

Environmental Education for Humanization: A Quest to Reconcile Farmers with Nature and Promote Environmental Sustainability in Nigeria

Journal of Humanity and Social Justice.
Volume 8 Issue 1, 2026. 23-38
Journal Homepage:
<http://ojs.isjn.or.id/index.php/journalhsj>
e-ISSN: 2657-148X

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ARTICLE INFO

Keywords: *Environmental Education; Humanization; Agroecology; Environmental Sustainability; Farmer Field School*

How to cite:

Okorie, C. U., & Ijeoma, E. J. (2026). Environmental Education for Humanization: A Quest to Reconcile Farmers with Nature and Promote Environmental Sustainability in Nigeria. *Journal of Humanity and Social Justice*, 8(1), 23-38.

DOI:

<https://doi.org/10.38026/jhsj.v8i1.81>

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ABSTRACT

Traditional farming practices in Ebonyi State, which include deforestation for land expansion, slash and burn, and overuse of chemical inputs, contribute to the depletion of soil resources and undermine long-term environmental sustainability. One of the main factors behind these unsustainable practices is the growing disconnection between humans and the natural world, because farmers place profit before the man-nature relationship. The detachment has left a void in the ways that rural farmers engage with and view their surroundings and has also weakened the sense of stewardship that was formerly ingrained in rural farming communities. Thus, there is an urgent need for a paradigm shift in contemporary farming practices through an educational process that will reorient farmers on the need to change their present actions on the environment. This paper explained how environmental education can help rural farmers in Ebonyi State become more humane and adopt sustainable farming methods through the adoption of agroecology as an alternative farming approach that can preserve soil health, secure future food supply, support farmers' livelihoods, and combat the adverse effects of climate change. This environmental education programme for farmers has to be provided to farmers through a farmer field school.

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1. INTRODUCTION

Environmental problems are becoming more and more pressing, with effects being seen almost everywhere in the world. A few signs of the ecological catastrophe we are facing are the current rising global temperatures, melting ice caps, deforestation, and dangerously high pollution levels. The sustainability of human and biological systems is seriously threatened by a number of issues, including pollution, resource depletion, climate change, and biodiversity loss. In addition to endangering the equilibrium of our ecosystems, these problems could have serious repercussions on the welfare and standard of living of both the living and the dead. The loss of biodiversity raises increasingly serious concerns since it shows how invasive species, pollution, overexploitation, and habitat destruction are accelerating the rate of extinction, endangering both human health and ecosystems. Wide-ranging effects on ecosystem processes may result from species extinction and altered ecological interactions. Approximately one million plant and animal species are currently under threat of extinction, many within a few decades, according to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019). Global Assessment Report on Biodiversity and Ecosystem Services (IPBES, 2019). In addition to upsetting ecosystems, this loss of biodiversity lowers the provision of ecosystem services such as clean water, air, and rich soil that are essential to human survival.

Climate change is the primary cause of the majority of environmental problems that world is currently facing. The Intergovernmental Panel on Climate Change (IPCC, 2018) noted that during the industrial revolution, there has been an acceleration in the rise in global temperatures, with the last few decades seeing the most of these changes. Sea level rise and ocean acidification are two of the cascade impacts of this temperature rise, together with increasingly frequent and severe weather events, including floods, droughts, and wildfires (IPCC, 2018). Ecosystems, food security, human health, and livelihoods are all at risk from these changes, especially in low-income areas where vulnerable groups reside. The IPCC (2001) noted that "although climate change is a global phenomenon, its negative impacts are more severely felt by poor people and poor countries. The adverse effects of climate change are already evident; natural disasters are more frequent and more devastating, and developing countries are more vulnerable." Their increased reliance on natural resources and their poor ability to adapt to climatic extremes and variability make them increasingly susceptible. The burning of fossil fuels, deforestation, and industrial processes are among the human activities that have contributed to the buildup of greenhouse gases in the atmosphere, which is what causes global warming. According to the Intergovernmental Panel on climatic Change (IPCC) in Okorie (2023), human activity is and will continue to impact our climatic system. Since surface temperatures have risen over the past century, there has been a growing awareness of the effects this has had on biological and physical systems. According to Chidumayo et al. (2011), the poor and vulnerable groups that rely on ecosystem services for survival and a means of subsistence are the ones most impacted by the effects of climate change. They also emphasised the mounting evidence that climate change is having an impact on Africa's forests and forest ecosystems, as well as the national economic activities that depend on vegetation services and the livelihoods of communities that depend on

forests. There is an urgent need for a change in how cultures perceive and engage with the environment, as evidence of these changes in the environment grows.

