

Influence of Environmental-related Corporate Social Responsibility (CSR) Activities on the Sustainable Livelihood of Selected Communities in Gombe State, Nigeria

¹Timothy R. Eyab PhD, ²Wachira Wanjugu PhD. and ³Antony Odek PhD.

¹Department of Development Studies, Faculty of Social Science, St. Paul's University
Limuru Kenya

^{2&3} Department of Business Administration, Faculty of Social Sciences, St. Paul's University
Limuru Kenya
Email: eyabt@yahoo.com

Abstract

This study examined the influence of environmental-related corporate social responsibility (CSR) activities on the Sustainable Livelihood of selected communities in Gombe State, Nigeria. The study employed the qualitative research design. The target population for the study was 25,479 individuals drawn from 19 corporations and 22 selected communities in Gombe State. Thematic and narrative analysis was used to analyse data collected for the study. Findings of the study reveal that environmental-related CSR activities contribute satisfactorily to sustainable livelihood of selected communities in the study area. Based on the result of the findings, the study recommends among others that Corporations should pool their resources to implement expensive CSR projects, programmes and policies that encourage eco-friendly activities in the study area. The study also recommends the promotion of conservation of natural resources in the communities.

Keyword: Corporate social responsibility, Gombe, Livelihood and Sustainable environment

Introduction

The world is passing through a critical moment in history. There is significant concern about the future of the global economy, particularly in terms of human livelihood. This phenomenon is also affecting the future of social and economic development in developing countries. The African continent appears to be the hardest hit by the global economic fallout. Many of the problems range from infrastructural deficit, extreme poverty, challenges in education and health, intercultural and tribal conflicts, climate change among others. Governments have struggled to incorporate a sustainability approach into their planning and frequently lack the capacity to implement sustainable initiatives effectively (Sachs, Schmidt-Traub, Mazzucato, Messner, Nakicenovic & Rockstrom, 2019; Salvia, Leal Filho, Brandli & Griebeler, 2019; Kolk, Kourula & Pisani, 2017).

Nigeria is one of the countries that have been affected by the global economic challenges and climate change, particularly in the last twenty years. All the states in Nigeria have experienced less rainfall, higher temperatures, and extreme weather conditions such as high sun intensity and severe winds, among other consequences (Nwokeoma & Chinedu, 2017; Dinyadi, 2012). Gombe State is one of several states dealing with a variety of environmental issues related to climate change. According to Gombe State Ministry of Environment and Natural Resources (2020), the population of the state must contend with issues including rising temperatures, extinction of plant and animal species, fluctuating precipitation, and many other elements that have severe consequences on economy, agriculture, education, and health among others.

Concerned with this trend, corporations in Nigeria have yielded to the calls by United Nations (UN) agencies, Civil Society Organisations (CSOs), and community members and have

integrated economic, social, and environmental concerns into CSR programmes in the communities. The European Commission (2011) defines corporate social responsibility (CSR) as “a concept whereby companies integrate social and environmental concerns in their business operations and in their interactions with their stakeholders on a voluntary basis”. Heemskert (2012) maintain that CSR consists of economic, social, cultural, environmental, ethical, and legal responsibilities undertaken by corporations in order to meet the interests of stakeholders.

Okanga and Groenewald (2017) maintained that the environmental-related aspect of the triple-bottom-line (TBL) of CSR refers to a situation where corporations are involved in sustainable environmental actions and decisions that enhance community livelihoods or cause the least harm possible to the natural environment in communities. Environmental-related CSR activities include the provision of clean water, circular economy, and the conservation of natural resources, among others.

Gombe state had witnessed significant increase in term of establishment of companies and corporate businesses across different sector of the economy. Interestingly, the State tops the rank as the apex in the ease of doing business compared to Anambra, Ondo, and (even the famous) Lagos ranking 7th, 8th, and 20th respectively (Everest, 2021). Hence, Gombe State has become a popular destination for local and global businesses and investments. The activities of these businesses in one way the other pose a threat to the environment and invariably affect the sustainable livelihood of the communities where these businesses/companies operate. One of the ways that these corporations can assuage their footprint is through CSR centered on the environment. Hence, this study intends to examine the influence of environmental-related CSR activities on the livelihood of the communities in some selected communities in Gombe state.

