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RESEARCH ARTICLE

ECOLOGICAL ETHICS IN THE FACE OF THE RISKS OF SHIFTING AGRICULTURE PRACTICES BY WOMEN IN RURAL AREAS OF CABINDA PROVINCE

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ABSTRACT

Ecological ethics serves as a tool to raise human awareness about the real meaning of preserving and conserving nature. This article is part of environmental concern and the desire to bring proposals for solutions to change the behavior and habits of Farmers regarding the use of natural resources in Cabinda. In recent years, the Province has been recording a wave of deforestation resulting from the process of removing or cutting down sections of virgin forest for economic purposes. So, it was from this perspective that the research was carried out among women who practice shifting cultivation in rural areas, to understand whether they really know about the irreversible environmental damage caused by this agricultural production system. However, it was found that they lack any information and knowledge regarding the subject. This led to the following question: what are the factors behind the lack of information and knowledge regarding the risks of shifting cultivation practiced by Women in Rural Areas? And How can ecological ethics influence the acquisition of information and knowledge about these risks? The answers to these questions were associated with factors such as level of education, lack of time to follow the newspaper and lack of public actions or policies aimed at rural education. Materials and methods: the questionnaire was applied to a sample of 126 Peasant Women, whose opinions were processed in the SPSS software, allowing statistical processing of the data. Results: of the 126 respondents, 39.95% are between 48 and 58 years old, around 63.49% are married, 68.25% have primary education, 19.05% have secondary education and only 12.70% have high school education, 99.99% stated that they cut down and burn vegetables and use the ashes as nutrients for the soil, and 99.99% stated that they do not watch the news to get information about the consequences and dangers of this practice, 98.41 % have a level of environmental education considered terrible. Conclusion: after the study carried out, it is concluded that it is necessary to promote actions that make Women aware of the importance of conserving the environment, starting with the construction of field schools and holding an environmental forum in rural areas.

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INTRODUCTION

Since the beginning of human history, man has always maintained contact with nature, this being noticeable through the use of resources available in the environment to meet his infinite needs. The relationship between both has become unsustainable, giving rise to environmental or ecological crises. To increase his material wealth, man has intensified the exploitation of natural resources, causing aggression against nature and all other species that inhabit it. In this way, economic activities are identified as the main causes of current environmental problems, including agriculture. Generally, the ecological crisis is associated with a lack of ethics due to the priority and value that humans attribute to material goods, ignoring, however, the importance of preserving and conserving ecosystems. Ethics studies, which were previously limited to the scope of philosophy and anthropology, have over time expanded into several other areas, such as biology, where the issue of ecological or environmental ethics is addressed. In this context, the concept of ethics boils down to evaluating the way man acts on nature, or even, it is seen as a judge of value on human action in the environment. However, every practice reflects the habits and customs of the people of a given region. This article focuses on addressing ethics in ecological culture in light of the risks of shifting agriculture practiced by women in rural areas of the Province of Cabinda. However, it is one of the 18 Provinces of Angola whose predominant economic activity is subsistence agriculture, which is responsible for generating income for various families. Women head to the interior (rural areas or villages), purchasing spaces with a size varying between $20m^2$ e

2500m^2. It is worth highlighting that the size of the land for cultivation depends on the financial capabilities of each Peasant. Discussions in favor of preserving ecosystems point to shifting agriculture as one of the most harmful economic activities for the environment due to the method of soil preparation and the archaic technology used during the production process. However, this process involves cutting down sections of virgin forest, burning them, using the ashes as soil fertilizer for planting crops in this space and, immediately after harvesting, the area is abandoned and replaced by another. As a result, atmospheric pollution, deforestation, increase in greenhouse gases, etc. In this context, ethics can serve as an instrument to raise awareness among these women regarding environmental education, promoting a change in behavior or habits towards nature.