The growing population in Nigeria has led to a greater demand for farmers' produce, particularly rice, cassava (garri), yams, and vegetables in Ebonyi State. As a result, farmers are placing more pressure on natural resources, such as land and forests, which has widened the gap between humans and nature and put the environment and farming communities' livelihoods at risk. Farmers in Ebonyi State who rely primarily on the land and its resources for their livelihoods suffer more from the effects of environmental deterioration. Farmers' actions on the environment through their traditional farming practices, such as deforestation for land expansion, slash and burn, and overuse of chemical inputs, contribute to the depletion of soil and undermine long-term environmental sustainability. The growing disconnection between humans and the natural world is one of the main factors behind these unsustainable practices. The transition to more intensive, contemporary farming practices from more traditional, environmentally friendly ones has left a void in the ways that rural farmers engage with and view their surroundings. This detachment weakens the sense of stewardship that was formerly ingrained in rural farming communities, in addition to causing harm to the environment. Farmers fail to understand that bush burning, excessive fertilizer application, continual use of herbicides, and so forth kill plants and other microorganisms that are essential to human survival and the ecosystem's ability to support itself.

Environmental deterioration has been greatly exacerbated by this disconnection between humans and the natural environment, especially in rural farming communities. Farmers in these areas face an even greater difficulty of human-nature disconnections since they have little access to environmental education, which leaves them unprepared to deal with the long-term environmental effects of their actions. If action is not taken, this rising gap will endanger not just the community members' environmental health but also the sustainability of farming practices. Despite having a certain degree of cultural environmental literacy, farmers in Ebonyi State continue to engage in practices that negatively impact the ecosystem because they have little access to environmental education, especially in rural areas where there is a dearth of knowledge about sustainable farming methods. The majority of farmers are not exposed to training or program that highlight the value of the interaction between humans and nature, environmental sustainability, and the long-term advantages it offers to both the environment and their means of subsistence. Therefore, the quality of life in these rural communities and agricultural output are still at risk due to environmental degradation. The ramifications of unsustainable practices on our planet are becoming more and more apparent, making it imperative that future generations be prepared to tackle these issues. Environmental education is a key component of this transformation, as it can encourage increased awareness, responsibility, and action towards reducing environmental degradation. By promoting awareness, fostering a sense of responsibility, and encouraging sustainable practices, environmental education plays a crucial role in shaping a more environmentally conscious and resilient society. It equips people with the knowledge, skills, and attitudes needed to comprehend and address these challenges. The key to

taking action on climate change is education. Therefore, it is essential to educate rural farmers in Ebonyi State about the environment to increase their understanding of the value of biodiversity, the significance of conservation, and the necessity of preserving and restoring ecosystems. This will promote Ebonyi rural farmers' deeper knowledge of the interconnectedness between humans and the natural world, and act as a means of reconciling humans (farmers) and nature, and promote environmental sustainability.

2. CONCEPTUAL AND THEORITICAL DISCUSSION

Concept of Environmental Education

Environmental education is a process where people can learn about environmental issues, solve problems, and take action to protect the environment. It is a process meant to raise people's knowledge and comprehension of environmental issues so they may take responsible individual and collective action. In the Tbilisi Declaration, environmental education is defined as a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action, (UNESCO, 2017).

Environmental education in this study is conceptualized from a critical transformative point of view that encourages learners to engage in reflective thinking, question dominant environmental narratives, and actively participate in creating solutions that address both ecological and social injustices. Environmental education, from a critical and transformative perspective, transcends the mere transmission of knowledge about the environment. It is a pedagogical approach that seeks to empower individuals to critically examine the socio-political, economic, and cultural structures contributing to environmental degradation and to transform these structures in pursuit of a more sustainable and just world. This view of environmental education encourages learners to engage in reflective thinking, question dominant environmental narratives, and actively participate in creating solutions that address both ecological and social injustices.