Methodology

The study adopted the qualitative research design. The target population for the study was 25,497 people from which 246 was drawn from the 19 sampled corporations’ employee and 22 selected communities in Gombe State, who benefited from the corporations CSR programmes. The corporations were selected from sectors such as banks; extracting/mining industries, telecommunication companies, agricultural corporations, religious organization, NGOs, health and pharmaceuticals industries. The study collaborated with Gombe State Ministry of Trade and Industries, Ministry of Environment and Forest Resources in obtaining information on corporations that undertake CSR activities in the study area. Purposive sampling technique was used to sample 19 corporations that implement environmental-related CSR initiatives in the study area from 2015 to 2019 and 22 communities mostly affected by climate change impact in Gombe State. The aggregate sampled size for the study was 41 key informants which comprises of 22key informants from 22 communities and 19 key informants from 19 corporations (one each from the sampled communities and corporations). Also, three (3) clustered focus group discussion (FGDs) was conducted in Pantami, Akko and Ashaka communities aimed at enriching the data garnering. The interviews lasted for about 30 minutes in the offices or homes of the key informant interviews (KIIs). Interview guide was used to collect data from the key informants. Two (2) separate sets of interview guide were developed for the communities and corporations KIIs. The data was analyzed using content analysis method and descriptive statistics (frequencies distribution and percentages). In compliance with research ethics, the anonymity of the key informants was guaranteed by means of assigning code name.

Result of the Findings

Table 1 showed the demographic characteristics of the key informant (KIIs) used for the study. Seventy-three percent (73%) of the community key informants are male, while 23% were female. For corporations, 84% of the key informants are male while 16% are female. Hence, the majority of the KIIs used for the study are male.

Table 1: Key Informants Interview Demographic

Description	Corporations KIIs		Community KIIs	
	Frequency	%	Frequency	%
Sex				
Male	16	84	17	73
Female	3	16	5	23
Total	19	100	22	100
Age				
35 – 40	5	26	4	18.18
41 – 46	8	42	8	36.36
47 – 52	4	21	2	9.09
53 – 58	2	11	6	27.27
59 & Above	-	-	2	9.09
Total	19	100	22	100
Education Qualification				
Nigeria Certificate in Education (NCE)	-	-	2	9
National Diploma	-	-	8	36.36
Higher National Diploma	6	32	6	27.27
Degree	9	47	4	18.18
Masters	4	21	2	9
Total	19	100	22	100

Source: Field survey, 2020

The high variation in the sex of the key informants might be attributed to the cultural norms and religious practice that confined the female to the house with little or no public appearance in the study area. The result in Table 1 further reveals that 18.18% of the communities KIIs were within the age bracket of 35 – 40 years, 36.36% were within 41 – 46 years, while 9.09% were within the age range of 47 – 52 year and 9.09 % were within the age of 59 years and above respectively.

For corporations KIIs, the result in Table 1 shows that, 26% of the key informants were between the age ranges of 35 – 40 years; 42% were within 41 – 46 years; 21% were within 47 – 52 years and 11% falls within the age range of 53 – 58 years respectively. This finding implies that majority of the KIIs falls within the age range of 41 – 46 years.

The data in Table 1 further showed that, 9% of the communities KIIs had Nigeria Certificate in Education as they highest educational qualification; 36.36% had National Diploma, 27.27% had Higher National Diploma and 18.18% had Degree while 9% had Masters. On the other hand, 32% of the corporations KIIs had Higher National Diploma, 47% had Degree while 21% had Masters. This finding implies that the communities and corporations KIIs are educated and are more likely to make an informed decision that impart their livelihood and that of the community.

In order to examine the influence of environmental-related CSR activities on the livelihood of selected communities in Gombe State, Nigeria, three indicators associated with environmental dimension of corporate social responsibility was used. These indicators included; the provision of clean water, promotion of circular economy activities and conservation of natural resources.

