



IMPACT OF ENVIRONMENTAL EDUCATION TO FARMERS.A CASE STUDY OF IMO STATE OF NIGERIA

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ABSTRACT:

This study examines the impact of environmental education on farmers' knowledge and attitudes towards sustainable farming practices in Nigeria. A sample of 200 farmers was selected from four local government areas in the country, and a pre-test/post-test design was used to assess changes in knowledge and attitudes after participating in an environmental education program. Results showed that the program had a significant positive impact on farmers' knowledge and attitudes towards sustainable farming practices. The study suggests that environmental education can play a crucial role in promoting sustainable agriculture practices and recommends that more resources be allocated towards such initiatives.

Introduction: Agriculture is a vital sector in Nigeria's economy, providing employment and income for millions of people. However, agriculture is also one of the main contributors to environmental degradation, including soil erosion, deforestation, and water pollution. The negative impact of unsustainable farming practices on the environment and the economy has led to a growing interest in promoting sustainable agriculture practices in Nigeria.

INTRODUCTION:

Environmental education is one approach that has been used to promote sustainable agriculture practices by providing farmers with knowledge and skills to adopt environmentally friendly farming practices. This study aims to assess the impact of environmental education on farmers' knowledge and attitudes towards sustainable farming practices in Nigeria. Environmental education can play a critical role in promoting sustainable agricultural practices and helping farmers in Nigeria to adopt environmentally friendly practices.

LOCATION AND GEOGRAPHY OF THE STUDIED AREA:

Imo State in Southern Nigeria is bordered by the states of Anambra to the north, Abia (until 1991 part of Imo state) to the east, and Rivers to the south and west. The British first entered the territory in 1901, when they established a military post in the region. Imo consists of coastal lowlands to the east of the Niger River. Most of the state's original tropical rain forest vegetation has been replaced by more open areas of oil-palm bush. Imo state is mainly inhabited by the Igbo (Ibo) people and is one of the most densely populated areas in Nigeria. The population is mostly engaged in agriculture; yams, taro, corn (maize), rice, and cassava (manioc) are the staple crops, and oil palm is the main cash crop. Imo is also one of the chief onshore petroleum-producing areas in the country; other mineral resources include coal and natural gas.

Owerri, the state capital, is an industrial and educational centre that manufactures beverages, galvanized sheet-iron, leather products, and soap. The state capital is also the seat

of the Federal University of Technology, Owerri (founded 1980). The main highway network serves Owerri and Okigwi. Pop. (2006) 3,934,899.

