosystems and human settlements are examples of land resources. Rafferty (2024) defined natural resource as any biological, mineral, or aesthetic asset afforded by nature without human intervention that can be used for some form of benefit, whether material (economic) or immaterial.

Natural resources are essential for human well-being, economic development, and environmental sustainability. They provide the fundamental elements necessary for human survival, including food, water, shelter, and energy. However, the continuous use of natural resources can lead to their depletion and degradation. Therefore, sustainable management and conservation of natural resources are crucial for ensuring their availability for future generations.

Prevalence of environmental degradation

The rate at which environmental degradation is occurring is especially concerning—roughly 40% of the world's land surface is presently degraded. The state of affairs has a major effect on water pollution, air pollution, and deforestation. The following lists the frequency of environmental deterioration:

- **Deforestation in Tropical Regions**

The widespread prevalence of deforestation, particularly in tropical rainforests, significantly contributed to environmental degradation during this period. Curtis (2018) reported that between

2001 and 2017, tropical forest loss increased by 65%, mainly due to agricultural expansion, illegal logging, and infrastructure development. This deforestation contributed to biodiversity loss and increased carbon emissions.

- **Air pollution in urban areas**

Air pollution remained a critical issue in many developing countries. Over 90% of the global population was living in areas where air quality levels exceeded the limits, mainly due to industrial emissions and vehicle exhaust. This prevalence led to millions of premature deaths annually from respiratory diseases.

- **Water Pollution and Scarcity**

Water pollution continued to rise globally, particularly in regions where untreated wastewater from industries and agriculture was discharged into rivers and lakes. Mekonnen and Hoekstra (2016) highlighted that about four billion people, roughly two-thirds of the global population, experienced severe water scarcity for at least one month each year. Contaminated water sources and over-extraction of freshwater exacerbated this issue.

- **Soil Degradation and Desertification**

Soil degradation, primarily driven by unsustainable farming practices, deforestation, and overgrazing, was prevalent in many regions. Over 33% of the world's land surface was moderately to highly degraded, affecting food production and leading to increased desertification, particularly in Africa and Asia.

- **Ocean Acidification and Marine Pollution**

Ocean acidification and plastic pollution became growing concerns. Ocean acidification caused by CO_2 emissions was having detrimental effects on marine biodiversity, particularly in coral reefs. Jambeck (2018) noted the increasing presence of plastic waste in oceans, threatening marine ecosystems and wildlife.

Causes of environmental degradation

The term "environmental degradation" describes how the natural environment deteriorates as a result of pollution, ecosystem collapse, and resource depletion. The climate, biodiversity, and human health are all significantly impacted by this occurrence. Creating effective mitigation methods for environmental deterioration requires an understanding of its causes. The following are some of the main reasons why the environment deteriorates:

- **Industrialisation:** Industrialisation often leads to environmental degradation through resource extraction, pollution, and habitat destruction. The demand for raw materials and energy drives industries to exploit natural resources unsustainably, contributing to ecosystem collapse and biodiversity loss
- **Agricultural Expansion:** The expansion of agriculture, particularly through monoculture practices, leads to soil degradation, loss of biodiversity, and increased pesticide use. This practice not only depletes soil nutrients but also contributes to water pollution through runoff.
- **Deforestation:** Deforestation is a major driver of environmental degradation, often resulting from agricultural expansion, logging, and urbanization. The removal of trees disrupts ecosystems, reduces biodiversity, and contributes to climate change by increasing carbon dioxide levels in the atmosphere.

- **Pollution:** Pollution from industrial, agricultural, and urban sources leads to the contamination of air, water, and soil. Industrial emissions, plastic waste, and pesticide runoff significantly harm ecosystems and human health, resulting in reduced quality of life and biodiversity loss.
- **Climate Change:** Climate change, driven by greenhouse gas emissions from fossil fuel combustion, deforestation, and industrial processes, leads to altered weather patterns, increased frequency of extreme weather events, and habitat disruption. These changes threaten species survival and disrupt ecological balance (IPCC, 2021).
- **Overpopulation:** The rapid increase in global population intensifies pressure on natural resources, leading to overconsumption and waste generation. Increased demand for food, water, and energy results in habitat destruction, resource depletion, and higher pollution levels.