Provision of Clean water

Based on the interviews with corporations' key informants in study area, the sampled corporations accomplished CSR initiatives that delivered clean and safe drinking water in the communities. Some of Corporation key informants hold that their communities have been suffering from growing shortage of clean and safe water and some of the corporations have been assisting the communities' demands for clean water. The key informants indicate that, Ashaka Cement Plc. was among the corporations which provided CSR projects concerning water in their communities. The corporation drilled eleven solar motorise boreholes with overhead tanks in the communities of Nayinawa, Hammakolori, Unguwansla, Maidukuri, and Maiganga among others to alleviate the water problems of the communities that lack the resources to dig wells or to drill boreholes. Also, TY Danjuma Foundation, Gombe State Cooperative & Savings Loan Limited in their effort to ensure safe and clean water for the members of our communities, usually repairs the boreholes in the communities. They also regularly trained some members of the communities to maintain and repair the boreholes in case of future damage as stated by one of the key informants:

part of that component was to trained mechanics to maintain the hand pump when they get bad and we also trained individuals in the communities who acted as the trustees who are now responsible for the upkeep of the hand pump and if there is a problem, they collect money from the communities to fix the hand pump. So, we give them training on funds rising, we give them ideas on how the boreholes function. Sometimes what happen to the borehole will not be more than five thousand (N5,000) but because they don't know the technical knowledge of it, they will just abandon it and this could stay for many years without repair (Corporations'key informant).

The key informants maintained that, even with that, some of the boreholes normally dry up within few months. This implies that some of members of the communities do not have access to safe and clean water for domestic usage apart from the efforts of the corporations. The corporation key informants maintained that, several of the corporations have fixed damaged public water pipelines in the communities where they operate as observed by one of the informants:

The impact of climate change, has increased water scarcity in Gombe state's growing population in general. Right now, urbanization has already posed challenges for water supply systems especially in the urban cities and our corporation has limited resources to provide quality water that will improve the livelihood of the communities affected by climate change through CSR (Corporations' key informant 6).

It is with the same view that, most of the corporations' key informants hold that the corporations did not implement significant CSR projects and initiatives that deliver clean water to the communities. Several of the key informants reveal that part of the obstacles that hinder deliverance of clean water in the communities by the corporations were due to some reasons. Firstly, key informants confirmed that, the geographical location of Gombe State is in the northern part of Nigeria which faces environmental challenges characterized by continued loss of the wetlands due to rising heat, deforestation and less rain leading to drought and desertification. This makes it difficult to get ground water that will provide the inhabitants of the vulnerable communities with all year round clean and safe drinking water.

Secondly, due to the above concern, some of the key informants maintained that, the cost of drilling durable boreholes that can supply most of the communities suffering from lack of clean

water all year round is high for corporations to afford. The informants further confirmed that, most attempts to sink boreholes by the corporations have been met with government regulations and bureaucracy that have made this difficult for them. What most of the corporations do was to maintain or repair the existing boreholes sank by either the public authorities or other corporations in the communities where they operate:

we do not carry out drilling of boreholes in the communities at will due to their cost; rather we repaired the ones drilled by public authorities or other corporations upon request by the communities. There are instances of communities who have made formal request for boreholes and which we have repaired it for them (Corporations' key informant 13).

However, findings from the community key informants further revealed that, a minimal number of the corporations delivered CSR projects and initiatives that provided clean water that improved the livelihood of the members of the communities. Several of the key informants listed some of the business that have benefited from the provision of clean water in the communities to include the small and medium scale enterprises, dry-cleaners, hair salons, block industry, farmers, car washers and herders amongst others.