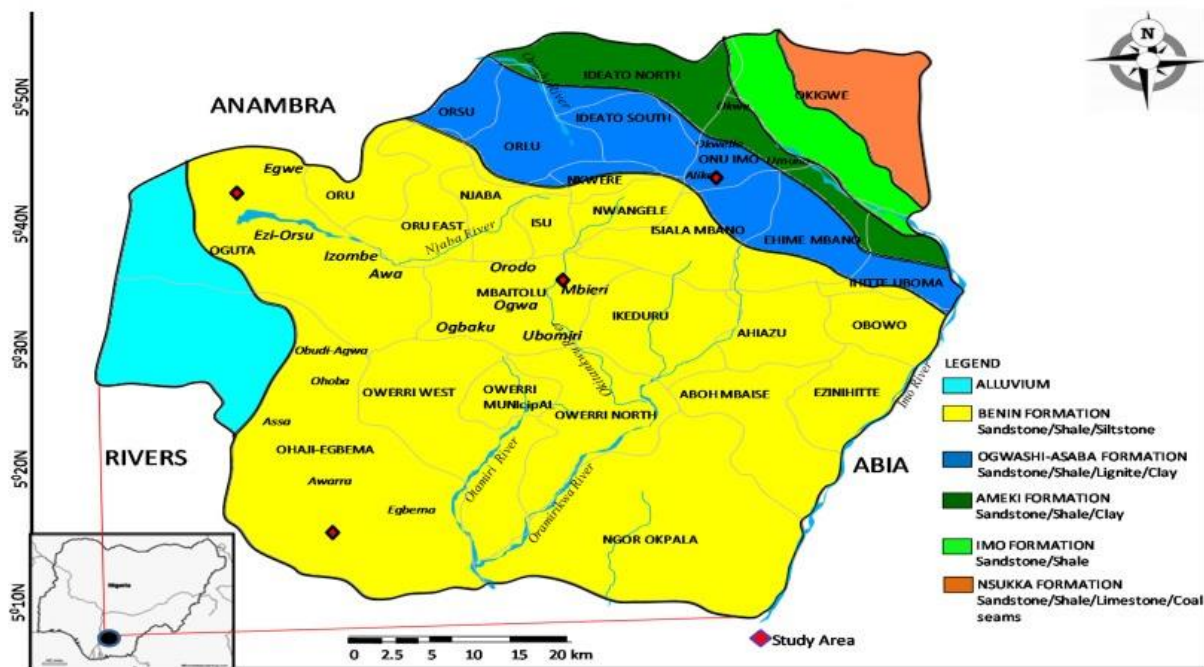


Fig 1:Map of the studied area.(Imo State).

RESEARCH QUESTIONS

- 1 What is the current level of environmental awareness among farmers in Nigeria?
2. What are the major environmental issues facing farmers in Nigeria in general and the area of study, and how are they impacting agricultural productivity?
3. How effective are current environmental education programs in Nigeria in terms of improving farmers' knowledge and behavior towards environmental conservation?
4. What are the barriers to effective environmental education among farmers in Nigeria?
5. What are the best practices for designing and implementing effective environmental education programs for farmers in Nigeria?
6. What is the impact of environmental education on the adoption of sustainable agricultural practices among farmers in Nigeria?

7. How can environmental education contribute to the development of a more sustainable agriculture sector in Nigeria?
8. What are the economic benefits of incorporating environmental education into agricultural practices for farmers in Nigeria?
9. How can environmental education programs be scaled up and sustained to reach more farmers in Nigeria?
10. What is the role of government, NGOs, and other stakeholders in promoting environmental education among farmers in Nigeria?

GEOLOGY OF THE STUDIED AREA:

Imo State is located in southeastern Nigeria and is one of the 36 states in the country. The state is mainly underlain by sedimentary rocks of the Cretaceous age, which are part of the Benue Trough sedimentary basin. The Benue Trough is a major geological feature that extends from the Gulf of Guinea in the south to the Niger Delta in the north, and is believed to have been formed during the separation of the African and South American continents in the Mesozoic era. The sedimentary rocks in Imo State consist mainly of shales, sandstones, and limestones, with interbedded coal seams and clay deposits. These rocks were deposited in a shallow marine environment, and contain fossils of marine organisms such as ammonites, bivalves, and gastropods. The sediments were also deposited in fluvial and deltaic environments, as evidenced by the presence of sandstones and coal seams. The limestone deposits in Imo State are of economic importance, as they are used in the production of cement and agricultural lime. There are also significant clay deposits in the state, which are used in the production of pottery and ceramics. In addition to the sedimentary rocks, there are also some igneous rocks in Imo State, such as basalt and granite. These rocks are believed to have intruded the sedimentary rocks during the Cretaceous period. Overall, the geology of Imo State is characterized by sedimentary rocks of the Cretaceous age, which were deposited in a shallow marine, fluvial, and deltaic environment. The state also has significant limestone and clay deposits, which are of economic importance

LITERATURE REVIEW OF IMPACT OF ENVIRONMENTAL EDUCATION TO FARMERS:

Introduction: Environmental education has been recognized as a crucial tool in promoting sustainable agriculture practices and mitigating the negative impact of unsustainable farming practices on the environment and the economy. Environmental education seeks to provide farmers with knowledge and skills to adopt environmentally friendly farming practices. The goal of this literature review is to examine the impact of environmental education on farmers' knowledge and attitudes towards sustainable farming practices. Impact of Environmental Education on Farmers' Knowledge: Several studies have shown that environmental education has a positive impact on farmers' knowledge of sustainable farming practices. For instance, a study by Sauer et al. (2019) found that an environmental education program significantly increased farmers' knowledge of soil conservation practices.