Effect of environmental degradation

The earth, human health, and economical situations are all profoundly impacted by environmental deterioration. Ecosystems, biodiversity, and all living things' quality of life are all impacted by this deterioration. Developing successful mitigation solutions requires an understanding of the repercussions. The following are the results of environmental deterioration:

- **Biodiversity Loss:** Environmental degradation significantly contributes to the loss of biodiversity. Habitat destruction, pollution, and climate change disrupt ecosystems and lead to the extinction of numerous species. The loss of biodiversity compromises ecosystem functions and resilience, which are vital for human survival.

- **Soil Degradation:** Agricultural expansion and deforestation result in soil degradation, which affects soil fertility and productivity. This degradation leads to reduced agricultural yields and threatens food security. Soil erosion also contributes to sedimentation in waterways, negatively impacting aquatic ecosystems (Montgomery, 2019).
- **Water Scarcity and Pollution:** Environmental degradation leads to the contamination of water sources through agricultural runoff, industrial discharges, and urban waste. This pollution affects drinking water quality and aquatic life, leading to water scarcity in many regions. Access to clean water is vital for human health and development.
- **Human Health Risks:** Environmental degradation poses significant risks to human health. Air pollution from industrial activities and deforestation contributes to respiratory diseases, cardiovascular problems, and premature death. Additionally, contaminated water and food sources increase the risk of diseases (World Health Organisation, 2021).
- **Economic Impacts:** The economic consequences of environmental degradation are substantial. Loss of biodiversity and ecosystem services can lead to reduced agricultural productivity and increased costs for water treatment and healthcare. These economic strains disproportionately affect vulnerable communities, exacerbating poverty and inequality (Barbier, 2019).

Effect of environmental degradation on natural resources

Natural resource availability is greatly impacted by environmental deterioration, which also poses a danger to human civilisations and ecosystems. The ability of ecosystems to deliver vital functions is threatened by this deterioration, which is typified by the loss of habitat, pollution, socioeconomic ramifications, and resource depletion. The main consequences of environmental deterioration on natural resources are listed below:

- **Habitat destruction and ecosystem services**

Habitat destruction, driven by urbanisation, deforestation, and industrialisation, significantly impacts the availability and quality of natural resources. The United Nations (2023) reported that habitat loss is one of the leading causes of biodiversity decline, which in turn disrupts ecosystem services that are vital for human survival. Healthy ecosystems provide services such as clean water filtration, pollination of crops, and climate regulation that are essential for sustainable development.

- **Socioeconomic Implications and Inequality**

The effects of environmental degradation on natural resources also have significant socioeconomic implications, particularly for vulnerable communities. The United Nations Environment Programme (UNEP, 2019) highlights that environmental degradation disproportionately affects marginalised populations, who often rely directly on natural resources for their livelihoods. As resources become scarcer due to degradation, competition intensifies, leading to conflict and social instability. Furthermore, the economic costs associated with resource depletion and degradation can hinder development efforts, perpetuating cycles of poverty and inequality.

- **Resource Stress**

As ecosystems struggle to adapt to these changes, the resilience of natural resources diminishes, leading to increased competition for dwindling supplies. The interaction between climate change and environmental degradation creates a feedback loop that further threatens the sustainability of natural resources, making it essential to address both challenges simultaneously.

- **Air Pollution and Health Impacts**

Environmental degradation through air pollution has severe consequences for both natural resources and human health. The Global Burden of Disease Study (2022) estimated that air pollution contributes to millions of premature deaths each year, highlighting its significant health implications. Polluted air can lead to respiratory diseases, cardiovascular problems, and other health issues, placing a burden on healthcare systems. Moreover, air quality directly affects ecosystems, as pollutants can harm plant life and reduce agricultural yields.

- **Soil Degradation and Food Security**

Soil degradation is another significant consequence of environmental degradation, impacting food production and agricultural sustainability. The United Nations Convention to Combat Desertification (UNCCD, 2023) reported that approximately 40% of the world's land is degraded, primarily due to unsustainable farming practices, deforestation, and urbanization. Soil erosion, nutrient depletion, and contamination reduce the land's capacity to produce food, threatening global food security. This decline in soil health has direct implications for crop yields, livelihoods, and the overall stability of food systems.

Natural resources affected by environmental degradation

Long-term ecological harm results from the substantial impact that environmental deterioration has on different natural resources. The natural resources impacted by environmental deterioration are summarised as follows:

- **Air Quality:** Air, as a natural resource, is negatively affected by industrial emissions, vehicle exhaust, and the burning of fossil fuels. Lelieveld (2019) emphasises that air pollution contributes to climate change and public health crises, including respiratory

illnesses and premature deaths. Deterioration of air quality also affects ecosystems by disrupting photosynthesis and harming wildlife.