Some of the community key informants stated that the provision of water by corporations such as Ashaka, TY Danjuma Foundation, Mahadi Foundation, Fidelity Bank among others encouraged sanitation and hygiene practices among the members of the communities resulting in minimal incidences of water related ailments in the communities. The key informants affirmed that, most of the maintenance works of boreholes were carried out by the members of the communities themselves as a result of the training they received from some of the corporations:

we have the boreholes sunk by philanthropic sons and daughters of the communities; we have the boreholes sunk by the corporations. But the boreholes have been maintained by the communities. Before they sink the boreholes, they told us okay, we are going to sink a borehole for you but remember, having the borehole is not a problem, but maintaining the borehole is the problem. So now most of the boreholes are maintained by the communities (Community key informant 21)

The community key informants also confirmed how Christian New Converts and Orphanage Foundation (CNECOF) and Living Stream Impact Foundation (LIFT) through collaboration with community groups provided accessible water by digging wells, and drilling boreholes in Kaltungo and Billiri Local Government areas to provide portable drinking water and for domestic use in the communities affected by climate change.

In contrast to this, majority of the community key informants felt that some communities, especially in the rural areas did not significantly benefit from the provision of portable water from the corporations. The communities mostly relied on hand dug well, rivers, ponds, and other unverified source of water for their daily needs. This has resulted to dropout or lack of school attendance by children in some of the rural communities affected by climate change as was quoted from one key informant: "The well which they use to go and fetch water is far, before they come back that will make them not to go to school".

Several key informants posit that, the available boreholes dug in the communities by the corporations do not adequately cater for the water needs of the members of communities all year round. This was attributed to the fact that several communities of large population depend on few boreholes to supply their water demand throughout the year. The key informants added that, this have exerted a lot of pressure on the boreholes resulting to early dried-up of some of

the boreholes in the communities affected by climate change. Other major challenge according to key informant is the contamination of water in the distribution systems. This breed water borne diseases such as typhoid, diarrhoea, hepatitis, scabies cholera, amoebiasis, malaria among others in the communities. They also decry the shortage innovative low-cost water and sanitation systems in the communities.

These finding was in sync with Cavallo (2013), who upholds that, access to improved water is a fundamental human right, nonetheless, many communities around the world especially, Africa do not have access to this basic need. The World Economic Forum (WEF) (2016) lends credence to this, that, shortage of safe drinking water is a great concern for all and sundry in African society. Lack of availability of water has continued to expose the women/girl child to vulnerable attacks in most communities in Africa. Also, the findings on water supply are in conformity with the reports of Cavallo (2013) and United Nations World Water Assessment Programme (2018), who reported that, many communities, especially in Sub-Sahara African settings do not have access to sustainable source of portable water, which is globally regarded as a fundamental human right. The authors further reported that, the lack of this basic human rights have resulted to water-borne diseases outbreak and infant mortality, especially in the rural communities. This result was also consistent with reports from Hailsham, Dokubo and Deekor (2021) that the health challenges in many communities, particularly rural communities, are being exacerbated by a lack of clean water and the distance that most women and girls must travel to obtain.

Promotion of Circular Economy Activities

Few of the corporations' key informants are of the views that the corporations performed CSR initiatives that involved the recycling of waste materials that improved the livelihood of the members of the communities. For instance, one of the corporation key informants posits that Ashaka Cement Plc. within the period under evaluation dropped 100% use of diesel which causes greenhouse emission in the atmosphere and was dangerous to human health and adopted the use of biomass in some of its sites to reduce carbon dioxide (CO₂) emission resulting from its manufacturing operations. Because of this, it was able to record an energy mix of 45% renewable and 55% non-renewable energy in its operations. The corporation also designed and packaged its cement bags in a manner that the bags could be reused for other purposes. The corporation also bought and sold goods and services from suppliers and distributors who have high regard and policy towards circular economy activities in their lines of operations.

Some of the corporations' key informants stated how in collaboration with community organizations, Olam and Ashaka Cement Plc. among others imparted on farmers how to turn waste into wealth through utilizing solid organic wastes such as manure, tree trimmings, grass clippings, and crop residues such as rice husk, rice straws, maize stalk, maize husk, maize cobs, cassava peels and stalk, groundnut shells and straws, soybeans pods, sugarcane bagasse and leaves, and cotton stalk into feeds for animals, bio-gas and sources of cooking. A corporation key informant maintained that, all these were efforts made to encourage environmentally friendly practices and to enhance the livelihood of the communities affected by climate change in the state.