In support of this, Tilbury (2020) asserted that environmental education plays a critical role in fostering a sense of stewardship, where individuals feel a responsibility to act in ways that conserve natural resources for future generations. The key objective of environmental education is to empower individuals to become agents of change by adopting sustainable practices and advocating for policies that promote environmental protection. Accordingly, Ardoin et al. (2013) asserted that the goal of environmental education is to foster an understanding of the interconnections between natural systems and human actions. It emphasizes awareness of environmental issues such as climate change, pollution, deforestation, and biodiversity loss, enabling individuals to make informed decisions. A study of Ardoin et al. (2016) identifies the core outcomes of environmental education to include:

1. Improving social and cultural aspects of the human experiences;

2. Having high-quality, meaningful experience in interaction with the (bio) physical environment;
3. Learning necessary skills and competencies;
4. Undertaking pro-environmental behaviours; and
5. Actions to improve environmental health.

With these core outcomes in mind, Brauset al. (2022) pointed out that the purpose of environmental education is to move people to action for the tangible benefit of the environment and humanity, and to realize these benefits, people must connect experientially with the environment, learn needed skills, and understand the complicated social and cultural connections between humanity and the natural environment. In relation to this core purpose of environmental education, as noted by Ardoin et al. (2016), observed that at the foundational level, environmental education:

1. Provide high-quality, meaningful experience in and interaction with the (bio)physical environment, and
2. Improve social and cultural aspects of the human experience.

Furthermore, Clark, Heimlich, Ardoin, & Braus. (2020) pointed out that building on these two purposes, environmental education provides learners with the opportunity to:

1. Learn necessary skills and competencies;
2. Undertake pro-environmental behaviors (and change behaviors to be more environmentally friendly); and
3. Act to improve and enhance the quality and health of the environment.

Environmental education (EE) is thus an organized effort to teach how natural environments function, and particularly, how human beings can manage behavior and ecosystems to live sustainably. Environmental education is built on principles of environmental sustainability. In view of this, Purvis, Mao & Robinson (2019) averred that we cannot achieve a healthier environment without also focusing on social equity and shared prosperity

Environmental Sustainability

The foundation of environmental education is sustainability, which includes using the power of knowledge to build a more equitable and sustainable future. Since climate change is hurting ecosystems and humanity globally, a growing number of people, groups, and organizations are supporting environmental sustainability and giving it top priority. The term "environmental sustainability" describes the prudent use of natural resources to meet present demands without endangering the capacity of future generations to meet their own. It seeks to strike a balance between ecological, economic, and social objectives, such as lowering carbon emissions, supporting renewable energy sources, and guaranteeing fair access to resources. According to Elliot (2013), environmental sustainability includes actions that support ecological balance and environmental health, such as reducing waste, safeguarding biodiversity,

and preventing the depletion of resources. According to Cardinale et al. (2012) that biodiversity conservation is essential to environmental sustainability. Biodiversity, or the variety of all life forms on Earth, is vital to sustaining the health of ecosystems, and the extinction of a species can upset food chains, lower ecosystem productivity, and erode ecosystem resilience to environmental changes. Díaz et al. (2019) argued that maintaining ecosystems that offer crucial functions like pollination, water filtering, and carbon sequestration requires safeguarding biodiversity through conservation initiatives, habitat protection, and pollution reduction. In order to achieve environmental sustainability, resources must be distributed fairly, and environmental injustices that disproportionately harm vulnerable people must be addressed. Due to their proximity to contaminated places, lack of access to clean water, and restricted participation in resource management decision-making processes, marginalized people frequently bear the burden of environmental degradation (Bullard, 2018). Encouraging environmental justice in the context of sustainability guarantees that everyone, irrespective of socioeconomic background, may enjoy a healthy environment and have the chance to engage in sustainable development (Agyeman & Evans, 2019). Amelia (2024) suggested that environmental sustainability encompasses a wide range of interconnected issues, which include:

1. **Climate Change:** The burning of fossil fuels releases greenhouse gases that trap heat in the atmosphere, causing global temperatures to rise. This has far-reaching consequences, including melting glaciers, rising sea levels, and more extreme weather events.
2. **Biodiversity Loss:** Human activities like deforestation, habitat destruction, and pollution are leading to a rapid decline in plant and animal species. This loss of biodiversity disrupts ecosystems and has a cascading effect on the entire planet.
3. **Water Pollution and Scarcity:** Water is essential for life, but pollution from sources like industrial waste and agricultural runoff is making clean water scarce.
4. **Waste Management:** We generate a vast amount of waste every year, much of which ends up in landfills or leaks into the environment. This waste can take hundreds of years to decompose and pollute our air, water, and so