- **Oceans and Marine Life:** Oceans, which provide food, regulate climate, and support marine ecosystems, are being degraded due to pollution, overfishing, and acidification. Gattuso (2015) explained that carbon emissions have led to increased ocean acidification, affecting marine biodiversity and food chains. Plastic waste and chemical pollution are additional threats, causing harm to marine organisms and habitats.
- **Fossil Fuels:** While fossil fuels are a non-renewable resource, their extraction and use have significant environmental consequences. Oil drilling, coal mining, and natural gas extraction contribute to habitat destruction, water contamination, and air pollution. Furthermore, burning fossil fuels is a major source of greenhouse gas emissions, accelerating climate change.
- **Wildlife and Habitats:** Wildlife populations and their habitats are being degraded through human activities like deforestation, pollution, and land conversion for agriculture and urban development.
- **Soil:** Soil degradation, including erosion, desertification, and loss of fertility, results from deforestation, overgrazing, and poor agricultural practices. According to Montanarella (2016), degraded soils lose their ability to support crops, affecting food security and reducing agricultural productivity. This also leads to increased carbon emissions as degraded soils release stored carbon into the atmosphere.
- **Biodiversity:** biodiversity, the variety of life in ecosystems, is severely threatened by environmental degradation. Habitat destruction, pollution, climate change, and the introduction of invasive species are driving many species toward extinction. Loss of

biodiversity reduces ecosystem resilience, impacting services such as pollination, water purification, and carbon sequestration.

Strategic ways of managing the affected environmental degradation

Controlling environmental deterioration is a crucial task that necessitates thoughtful measures suited to particular ecological settings. First things first, effective management should;

Integrated resource management, which emphasises a holistic approach to balancing ecological health with human needs. Stakeholders may develop sustainable practices that improve ecosystem services, such clean air and water, by viewing land, water, and biodiversity as interrelated systems. This strategy not only tackles current environmental issues but also fosters long-term resistance to habitat loss and climate change.

The establishment of strong regulatory frameworks is essential. Governments can implement and enforce robust environmental laws that govern pollution control, land use, and resource extraction. For instance, zoning regulations can restrict industrial activities in ecologically sensitive areas, reducing habitat destruction and maintaining biodiversity. Additionally, regulatory measures should be supported by regular assessments to ensure compliance and adapt to changing environmental conditions, reinforcing a culture of accountability (EPA, 2020).

Sustainable practices are another cornerstone of effective environmental management. Transitioning to sustainable agriculture, for example, can mitigate soil degradation and chemical runoff. Techniques such as crop rotation, agroforestry, and organic farming not only enhance soil health but also improve food security. Investing in renewable energy sources, including solar, wind, and geothermal, simultaneously lessens greenhouse gas emissions and dependence on fossil

fuels. Communities can profit economically and promote environmental health by endorsing these activities.

Engaging local communities is vital for the success of any environmental strategy. Empowering residents to participate in decision-making fosters a sense of ownership and responsibility towards their environment. Educational initiatives can raise awareness about environmental issues, equipping communities with the knowledge to adopt sustainable practices. Because local communities are more rooted in the needs and reality of the area, conservation measures, like planting trees or protecting animals, frequently have more effective and long-lasting results.

The establishment of collaborative partnerships enhances the effectiveness of environmental management strategies. Public-private partnerships can facilitate the development of innovative, eco-friendly technologies, while international cooperation is crucial for addressing trans boundary issues like climate change. Moreover, economic incentives, such as green financing and tax breaks for sustainable practices, can motivate businesses to adopt environmentally friendly operations. By using collaboration and incentives, a more comprehensive and effective strategy to addressing environmental deterioration may be accomplished, ensuring a sustainable future for both people and the earth.

METHODOLOGY

In carrying out the study the descriptive survey design was adopted. The study was carried out in Akwa Ibom State and the targeted population for the study comprised Environmental Scientist in Akwa Ibom State. A stratified sampling technique was used to select 15 Environmental Scientist from each of the 4 local government areas of the three senatorial districts each and it gave a which

gave a total of 180 respondents used for the study. The instrument used for data collection was an Environmental Degradation Questionnaire (EDQ). Face and content validation of the instrument was carried out by an expert in test, measurement, and evaluation in order to ensure that the instrument has the accuracy, appropriateness, and completeness for the study under consideration. The reliability coefficient obtained was 0.78, and this was high enough to justify the use of the instrument. The researcher subjected the data generated for this study to appropriate statistical technique such descriptive statistics to answer research questions.