An informant stressed that, corporations such as Olam who are involved in agro-allied industries taught farmers on the use of waste from forage and animal dungs as feeds and compost. Some corporations also embarked on sensitisation programmes in communities on the need for the recycling of agricultural wastes such as poultry dung, animal faeces and crops straw, as potential soil nutrients which improves soils conditions. Besides this, they also emphasized how plant waste such as old trees, branches, and hedges they emphasized could be separated and shredded for reused.

Some of the key informants narrated how Sufabel and Gamakai Pantami Multipurpose Cooperative Society taught farmers in the communities about the importance of composting farm and organic waste which are smart and low-cost technology for farmers. The use of these finished products on the farms assisted the farmers to shun the costs related with the purchase of organic fertilizers and soil conditioners. Some key informants stated how farmers were taught that livestock wastes could be utilized as soil conditioner, fuel source either by direct burning or converted to biogas. The same goes for plastics, bale wraps, feed bags and buckets among others, which could be baled together for sale. An informant affirmed to Amana FM, that recycling is not only about sorting out papers, cardboard, and plastics. It is also about the safe and responsible disposal of all waste materials, including computers and electronic equipment, office equipment, and home appliances. The radio house in collaboration with other corporations had a programme tagged “From Waste to Wealth” which instilled in the members of the communities the enthusiasm to reduce and where necessary to eliminate waste materials in safe and environmentally responsible manner in their communities. The programme emphasized how plant materials and animal wastes which are naturally abundant in the communities could be converted into profitable products either as raw materials for secondary production, or utilize as alternative source of energy, the opportunity could be adopted to serve as substitute to fossil fuel in the communities affected by climate change.

A corporation key emphasised that, to Triacta Nigeria Ltd, waste materials generated in its construction sites are not homogenous. Therefore, recycling was difficult due to the combination of different types of waste materials. However, the corporation properly gets disposed of their waste materials in conjunction with the implementation of controls on their generation and aim to achieve medium- and long-term target of 100% for the rate at which waste materials are recycled. In the word of an informant “Triacta Nigeria Ltd promotes the reuse of waste asphalt and excavated soil as either asphalt, regenerated roadbed material, or improved soil conditions in the communities affected by climate change”.

Another corporation key informant holds that even though only few corporations implemented circular economy activities initiatives in the communities, the corporations created mediums for communities to get involve with their employees and learn the process of promoting zero waste and how to turn their domestic waste into useful household items such as mat, chairs, hand-fan, and door foot-mat among others.

However, in contrast, some of the corporation key informants revealed that, some corporations did not implement significant initiatives on recycling of waste materials that improved the livelihood of members of the communities. This according to them, despite the efforts put in by the corporations so far, there are still lack of education and awareness in some communities about circular economy activities and this might be due to inflexibility in cultural practices.

Some of the corporation’s key informants are of the view that most of the problems on circular economy procedures are affected by poorly trained, and lack of motivation of the corporations staff. To confirm these, some corporations’ key informants maintained that, many of the employees of the corporations have never been improperly trained, and don’t understand the expectations and the basis of circular economy activities, while some posit that differences in culture, languages are also challenges in explaining the procedures of circular economy to members of the communities as mentioned by one of the informant: “There is need to involve people who can speak the languages of the communities. Extra efforts and ultimate hardwork is needed in this area”.

In the same vein, few communities’ key informants attest that, the corporations’ initiatives on the circular economy activities have contributed immensely to a healthy and cleaner environment because the wastes materials which would have been indiscriminately dumped

either into open space, ponds and rivers thereby giving rise to environmental and water pollution, which poses serious threat to human health, aquatic lives and the environment in the communities are now exchanged for wealth;

All cartons we use to dump them, but now you see children packing them. We have what we call “Bola Jari” (refuse collators), now they don’t go to where they dump refuse, to check again to see like they used to do before. Even the polythene bags the children usually take them for sale. They were taught by the corporations (Community key informant 12).