MATERIALS AND METHODS

This is an exploratory research carried out in the Province of Cabinda during the period from December 12, 2022 to April 25, 2023, with the aim of proposing mechanisms to promote ethics in ecological culture in the face of the risks of shifting agriculture practiced in rural areas. To collect the data, bibliographical research, non-structured interviews, non-participatory observation and finally, the questionnaire were used. The concept of ethics discussed in this article, is seen from an ecological perspective, however, it focuses on evaluating the behavior of Rural Women or their agricultural practices in relation to the standard established by science on viable techniques that ensure the well-being of nature. Lislopes (2007) defines ecological ethics as something that involves awareness of environmental issues and human understanding of the real meaning of their relationship with nature. In this approach, it can be seen that conscience serves as the law or code of conduct that helps individuals have responsibilities to preserve and conserve the environment and secure the lives of other beings on the planet. In villages or rural communities, it is common to come across customs or habits that contrast with the vision of science, generating conflicts between scientific knowledge and the beliefs of the local population. Therefore, it is necessary to promote actions to incorporate innovative ideas into the culture of this society so that there are improvements both in the mode of production and in the way of relating to nature. Leff (2000) considers “ecological culture” to be as a system of environmental values that guides individual and collective behaviors, in relation to the practices of using natural and energy resources. The authors Lislopes (2007) and Leff (2000) raise two important elements in their concepts, that is, “environmental awareness and values”. These, however, are principles that man needs to shape and subject his habits or customs to sustainable practices, always ensuring the well-being of the planet. The materialization of ethics and ecological culture involves issues inherent to environmental education. Herzer (2019) defines environmental education as a formal and informal method of transmitting environmental values to the population regarding the rational use of natural resources. However, the formal one goes through schools, academies, etc., that is, individuals can, from a very early age, acquire knowledge about preservation and conservation mechanisms through academies, while the informal one occurs through activities carried out outside chool or academic environments, for example, communities, companies and other Conservation units. The author also points out the following objectives of environmental education: encouraging sustainable practices, environmental awareness, promoting actions to reduce global warming, rethinking habits that harm the environment, and encouraging the general population with regard to ecological awareness.

RESULTS

Sociodemographic data: From February 1st to 28th, 2023, 126 women who responded to the questionnaire were selected by municipalities, specifically Cabinda and Cacongo, and then subdivided into residential areas. The participants' ages were classified as a range, with the average of this classification being 48-58 years old (corresponding to 31.0%), however, the majority are married, and all have children. The Municipality with the highest number of Women practicing shifting cultivation is Cabinda with a total of 61.9%, of which 27.7% come from the Districts of Mbaca and São Pedro, followed by Cabassango and 4 de Fevereiro with 21.43% and 12.70%, and Cacongo, specifically Lândana Municipal Market, presents 38.10%.

Table 1. Sample of Women Surveyed by Municipality and Areas of Residence

Municipalities	Areas of residence	Number of Women	%
Cabinda	Mbaca e São Pedro	35	27.77
	4 de Fevereiro	16	12.70
	Cabassango	27	21.43
Cacongo	Municipal Market of Lândana	48	38.10
Total	-	126	100

Source: The author, based on SPSS results.

Academic and professional data for Women: The majority of respondents stated that they had a low level of education. Because, of the 100.00%, only 68.25% have completed primary education, but some have not completed it, with agriculture being their main activity.

Cultivation technique or method of preparing soil for planting: During the production process in rural areas, archaic equipment is used and there is little labor in the field. However, 99.99% of the Peasants claimed to cut (remove) and burn the sections of virgin forest, and later use the ashes as nutrients, and after harvesting, they abandon the areas, heading to another with the aim of repeating the same procedure. Regarding the issue of using fertilizers or fertilizers, all 126 stated that they did not use them, fearing that they would harm the products and their durability.

Size of land for planting: According to the Peasants' responses, the size of land for planting varies year after year depending on the financial capacity of each of them, however, the average proportion used was 41- 50m^2(34.13 %).

The Risks of Shifting Agriculture – 99.99% of peasant women responded that they did not know the consequences and dangers of this method of soil preparation nor did they have information regarding deforestation or deforestation, loss of biodiversity, climate change and loss of the hydrological cycle.

The Main Cultivated Products – the Peasants responded that they are different types of products, but they point out Banana