The primary focus of this study is on the practice of controlling farming methods to satisfy farmers' requirements while maintaining the land's (soil) health. A farmer's most valuable resource is their soil, which, when in good condition, can produce higher yields, improve the environment, and increase resistance to future climate change. Healthy soil is also critical to farming systems since it provides the necessary medium for growing food. In order to maintain or improve water and air quality, support plant and animal health, and function as a vital living system within ecosystem and land use constraints, a soil must be in good health, according to Doran and Zeiss (2000). According to Stevens (2018), the current heavy tillage practices used on agricultural areas put soils at risk of significant loss and degradation on a global scale.

In an effort to feed a growing population, agricultural land has undergone extensive tillage, which has severely harmed the health of the soil. Furthermore, if the

crucial strategy for preserving the health of the soil is not put in place, further harm is certain given the estimated 8.9 billion people that will inhabit the planet by the year 20250. According to Bach and Wall (2018), soil functions are vital for promoting global sustainability since they include vital elements such as food production, climate considerations, water quality, pollution remediation, and habitat for both aboveground and underwater biota. According to Sahu, Vasu, Sahu, Lal & Singh (2017), healthy soil inhibits infections, supports biological activity, breaks down organic matter, inactivates harmful substances, and recycles water, energy, and nutrients. Similarly, inappropriate agricultural practices like soil salinization, acidification, compaction, crusting, nutrient deficiency, decrease in soil biota biodiversity and biomass, water imbalance, and disturbance of elemental cycling lower soil health, according to Jacoby et al. (2017). It kills the microorganisms in the soil that help roots attach to the soil, recycle nutrients, break down organic materials, and react swiftly to changes in the soil ecosystem. These microorganisms also serve as precise markers for particular roles in the soil ecosystem. Crop growth, development, and long-term yields can be supported by a sustainable soil ecological system that is established by the functions of the microbial community and its relationship to the soil and plant. In order to improve or restore soil health and support both environmental sustainability and food security, we must humanize our agricultural practices with environmentally friendly practices.

Humanization of Agricultural Practices for Environmental Sustainability

Conventional farming has been the backbone of our food production for ages, but due to the quest to meet the increasing demand for food by a growing population, we've often turned a blind eye to the environmental degradation caused by conventional agricultural practices. Food and Agricultural Organization (2019), stated that 31% of carbon dioxide emitted into the air came from the way we grow, process, and consume food. Conventional farming practices rely on chemical fertilizers, pesticides, and intensive farming methods, which have jeopardized natural ecosystems and the quality of life for both humans and the ecosystem at large, contributing to environmental degradation, soil erosion, water pollution, and biodiversity loss. The humanization of agricultural practices for environmental sustainability involves rethinking and restructuring farming systems to integrate social, ecological, and economic dimensions, fostering a more holistic approach to food production. This process requires addressing both the environmental impacts of agriculture and the human practices driving these impacts, promoting an ethical relationship between humans and nature. Davis et al. (2013) stated that to stop environmental degradation and increase food accessibility, agricultural production must use ecological principles and innovative management practices that help conserve soil, water, and biodiversity.

Agroecology, according to Iuliano et al. (2021), is well-suited to meet these challenges because of its emphasis on applying ecological principles to understand and design better farming systems, as well as engaging with agriculture's broader human context. In collaboration, Altieri and Nicholls (2020) stated that when agroecological principles are adopted, yield enhancement and stability of production

are achieved, as well as a series of ecological services such as conservation of agrobiodiversity, soil and water conservation and enhancement, improved biological pest control, etc., regardless of scale or farm size. This was further explained in Altieri and Nicholls (2017) that agroecology provides an essential framework for humanizing agriculture by promoting farming systems that respect biodiversity, minimize environmental harm, and empower local communities. The idea of agroecology is to go beyond the use of alternative practices and to develop agroecosystems with minimal dependence on high agrochemical and energy inputs, emphasizing complex agricultural systems in which ecological interactions and synergisms between biological components provide the mechanisms for the systems to sponsor their own soil fertility, productivity, and crop protection (Altieri and Rosset, 1995). The main focus lies on the reduction or elimination of agrochemical inputs through management changes to assure adequate plant nutrition and plant protection through organic nutrient sources and integrated pest management, respectively.

