



# **Managing Environmental Degradation Using Traditional, Cultural and Spiritual Strategies the Tale of Dagaaba and Birifor People**

**Dongballe Felix <sup>a</sup> and Dakora Edmond <sup>a\*</sup>**

<sup>a</sup> *McCoY College of Education, Box ND 12, Nadowli-Upper West Region, Ghana.*

## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

The environmental laws seem not to be effective in protecting the environment. The article looked at alternative ways of protecting the environment from stressors and disturbances. It utilized personal observation, narration, and primary data from the role traditional/cultural strategies play in environmental conservation in the Dagaaba and Birifor communities. Findings revealed individuals with Dagaaba and Birifor background have rich indigenous cultural systems which facilitate environmental conservation of different ecosystems. This paper concludes that environmental taboos (i.e., cultural norms, values and traditions) and the fear of the wrath of the gods (i.e., beliefs and spiritualism) have enhanced the conservation of some portions of the land for the people of Dagaaba and Birifor. However, this approach is not effective in minimizing bushfires, considering the fire's propensity to escalate and extend from one community to the other. The traditional/cultural/spiritual strategies can be adopted to minimize illegal mining which is currently destroying the forest reserves, land, air and water bodies, among other ecosystems in Ghana. These strategies are effective in managing environmental degradation.

\*Corresponding author: Email: [edmondakorah@gmail.com](mailto:edmondakorah@gmail.com);

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## 1. INTRODUCTION

Environmental degradation is seen as the deterioration of the environment through depletion of resources which includes all the biotic and abiotic element such as air, water, soil, plants, animals, and all other living and non-living elements of planet earth that form our surroundings [1]. Sarfo, Shuoben, Otchwemah et al [2] view the key drivers of the environment as biophysical, cultural and technological factors as they have the potential of influencing climate sensitive sectors Kaledzi, [3] opined that the forest areas have shrunk five times in 100 years. Anthropogenic activities like illegal artisanal and small-scale mining, inappropriate agricultural practices, urbanization and industrialization are destroying water bodies, aquatic lives and the air we breathe [4]. The destruction of the environment has led to extinction of some species of living elements. These have equally led to land degradation, pollution of the natural air/ water/land, global warming and deforestation. The air, water and plastic pollution affect health and hygiene; illegal mining, improper solid waste disposal, and contaminated sites release hazardous chemicals; land degradation, deforestation heavily impact livelihoods and limit growth and development [5]. These equally have the propensity to cause prolonged drought, water shortage and inadequate plants and animals in the ecosystem if not managed well. Therefore, Protection of interests and concerns about climate change and observable changes in the Earth's system increase the need for further research that will improve information, innovations and informing the decision-making of urban planners, municipalities, researchers and interested organizations [2]. As warned, the natural resources underpinning the success of Ghana must be protected, sustained and managed for the future [5].

Most rural people in Ghana depends on agriculture for survival. The Environmental Protection Agency (EPA) (2002) has indicated that the agricultural sector have employed about 70% of the rural labour force, contributes 45% of the GDP, accounts for over 55% of the foreign exchange earnings and is responsible for meeting over 90% of the food needs of the country. Poor land management leads to land degradation [5]; polluted air and water affects human and animal health [4] and felling of trees

and bushfires destroys the forest and grassland thereby reducing transpiration, precipitation and rainfall [6]. Therefore, the rural people whose livelihood depends on agriculture suffer when the environment and the ecosystem are not well protected and therefore, allowed to be destroyed or degraded.

Today, most governments have initiated several policies and legislative instruments to protect the environment. However, ineffective implementation coupled with lack of political will, have left the land, air, water resources, plants and other natural resources in an increasingly alarming state [4]. According to Mbiti (1969) cited in Saani, [7], "the African is notoriously religious". For most African communities all aspects of nature, plants and wildlife and water bodies are under the mystical tutelage of ancestral spirits and guardian animals. People are therefore mandated to use natural resources sustainably on behalf of these spirits. The application of environmental taboos are intended for the ethical use of the environment. These taboos help keep people away from further depleting the environment. The Dagaaba and Birifor people have a rich indigenous knowledge system which help in environmental conservation.

The Dagaaba and Birifor located in the Upper West Region of Ghana and the southern part of Burkina Faso believed the gods reward and punishes. These rewards include protection from sicknesses, inexhaustible material gains, ability to conquer enemies, and so on. The punishment from the gods, ancestral spirits are characterized with an incurable sickness and death. The symbol of any traditional/cultural/spiritual element placed on a land, trees, living or non-living object in the environment has a positive or negative connotation to a Dagaaba or Birifor. Therefore, these people collectively adopted traditional/cultural/spiritual/ strategies to protect and sustain the environment. As Srivastava and Pawlowska, [5] suggested, it is better to act now to protect the ecosystem and the impact of environmental degradation on vulnerable groups, especially in the Ghana. It is also key to understand the importance of well-informed community norms that seek natural justice, transparency and discipline. Therefore, the Dagaaba and Birifor belief in: taboos, totems, sacred groves, deities (rain god, hunch back, water god, earth god) and curses. These beliefs and deities are employed to complement the

environmental policies to protect the environment.