Table 2. Trend in Women's Opinion regarding the risks of shifting agriculture

Variables	N	Normality parameters [a, b]				Test Statistics	Significance	Trend of Opinion
		Standard deviation	Mean	Median	Mode			
Age	126	1.236	4.02	4.00	4	.175	.000	From 48 to 58 years old
Marital status	126	.858	1.61	1.00	1	.397	.000[c]	Married
Children	126	0.000	1.00	1.00	1			Yes
Education Level	126	.711	1.44	1.00	1	.417	.000[c]	Primary school
Main activity	126	0.000	1.00	1.00	1			Farmer
Cultivation Technique	126	0.000	1.00	1.00	1			Cutting and Burning stretches of virgin forest
Knowledge of the Danger and Consequences of Shifting Agriculture	126	0.000	2.00	2.00	2			No
Dimension of the Earth for cultivation	126	1.274	3.01	3.00	3	.201	.000[c]	From 41- 50m^2
Reasons that motivate you to develop this activity	126	1.207	1.83	1.00	1	.364	.000[c]	The only way to raise income to support yourself and your family
International news or newspapers to inform you about the risks of this activity	126	0.000	2.00	2.00	2			No
Environmental education	126	.125	1.02	1.00	1	.534	.000[c]	Terrible
The main most cultivated products	126	2.682	4.68	7.00	7	.354	.000[c]	Banana bread and fruit, Cassava, Corn, Peanuts (Ginguba), Sweet potato, yam, reindeer, Avocado, Mango, Orange, Pineapple, Tomato, Onion and Macundi Beans (string beans)

Source: The author, based on SPSS results.

Table 3. Correlation matrix between the variables under analysis

Correlation				
Variables	Education Level	Knowledge of the Danger and Consequences of shifting cultivation	International news or newspapers to inform you about the risks of agriculture in the world environment and health	Environmental Education regarding the practice of shifting cultivation in rural areas
Education Level	1	0.819**	0.561**	0.792**
Knowledge of the Danger and Consequences of Shifting Agriculture		1	0.219**	0.217**
International news or newspapers to inform yourself about the risks of agriculture on the environment and health			1	0.491**
Environmental Education regarding the practice of shifting cultivation in rural areas				1

Source: The author, based on SPSS results.

bread, Banana fruit, Cassava, Corn, Ginguba (Peanuts), Sweet potato, Reindeer potato, yam, Avocado, Mango, Orange, Pineapple, Tomato, Onion and Macundi Beans (string beans or Vigna unguiculata) are the most cultivated.

The correlation between the variables – at a significance level of 0.01 (1%), all variables being analyzed, namely level of education, knowledge of the dangers and consequences of practicing shifting cultivation, news or international newspapers to inform about the risks of practicing this agricultural system in the environment and environmental education have a positive correlation: 0.819; 0.561; 0.792; 0.219; 0.217 and 0.491.

It is worth highlighting that the information contained in table 2 results from the processing of data carried out using SPSS, in which it was possible to carry out the Kolmogorov and Smirnov test to evaluate the opinion of the 126 women surveyed regarding the risks of shifting agriculture. Therefore, the statistical analysis of opinions was carried out based on measures of central tendency and dispersion. Meanwhile, the data in table 3 illustrates Pearson's linear correlation performed in SPSS, which according to Miot (2018), serves to identify the degree of relationship between the variables tested, whether it is positive, negative and null.

DISCUSSION

With the results obtained, it can be seen that the Municipality with the highest concentration of Women who go to rural areas to carry out itinerant agricultural activities is Cabinda, representing around 61.90%, followed by Cacongo with only 38.10%. In this way, the two Municipalities strongly contribute to the high rate of deforestation in the villages due to the constant removal of vegetables, immigration from one area to another after harvesting and atmospheric pollution resulting from the burning of vegetables. This corresponds to what Schmitz (2007) addresses about shifting cultivation when

he refers to it as a traditional system, called slash-burn, where the farmer cuts down trees (or virgin forest), burns the organic matter and plants in that area, for a period of time from one to three years, annual crops for food. The majority of respondents are on average 48 to 58 years old, representing 39.95%, around 63.49% are married, and 68.25% have up to primary education, the latter being one of the factors that really explains the cause of the lack of information and knowledge on the environmental damage caused by the practice of slash-and-burn agriculture.

Therefore, Silva and Gonçalves (2019) point out rural education as a crucial element for Farmers due to its ability to influence their quality of life in different ways, starting with the level of productivity, income from work and their participation in issues socio-environmental. However, 99.99% of the Farmers stated that they cut and burn the virgin forest, and use the ashes resulting from this process as a means to fertilize the soil, without the need to use organic fertilizers, nor the new technologies required. This form of soil treatment corroborates the characteristics of itinerant agriculture highlighted in the study carried out by Alves (2019), in which he highlights that in rural areas rustic methods are used in agricultural production without the use of fertilization or modern technology required.