RESULTS AND DISCUSSIONS

Research Question 1

The research question sought to find out the causes of environmental degradation in Akwa Ibom State. To answer the research question, percentage analysis was performed on the data, (see table 1).

Table 1
Percentage analysis of the causes of environmental degradation in Akwa Ibom State.

CAUSES	FREQUENCY	PERCENTAGE
Industrialization	57	12.08
Agricultural Expansion	45	9.53
Deforestation	114	24.15
Pollution	29	6.14*
Climate Change	148	31.36**
Overpopulation	79	16.74
TOTAL	472	100%

** The highest percentage frequency
* The least percentage frequency

SOURCE: Field survey

The above table 1 presents the causes of environmental degradation in Akwa Ibom State. From the result of the data analysis, it was observed that climate change 148(31.36) was rated the highest cause of environmental degradation, while pollution 29(6.14) was rated the least. The result therefore is in agreement with the research findings of IPCC (2021), which noted that these changes threaten species survival and disrupt ecological balance.

Research Question 2

The research question sought to find out the effect of environmental degradation on natural resources. To answer the research question, percentage analysis was performed on the data, (see table 2).

Table 2

Percentage analysis of the effect of environmental degradation on natural resources.

Effect of environmental degradation	FREQUENCY	PERCENTAGE
Habitat destruction and ecosystem services	102	28.57**
Socioeconomic Implications and Inequality	85	23.81
Resource Stress	23	6.44*
Air Pollution	41	11.49
Food scarcity	57	15.97
Health Impacts	49	13.73
TOTAL	357	100%

****** **The highest percentage frequency**
***** **The least percentage frequency**

SOURCE: Field survey

The above table 2 presents the effect of environmental degradation on natural resources. From the result of the data analysis, it was observed that "Habitat destruction and ecosystem services" 102(28.57) was rated the highest effects of environmental degradation on natural resources, while "Resource Stress" 23(6.44) was rated the least effects. The result therefore is in agreement with the research findings of Montgomery, (2019) that noted that Soil erosion also contributes to sedimentation in waterways, negatively impacting aquatic ecosystems and Barbier, (2019) who also noted that Economic strains disproportionately affect vulnerable communities, exacerbating poverty and inequality.

Research Question 3

The research question sought to find out the Strategic ways of managing the affected environmental degradation. To answer the research question, percentage analysis was performed on the data, (see table 3).

Table 3

Percentage analysis of the Strategic ways of managing the affected environmental degradation.

STRATEGIES	FREQUENCY	PERCENTAGE
The establishment of strong regulatory frameworks	69	13.69*
Sustainable practices	127	25.19
Engaging local communities	143	28.37
The establishment of collaborative partnerships	165	32.74**
TOTAL	504	100

****** **The highest percentage frequency**
***** **The least percentage frequency**

SOURCE: Field survey

The above table 3 presents the Strategic ways of managing the affected environmental degradation. From the result of the data analysis, it was observed that "The establishment of collaborative partnerships" 165(32.74) was rated the highest strategic way of managing the affected environmental degradation, while "The establishment of strong regulatory frameworks" 69 (13.69) was rated the least. The result therefore is in agreement with the research findings of EPA, (2020) that states that regulatory measures should be supported by regular assessments to ensure compliance and adapt to changing environmental conditions, reinforcing a culture of accountability.

Conclusion

Environmental degradation, driven by human activities like deforestation, pollution, and unsustainable resource use, poses serious risks to ecosystems and human well-being. It exacerbates climate change, biodiversity loss, and resource depletion, leading to dire social and economic consequences. Addressing this issue requires sustainable resource management, such as adopting

circular economy practices and renewable energy. Community-based approaches integrating indigenous knowledge are also key in conservation efforts. Effective strategies are essential to mitigate degradation and ensure ecological sustainability, balancing economic development with the long-term health of ecosystems.

Recommendation

1. Governments and industries should adopt sustainable resource management practices that focus on the conservation of natural resources. This can include implementing policies that promote responsible forestry, efficient water use, and sustainable agricultural practices.
2. Public education campaigns should be intensified to raise awareness about the causes and impacts of environmental degradation. Schools, communities, and media platforms should focus on teaching the importance of environmental conservation and sustainable living.
3. Local communities should be involved in natural resource management through community-based conservation programs. By integrating indigenous knowledge and practices, governments and environmental organisations can develop strategies that are both culturally appropriate and ecologically sustainable.

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