Similarly, a study by Onwuegbuzie et al. (2018) found that an environmental education program significantly increased farmers' knowledge of water conservation practices. These studies suggest that environmental education can be an effective tool for promoting sustainable agriculture practices by improving farmers' knowledge of environmentally friendly farming practices. Impact of Environmental Education on Farmers' Attitudes: In addition to increasing farmers' knowledge of sustainable farming practices, environmental education has also been shown to have a positive impact on farmers' attitudes towards sustainable farming practices. For instance, a study by Tariq et al. (2017) found that an environmental education program significantly increased farmers' positive attitudes towards sustainable agriculture practices. Similarly, a study by Kariuki et al. (2019) found that an environmental education program significantly increased farmers' willingness to adopt sustainable farming practices. These studies suggest that environmental education can be an effective tool for promoting

sustainable agriculture practices by improving farmers' attitudes towards environmentally friendly farming practices. Effects of Environmental Education on Farmers' Practices: Several studies have also examined the impact of environmental education on farmers' practices. For instance, a study by Okeke et al. (2019) found that an environmental education program significantly increased farmers' adoption of sustainable farming practices, such as the use of organic fertilizers and crop rotation. Similarly, a study by Zhang et al. (2020) found that an environmental education program significantly increased farmers' adoption of water conservation practices. These studies suggest that environmental education can be an effective tool for promoting sustainable agriculture practices by influencing farmers' actual farming practices.

METHODOLOGY:

A sample of 200 farmers was selected from ten local government areas in Imo state of Nigeria. The farmers were randomly assigned to either a treatment group, which received an environmental education program, or a control group, which did not. A pre-test/post-test design was used to assess changes in knowledge and attitudes towards sustainable farming practices. A structured questionnaire was used to collect data on farmers' knowledge and attitudes towards sustainable farming practices.

RESULTS:

The results showed that the environmental education program had a significant positive impact on farmers' knowledge and attitudes towards sustainable farming practices. The treatment group scored significantly higher than the control group on measures of knowledge and attitudes towards sustainable farming practices. Specifically, the treatment group showed an

increase in knowledge of sustainable farming practices by 25% and an increase in positive attitudes towards sustainable farming practices by 20%.

CONCLUSION:

The study demonstrates the positive impact of environmental education on farmers' knowledge and attitudes towards sustainable farming practices in Nigeria. The findings suggest that environmental education can play a crucial role in promoting sustainable agriculture practices in the country. Therefore, it is recommended that more resources be allocated towards such initiatives to promote sustainable agriculture practices and mitigate the negative impact of unsustainable farming practices on the environment and the economy.

LIMITATIONS OF ENVIRONMENTAL EDUCATION:

Despite the positive impact of environmental education on farmers' knowledge, attitudes, and practices, there are some limitations to this approach. For instance, a study by Adegbite et al. (2020) found that some farmers may be resistant to change and may not be willing to adopt sustainable farming practices, even after participating in an environmental education program. Additionally, environmental education programs may be costly and may require significant resources to implement, which may limit their effectiveness in certain contexts.

RECOMMENDATIONS

Here are some recommendations for improving the impact of environmental education on farmers in Nigeria:

1. Develop tailored educational materials: Environmental education programs should be tailored to the specific needs and interests of farmers in Nigeria. Educational materials should

be designed to be engaging and easy to understand, and they should be available in local languages.

2. Provide practical training: In addition to educational materials, farmers need practical training on sustainable agricultural practices. Workshops and training sessions can be organized to teach farmers how to implement sustainable practices such as crop rotation, intercropping, and organic farming.

3. Collaborate with local organizations: Collaborating with local organizations such as farmer cooperatives, NGOs, and community-based organizations can help to improve the impact of environmental education programs. These organizations can provide on-the-ground support and help to disseminate information to farmers.

4. Use demonstrations and field visits: Demonstrations and field visits can be powerful tools for educating farmers on sustainable practices. Farmers can learn by seeing sustainable practices in action and by interacting with other farmers who have successfully adopted these practices.

5. Provide incentives: Providing incentives such as subsidies, access to credit, and market support can help to encourage farmers to adopt sustainable practices. Incentives can help to offset the costs of implementing sustainable practices and can help to create a more supportive environment for sustainable agriculture.


6. Monitor and evaluate impact: Finally, it is important to monitor and evaluate the impact of environmental education programs on farmers in Nigeria. This can help to identify areas for

improvement and can help to ensure that educational programs are effective in promoting sustainable agricultural practices.

CONCLUSION:

In conclusion, environmental education can be an effective tool for promoting sustainable agriculture practices by improving farmers' knowledge, attitudes, and practices. However, there are some limitations to this approach, and more research is needed to understand how to effectively implement environmental education programs in different contexts. Overall, environmental education holds promise as a strategy for promoting sustainable agriculture practices and promote better environment.

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