On the other hand, the correlation was analyzed between all the variables described in table 3, as a way of testing the hypotheses raised in the introductory phase of the research, however, it was effectively observed that the correlation is positive for all variables, translating In this way, the more rural training a woman has, the greater the knowledge she will have about the environmental damage caused by the practice of itinerant agriculture, however, the concern in watching or following the news to be informed about the risks of this activity will be greater and greater, and, this fact will improve her level of environmental education, which would lead her to become aware and acquire environmental values capable of guiding her to shape her behavior, customs and habits towards sustainable practices and vice versa. This confirms the hypothesis that the lack of information and knowledge regarding the risks of agriculture practiced in rural areas of the province of Cabinda is due to the fact that women have a low level of education and do not have time to follow the news or newspapers, because they dedicate themselves to rural work and commerce, and finally, the absence of educational policies (or actions) aimed at technical, social and environmental training in rural areas.

Photography as one of the Mechanism Proposals to convey information and knowledge about the risks of Shifting Agriculture: The majority of women in rural areas are not literate, however, the adoption of images as a tool to disseminate information and spread knowledge regarding the consequences and dangers of this activity, will raise awareness of responsibilities and abdication of methods that destroy nature (or the planet), thus corroborating Geronasso (2021) when he states that photography is an essential tool in environmental awareness and combating to deforestation. However, without the production of images, it would be very difficult to convey to people what is really happening in forests, oceans and other remote areas.

Construction of Field Schools as an action to promote ecological or environmental Ethics: the lack of a field school in the Municipalities under study limits knowledge of environmental problems among members of the rural community. However, the creation of at least one in rural areas will help Peasants, particularly women, to acquire knowledge about sustainable techniques necessary for agriculture and to improve their level of environmental education. This corroborates Victorino (2022) when he states in a note in the newspapers that field schools represent a space for training Farmers on improved cultivation practices, modern agricultural technology, improving soil fertility, and integrated nutriente management, management business, among other factors.

CONCLUSION

After the study carried out on Women in the rural community, it was concluded that 99.99% of them had never heard about the environmental crises resulting from the practice of Shifting agriculture such as deforestation, the extinction of microorganisms in a habitat, atmospheric pollution, loss of the hydrological cycle, and reduction in the forest's capacity to absorb carbon dioxide, thus pointing to the level of education, the insufficient time to get information through news, and finally, the lack of targeted educational policies (or actions) rural training as factors responsible for the lack of knowledge of the environmental problems mentioned above.

REFERENCES

Alves, M. 2019. *Agricultura itinerante e sua Influência no Mundo Agro*. Portal Vida no Campo e Agro20. Disponível: https://www.agro20.com.br/agricultura-itinerante/amp, acesso aos 13/02/2023, as 15h39.

Geronasso, M. 2021. *A Fotografia é uma Arma de Preservação Ambiental*. Central de Notícias Uninter – CNU, Brasil. Disponível: https://www.uninter.com/noticias/a-fotografia-e-uma-arma-de-preservacao-ambiental, acesso aos 27/03/2023, pelas 12h17

Herzer, E., Osório, D.M.M., Schreiber, D., & Jahno, V.D. 2019. *Educação Ambiental Informal: uma Revisão Sistemática da Literatura Nacional*. Revista de Ensino, Educação e Ciências humanas, vol. 20, n. 4, RS – Brasil. Disponível: http://dx.doi.org/10.17921/2447-8733.2019v20n4p4p465-475.

Leff, E. 2000. *Ecologia, Capital e Cultura: Racionalidade Ambiental, Democracia Participativa e Desenvolvimento Sustentável*. Blumenau: Editora da FURB.

Lislopes. 2007. Ética e Ecologia. Editora: Recanto das letras. Santa Cruz do Sul – Rio Grande do Sul, Brasil. Disponível: https://www.recantodasletras.com.br/ensaios/602355.

Miot, H. A. 2018. *Análise de Correlação em Estudos Clínicos e Experimentais*. Editorial J. Vasc. Bras. Disponível: https://doi.org/10.1590/1677-5449.174118.

Schmitz, H. 2007. *A Transição da Agricultura Itinerante na Amazônia para novos Sistemas*. Rev. Brás. Agroecologia, vol. 2, nº. 1.

Da Silva, R.V., & Da Silva, P.H.G. 2019. *O Nível de Escolaridade dos Produtores Rurais de Colinas do Tocantins*. JICE – Jornada de Iniciação Científica e Extensão. Instituto Federal do Tocantins.

Victorino, J. 2022. *Escolas de Campo Abrem Caminho para Melhores Colheitas*. Jornal de Angola. Disponível: https://www.jornaldeangola.ao/ao/noticias/escolas-de-campo-abrem-caminhos-para-melhores-colheitas.

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