Agroecology is a form of sustainable farming practice. Sustainable farming practices offer a myriad of benefits which include preserving soil health, promoting biodiversity, securing future food supply, combating climate change, and supporting farmers' livelihoods. The importance of sustainable agricultural practices includes preserving soil health due to incorporation of organic matter into the soil, crop rotation and cover crop farming; promoting soil biodiversity; helps in securing future food supply due to the practice focus on long-term productivity rather than just immediate yields; supports farmers' livelihood due to reduction in inputs cost and better farm-gate prices; and sustainable farming combats climate change by playing a pivotal role in sequestering carbon, reducing greenhouse gas emissions, and countering the adverse effects of climate change. FAO (2015) developed a comprehensive framework for sustainable agriculture. This framework outlines the five principles of sustainable agriculture which are to increase productivity, employment, and value addition in food systems; protect and enhance natural resources; improve livelihoods and foster inclusive economic growth; enhance the resilience of people, communities, and ecosystems; and adapt governance to new challenges

1. Increase Productivity, Employment, and Value Addition in Food Systems: This principle recognizes the need to balance the pursuit of increased productivity with the need to protect the environment.
2. Protect and Enhance Natural Resources: These principal counters the intensive use of farm inputs such as water, fertilizers, and pesticides, which are not environmentally friendly
3. Improve livelihoods and foster inclusive economic growth: This principle calls for gender equality and the provision of necessary resources for smallholder farmers who contribute immensely to global food security, yet continue to face significant challenges in accessing land, credit, and markets. FAO thus argues that agriculture can only become sustainable if it provides decent employment conditions to those who practice it in an economically and physically safe and healthy environment.

4. Enhance the Resilience of People, Communities and Ecosystems: This principle argues that we must help farmers build resilience to inherent challenges, to ensure sustainable food production and supply.
5. Adapt governance to new challenges: This principle states that "sustainable production" can only be achieved through a collaborative effort between the public and private sectors in an atmosphere of "accountability, equity, transparency, and the rule of law". While the two sectors often have different priorities and motivations, there should be a "public good dimension" to support stakeholders in the agricultural value chain with the resources needed to thrive.

Nguyen (2023) outlined the key sustainable agriculture practices to include:

1. Crop rotation and diversification that involve growing different types of crops in a sequence on the same land. It breaks pest cycles and increases the soil moisture and fertility. A farmer, after harvesting a nutrient-consuming crop like corn, can plant a nitrogen-fixing legume like beans on is same piece of land to restore the soil's balance.
2. Organic farming: This is a practice of prioritizing natural methods over synthetic inputs.
3. Conservation tillage: This practice technique keeps water retention and soil disturbance to a minimum. It permits crop leftovers, organic materials, and soil nutrients to stay on fields.
4. Agroforestry: Agroforestry, a multifunctional system that combines agriculture, livestock production, and forestry, is the practice of growing trees or bushes around or amid pastureland or crops. Additionally, agroforestry is in line with the EU's deforestation law, guaranteeing that farming aids in forest protection rather than contributing to deforestation.
5. Sustainable livestock farming: This method guarantees the welfare of the animals, lessens the impact on the environment, and produces healthier output by concentrating on the comprehensive management of animal production techniques.
6. Cover cropping: Planting particular crops that aren't meant to be harvested helps control pests, preserve the soil, and enhance fertility.
7. Biological pest control: This method lessens the need for chemical pesticides by using the natural predator and organism systems to control pests.
8. No-till farming: this technique entails planting new crops without tilling the soil, maintaining soil organic matter and structure.
9. Permaculture: An integrated design concept that minimizes waste by simulating natural processes and making sure resources are used in closed-loop systems such as creating a garden design where plants are irrigated with water from a fish pond and the fish are fed by the plant waste
10. Aquaponics: Fish and plants grow together in a single integrated habitat in this sustainable system that combines hydroponics and conventional aquaculture.