If the exotic methods are failing, resort to the traditional methods to combat environmental degradation. In the Dagaaba and Birfor cultural setting, certain natural features like trees, rivers, mountains and animals are considered sacred and should be conserved. The 'Benge' grove/forest in Wogu located in upper west region has been dedicated to the gods of the land and no body enters there to cut any wood or hunt without performing certain rituals or sacrifices. Therefore, the living and non-living elements are protected. The 'Wetuo' land located around the northern part of Nadowli along the N1 road on Nadowli-Babile road is a land which forbid hoe, axe and other metallic objects. Therefore, the land, trees and other shrubs are protected and therefore are in their natural state. The Dahiile mountain located between Hamile and Fielmuo in the upper west, Ghana is forbidden for people to farm or hunt around. The curses surrounding the mountain protect all the living and non-living species on the mountain. The Ombowira is a mountain in Nadowli-Kaleo District which have a gorge located at the eastern part of the mountain with water which contain fish that are forbidden to be harvested without any ritual. The python, crocodile, hedgehog, aligator, etc are animals the Dagaaba and Birifor believed they played roles in the lives of their forefathers. These animals are highly revered and protected from any danger. A dagao/Birifor who sees a jackal berry stick with three white stocks/broom sticks, three white stones with feathers fixed on a land dare not fetch sand, farm, fell a tree, or kill any animal on that land. This means there is a curse on the land and anybody who violates the curse suffers punishment, including death. Tress with strategies such as black marks, thunder mark (serpentine flat rod), dry okro, gourd, moulded clay and many more are avoided for fear of thunder striking, epilepsy, barrenness, hunch back and many more. A dead fowl floating in a river is an indication that the river has been cursed and anybody who unlawfully enters the water for fishing/mining is bound not to survive. All these seek to sustain and protect the biotic and abiotic elements in the environment.

The study seek to help the government and other agencies to adopt traditional strategies that seek to prevent land degradation and thereby minimising cost of reclaiming degraded lands. It will also help traditional rulers to enforce the

environmental protection laws locally. Law makers and other agencies seek to recognise the importance of traditional strategies in enacting laws for people. The cultural strategies used by Dagaaba and Birifor people to combat environmental destruction in this paper will enrich basic materials for further studies at the continental level.

## **2. BRIEF HISTORY OF DAGAABA AND BIRIFOR**

The Dagaaba and Birifor are located in the north-western part of Ghana, and some part of southern Burkina Faso and Côte d'Ivoire. These people are predominantly farmers. They grow various crops and rare animals. Tuozaafi is their staple food, while dog meat is their delicacy. Both men and women wear Smock. They depend largely on the environment for survival.

The people of Dagaaba and Birifor believe in so many deities. They invoke the spirits of these deities to fight, protect their properties and people, cure their sickness and curse the enemy. They believe that everything in the environment needs protection, which is why some animals, water bodies, mountains are prohibited from destruction.

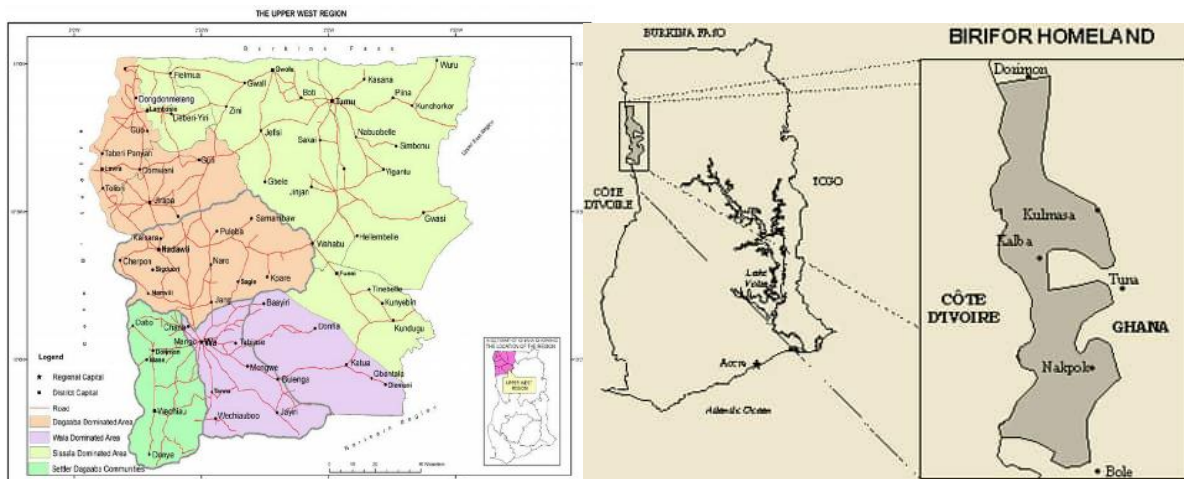
Adopted Maps showing Dagaaba and Birifor communities in Ghana.