Few of the community key informants are of the view that, the strata of beneficiaries of these kinds of CSR include the garbage collectors, children, youths, women, small-scale processing mills, farmers, transporters amongst others;

There is value change; people are being enlightened on the importance of waste especially as manure in the farms. So mostly like if you go to the market areas hardly you will find waste. People used to park everything especially during the dry season. They decompose them at the farms. Definably people are patronizing these things, people are aware. All these agricultural waste people are taking them back to the farm for cycle. There is value change (Community key informant 5).

The promotion of circular economy activities by corporations has spurred the establishment of waste collection enterprises in Gombe State, who collect these wastes from households, processing mills factories and supply to the corporations for onward recycling or reuse in their operations, thereby creating employment opportunities for the members of the communities affected by climate change.

However, in contrast several of the community key informants indicated that, members of the communities did not significantly benefit from the corporations’ initiatives on circular economy activities, because there are poor recycling quality materials due to improper and lack of recycling education in the selected communities. Several of the community key informants also complained of safety for workers due to exposure to chemical, dust, and other hazards. Some of the community key informants talked about the expensiveness of the training and lack of continuity and inadequate training received by the members of the communities affected by climate change. They also place the blame on the existence of low market demand for recycled materials due to the low quality produced in the communities.

Some community key informants revealed that, some members of the communities do not practice circular economy despite the efforts of the corporations as stress by one of the key informants as follows: “we only burn it, there is need to involve trainers who can speak the languages of the communities; additional efforts and diligent work are then required in this area. Similarly, some corporations did not teach the techniques of circular economy in the communities. “There has not been recycling of waste material initiatives here” maintained by one key informant.

This is in contrast to the practice emphasized by Baldo and D’Anghela (2020), who asserts that, important benefits gained through the minimization of waste and reuse of materials are enormous. Therefore, it is essential that corporations should embraced circular economy activities and include same in they CSR strategy. According to Baldo and D’Anghela (2020), this will create secure jobs, encourages innovations that provide competitive advantages, and provides a level of protection for humans, faunas, and the environment. Nduand Agbonifoh (2014), further stressed that, neglecting circulate economic activities in CSR initiatives by corporations can damage corporation reputations and positive image in the eyes of the communities.

Conservation of Natural Resources

The responses from corporations' key informants posit that, the corporations implement initiatives on conservation of natural resources in the communities. The CSR initiatives include tree planting to create shelter, stop erosion, desert encroachment and providing fruits seedlings for planting and for the consumption of the members of the communities. Others include organizing seminars and campaigns against deforestation to keep the trees standing instead of cutting them down; donations of green energy cooking stoves to reduce the use of fire woods and charcoals, and organizing campaigns to encourage the adoption of eco-friendly lifestyle among members of the communities.

Some of the corporation's key informants further revealed that, Ashaka Cement Plc. planted over 6000 trees in Bajoga, Ashaka and Maiganga communities among others to save the communities from erosion. The tree species planted by the corporations in the area were cashew, guava, mango trees, Albizia Lebbeck, Azadracta indica, Albizia zygia, Ceiba pentandra, Senna siame, Tripochiton scleroxylon, and Glicirida sepium. The determination of the corporation to ensure the availability and conservation of water resources which had been scarce by reducing its freshwater withdrawal and consumption by 24% in the year 2020 was being achieved. The corporation redefined its specific consumption volume, and had installed flow meters which accurately measure its water consumption levels. The corporation's water withdrawal comes solely from natural sources (rivers) which are naturally replenished by rain-water, ingress from groundwater and run-offs waters.

According to a corporation' key informant, Ashaka, in its attempt to be among the most carbon-effective corporation in the world, usually conduct the regulatory compliance and environmental audits of their carbon consumption to appraise their environment foot prints in the communities where it operates. The corporation keyed into Lafarge Holcim Groups' ambition target of reducing up to 40% less net CO₂ per ton of cement by the year 2030. To achieve this goal, the corporation continued to reduce the net CO₂ emissions per ton in the communities. This effort resulted in a net CO₂ score of 532kg/ton of cement, which represent more than the benchmark of 40% net reduction.