11. Agrobiodiversity: This highlights the significance of genetic diversity in animals and plants to guarantee resistance to pests, illnesses, and climate change, such as growing several types of rice to protect against diseases that might eradicate a single strain.
12. Water management: Water conservation and optimal usage are ensured by effective water use and storage techniques.
13. Waste recycling and composting: By converting organic waste into useful compost, this procedure improves soil quality, lowers the demand for artificial fertilizers, and produces the least amount of waste possible.
14. Polyculture: This involves simultaneously growing several crops in one area. This technique optimizes land use, lowers pest problems, and fosters a healthy ecology.

Environmental Education as a Tool for Humanization of Farming Practices Among Rural Farmers in Ebonyi State

The agriculture sector has played an important role in Ebonyi's economy for decades. Farmers in this state are known for the cultivation of rice (popularly called Abakaliki rice), cassava, yams, cocoyam, vegetables, and so on. The shift in importation of foreign rice to Nigeria has increased homegrown rice demand due to the ban on importation of rice expanded rice production in particular. In order to meet the growing demand for Abakaliki rice, farmers adopt different unfriendly environmental farming practices that have harmed the ecosystem. Unfriendly environmental farming practices are not limited to rice farmers; all other crop farmers engage in unfriendly farming practices that are not sustainable. Farming practices are one of the leading causes of environmental degradation. Many farmers adopt techniques that are not environmentally friendly and also not sustainable due to the long-term impacts of such practices on the soil, livelihood, and the health of the farmers. Creating sustainability in rural farming communities involves implementing flexible sustainability principles into their farming practices, embracing eco-friendly techniques, and farmers cultivating a collective mindset focused on the environment.

According to Peterson et al. (2017), healthy agroecosystems require fewer inputs into the land, allowing farmers to conserve natural resources, limit air and water pollution, decrease the use of herbicides and pesticides, and both retain and enrich soil. This, according to Rosa-Schleich et al. (2019), creates a positive feedback loop in which healthy ecosystems support environmentally sustainable farming practices and allow for decreased environmental degradation. Reilly et al. (2022) observed that due to the interdependent nature of healthy agroecosystems and environmental sustainability, individuals and communities that are both environmentally and agriculturally literate are necessary for meaningful change. Farmers need to be agriculturally literate. Agricultural literacy emphasized the interdependence of agricultural (e.g. food security) and environmental (e.g., climate change) issues to protect environmental sustainability, agricultural economies, and community well-being. Agricultural literacy, according to Frick, Kahler, and Miller in Reilly, et al. (2022), is the ability to understand, think critically about, and communicate key concepts surrounding systems of food and fiber production. Adopting and

implementing sustainable farming practices can result in pro-environmental behavior (PEB) among farmers. It is extremely difficult to encourage pro-environmental behavior (PEB) among farmers in rural areas. In the age of globalization, farmers in rural communities must embrace pro-environmental behavior (PEB) in order to increase their eco-friendly endeavors and save the environment. PEB is concerned with the significance of determining and implementing sustainable agricultural methods as well as sustainable solutions to lessen the adverse effects on the environment in rural areas. Developing the PEB among farmers is necessary to achieve a more sustainable future for agriculture.

In Ebonyi State, farmers engage in several unfriendly environmental farming practices, such as applying pesticides and fertilizers, using chemicals such as herbicides (such as atrazine) throughout the entire farming process, and the slash-and-burn farming practice. It is commonly known that excessive chemical use has negative health impacts on applicators, consumers, and field workers, and applicators. There have also been documented negative effects on agro-biodiversity and ecological processes like pollination, soil fertility, and naturally occurring pest suppression. There is a common problem of chemical pollution of groundwater from fertilizers, pesticides, and herbicides seeping into supplies of drinking water. One effective strategy for helping rural farmers humanize their farming methods is agricultural literacy, which is a form of environmental education. It has a big impact on changing farming practices, especially in rural areas where conventional techniques can occasionally worsen the environment. With a humanized approach to farming, agricultural literacy supports sustainable farming practices, raises environmental awareness, and equips farmers with the information and skills necessary for ethical and ecologically acceptable farming activities. This humane strategy ensures long-term sustainability for farmers and the environment by striking a balance between the requirement for agricultural productivity and the preservation of natural ecosystems. Aligning farming methods with sustainable environmental stewardship while upholding the farmers' cultural and social surroundings is known as "humanization in farming practices." Farmers can be given the information they need to make decisions that strike a balance between productivity and environmental preservation by incorporating EE into rural farming systems.