### **2.1 Objective**

The main aim of the study is to provide an alternative way of preventing and conserving the environment from destruction.

## **3. METHODOLOGY**

This is a phenomenological and ethno-methodological studies which transcends the importance of beliefs, primacy and objectivity of consciousness with regards to the surrounding. Our knowledge in beliefs and everyday world inheres in social order as the world is socially ordered [8]. Therefore, phenomenological and ethnomethodological studies delve into the ideals of everyday life and how people make sense of their everyday world. According to Burrell and Morgan (1979) cited in (Cohen, Manion and Morrison, [8], phenomenological and ethnomethodological studies indicate the relationship between actions and statements in social context producing them and the way the meanings are interpreted. Therefore, traditional/cultural/spiritual strategies are actions or statements related to social context that are stated/shown explicitly.



This article used personal observation, narration, primary data from the role traditional/cultural strategies are playing in environmental conservation in the Dagaaba and Birifor communities. Other secondary information are sought from articles, papers and publications regarding environmental degradation. The belief of the people regarding the gods within the communities were sought from the chief priest of some of the deities as primary data. This was done through unstructured interview. Some of the sacred environments were visited to see the signs of the gods prohibiting people from entering.

### 3.1 Ethical Issues

The research team got access to the deities through linguist. The purpose of the visit was stated to the various chief priest and their acolytes. The chief priest of the various deities narrated stories of the gods. The dos and don'ts of the gods were equally presented. The research team performed some rituals to enable them snap pictures of the deities.

## 4. RESULTS

From the unstructured interview, the sign of rain god on a piece of land is a jackal berry stick, three white stocks, three white stones and or a serpentine rod. Either of these is fixed together with feathers. The sign of any of these show that the land is cursed and can therefore be pacified with rituals. The sign of the hunchback is shown with a shaped moulded clay or carved wood in the form similar to the sickness. People who enters the land without the required ritual develops hunchback. A cursed river or water bodies are shown with fowl blood and dead fowl

floating in the water. In most of the sacred groves, there are no signs, however, there are known by members of the communities, and the community people are ever ready to warn anybody who wish to enter the land. The land gods (in the form of stones, curved wood, or moulded clay) and signs of sacrifices (feathers, blood, animal skin, wool) made are visible signs in sacred groves showing that the land is prohibited to be exploited.

### 4.1 Cultural Strategies

#### Rain gods

The sign of rain god invoked on a land, tree, mountain and other natural resources are shown with either a serpentine flat rod, dry okro, three white stones, or jackal berry stick with white stock/broom stick. All sacrifice to invoke or dispel the wrath of the rain god is on a local roof. It is believed that violation of this god bring thunder which kills the offender.



Fig. 1. The Rain god in Dapuori, Nadowli-Kaleo District in Upper West Region-Ghana

## The Water gods

Invocation of water gods is done publicly and the fowls thrown into the water. Anybody who secretly goes into the water to fish or do mining must follow the due processes to perform sacrifice to cleanse themselves or suffer death in water.



**Fig. 2. A pond with crocodiles located in Wa Kunbiehi upper west region, Ghana believed to have spirits capable of rewarding and punishing wrongdoers**

## Taboos/totem

Every community in the dagaaba/Birifor land revered or adored a particular animal for playing key role in the life of their for-fathers. These animals are not ill-treated; and for that matter they can be seen roaming freely in the community, such as the red pidgin for the people of Nuorung, Goli-Nuorung, crocodile for the people of Kumbiehi, python for the people of Nadowli and mud fish for some people in Jirapa and their related clans.

## 5. DISCUSSION

The study has established that people who died in some lands, water bodies, through thunder and lightning were alleged to have died through the wrath of the gods. Rituals were performed in these death scenes to enable the bodies of the decease to be retrieved. People who died in water bodies were buried along the water, after the ritual. Those who died through thunder and lightning had to wait for the rain god ritual performed before burial. Some people who violates an order of invocation of the rain gods bath herbs as a way of pacifications. People who

go into any sacred environment performs rituals to be free from the wrath of the gods. The perpetrators and the deceased families borne the cost of the rituals.

## 6. CONCLUSION

The study established alternative ways of managing environmental degradation using traditional, cultural and spiritual strategies. An unstructured interview was conducted among some deities' Chief Priest of some Dagaaba and Birifor communities. It can therefore be concluded that there are still virgin lands in the Dagaaba and Birifor setting that are yet to be exploited. The environmental taboos and the fear of the wrath of gods have necessitated the ethical use of the environment. The traditional/cultural/spiritual strategies are effective in managing environmental destruction. However, the method is not effective in minimizing bushfires as the fire has the propensity to escalate from one community to other. The traditional/cultural/spiritual strategies can be adopted to minimise illegal mining which is destroying the forest reserves, land, air, water bodies and the ecosystem in Ghana. The Dagaaba and Birifor people have a rich indigenous cultural system which if adopted wisely may help in environmental conservation and protection of the ecosystem.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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