Approach to Humanization of Rural Farming Practices for Environmental Sustainability

Humanization of farming practices is a strategy that aims to redirect agricultural operations toward upholding ecological integrity and human dignity. Instead of concentrating only on productivity, it entails incorporating ethical, social, cultural, and environmental factors into farming systems. The concept stems from the understanding that rural farmers are not just food producers but also environmental stewards, and their actions have a big impact on how long natural resources can be sustained (Altieri, 2018). In Ebonyi state, farmers are still practicing different unfriendly farming practices that are not humanized farming practices; most of their farming practices do not respect ecological integrity. It is worth noting that rural farmers are not just producers of food but also custodians of the environment whose

practices are expected to significantly influence the sustainability of the natural environment. However, to promote this culture of environmental sustainability, rural farmers in Ebonyi State need to adopt humanized farming practices that harmonize agricultural productivity with environmental stewardship and social equity. Farmers are to be exposed to education with critical skills for the sustainability of the environment through participatory training, such as farmers' field school.

Farmers Field School

Farmers' field school is where farmers will be exposed to different environmentally friendly ways of farming. Farmer field schools are an EE program that empowers farmers to create a safer working environment for themselves and their families. It is critical in helping rural farmers understand the broader implications of their farming practices on the environment, by becoming aware of negative health effects and ways to reduce chemical applications (herbicides, pesticides, and fertilizers). Farmers through field school are trained on how to adopt sustainable farming methods such as agroforestry, organic farming, crop rotation, and reduced pesticide use that reduce environmental impact while improving soil health and biodiversity. According to Moglia et al. (2020), farmers who engage in EE are more likely to incorporate sustainable techniques, which leads to improved long-term yields and reduced degradation of ecosystems. This humanization process shifts the focus from short-term gains to long-term ecological and economic sustainability. Murage et al. (2015) emphasized that environmental education programs targeting rural communities increase farmers' knowledge of ecological processes and equip them with the tools to mitigate negative environmental impacts.

Farmers' field school will align farming with environmental ethics, promoting the humanization of agricultural activities which farmers. This participatory farmer field school approach will serve as a capacity-building tool, empowering farmers with the knowledge and skills needed to implement environmentally sound practices. By incorporating education on topics such as climate change, water conservation, and soil management, the farmer field school approach will transform farmers from passive land users into active stewards of the environment. This transformation humanizes farming by acknowledging the complex interdependencies between humans, agriculture, and nature. However, to achieve and maintain a high-quality farmer field schools in Ebonyi State, extension agents and farmers need to be extensively trained as facilitators and train the trainers think tank.

Furthermore, humanized farming places a strong emphasis on inclusive, participatory methods that enable farmers to have a say in decision-making. To develop context-specific solutions, it is necessary to integrate contemporary agricultural advancements with indigenous knowledge, values, and experiences in the farmer field school project. In addition to giving farmers more authority, this integration ensures that farming practices respect regional ecological conditions, thereby reducing degradation and fostering resilience (Pretty, 2020). This is in support of Méndez et al. (2017) view that using crop rotation, agroforestry systems, and organic fertilizers can all help to increase soil fertility, protect water resources, and preserve biodiversity while lowering dependency on dangerous agrochemicals

(Méndez et al., 2017). Also, the ethical treatment of the environment is encouraged by humanized farming. Through the farmer field school approach, farmers will be urged to adopt stewardship values by viewing themselves as co-existing partners with nature, instead of using the land for temporary financial gain. This change in thinking, as observed by Gliessman (2016), encourages farming businesses to employ techniques like conservation tillage, integrated pest management, and renewable energy, all of which lessen their environmental impact while guaranteeing sustained productivity

3. CONCLUSION

In conclusion, to curb the long-term environmental, social, and economic challenges associated with present conventional farming practices in Ebonyi State, farmers are required to be exposed to sustainable farming practices with humanization potentials for environmental sustainability, and one effective strategy for helping rural farmers humanize their farming methods is agricultural literacy, which is a form of environmental education. The approach of promoting this humanized farming practice among rural farmers is engaging farmers through the farmer field school

Lastly, the study suggests that farmers' field schools should be provided to all categories of farmers in Ebonyi State. Second, we also suggest that the environmental education content for farmers should take into cognizance their indigenous farming methods that promote the nature-human relationship.

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