Also, one of the corporations which have strived in natural resources conservation within the period under evaluation was the Mahadi Foundation which planted over 40,000 trees in several communities in the communities affected by climate change to preserve and conserve forests which have been referred to as the lungs of the environment. The Foundation did not only planted trees, but employed individuals in the communities to continue to water them until they are well rooted as the key informant stated:

tree planting is one of our major approaches to preserve and optimize natural resources for ultimate purpose of protecting the biodiversity. Trees play crucial role in our environment preservation program chiefly because it assists in therelease of oxygen into the atmosphere and absorption of CO₂and support for wildlife (Corporations' key informant 15).

Some of the key informants emphasised how the Banks and MTN among others adopted renewable sources of energy including solar panel (MTN Lumos), energy bulbs to ensure minimal consumption of energy and dependence on fossil source of energy. Kishimi Foundation also planted over 500 trees in Gombe Metropolis and organized conservation campaigns which encouraged sustainable use of natural resources.

On the contrary, majority of the key informants reveal that the corporations did not significantly implement initiatives that encouraged the conservation of natural resources initiatives that improved livelihood in the communities affected by climate change from the following quote:

“Our corporation did not consider the issues of conservation in its CSR initiatives at this time may, be because of resources, but with the emphasis from the present government about planting of trees, we have started to think about it”.

Some of the corporation key informants are of the views that the performance of the corporations on conservation of natural resources have not adequately delivered significant CSR in the conservation of natural resources that improved livelihood of the members of the communities affected by climate change in Gombe state. The advanced reasons include the fact that most of the trees are stressed, apart from more targeted by pests due to environmental variability. Corporation key informant 4 is of the opinion that one of the big challenges associated with tree planting is that of commercial cutting by members of the communities affected by climate change which if not stopped will result into more desertification.

This finding is contrary with the view by Ismail (2009), who says that all human institutions be they public or private each have the responsibility to conserve and protect natural resources and each most contributes to stop the environment from further contamination. The activities which corporations can engage members of a communities with include abroad range of biodiversity education and awareness initiatives including tree planting, enhancing of soil, vegetation, animals checking overgrazing and other harmonious environmental practice through competitions, use of social media awareness among others.

In conformity to the position of some of the community key informant, only few corporations gave their attention to the conservation of the natural resources through planting of trees and organizing sensitization campaigns include the Mahadi Foundation that planted over 40, 000 of varieties of economically beneficial trees in several communities in the state. Others include Ashaka Cement Plc., Kishimi Foundation Association Charcoal Exporters of Nigeria (ACEN) and Access Bank among others. This was captured by a key informant that “Some of the trees planted are economic trees, like mango, like locust bean trees even the tamarind trees. Some of them tap oil from the seeds; they normally mix oil with it. So, these are very important to the members of the communities”.

The Association of Charcoal Exporters of Nigeria (ACEN) in collaboration with Kishimi Foundation planted over 5000 trees in Ngelbunu community in Dukku Local Government Area in Gombe State covering over one hectare (1ha) of woodlot. The planting of these trees has resulted in the decrease of desert encroachment in communities threatened by desertification. Similarly, some community key informants revealed that several of the corporations concentrated the planting of trees in Gombe Metropolis and others urban communities where they also organized sensitization campaigns to discourage deforestation, over-exploitation of the natural resources and to encourage the use of alternative source of cooking energy to reduce the over dependent on wood as a sole source of cooking energy in the communities affected by climate change.

Community key informants revealed that, many communities affected by climate change have been threatened by desertification, but the planting of trees and other efforts on conservation of natural resources have greatly reduced deforestation, erosion and desert encroachment threatening the communities. Some of the communities have started to witness moderate increase in rainfall because of high precipitation owing to the emergence of trees planted in the communities through the efforts of the corporations among others. An informant argued that “both economic and non-economic trees have developed and have started given shelter to the community and are protecting our environment from wind and erosion”.

In the reverse, some of the community key informants hold the opinion that the communities did not benefit from initiatives on conservation of natural resources that improved the livelihoods.

A community key informant affirmed that, most of the CSR initiatives on conservation of natural resources were executed in urban and semi-urban communities affected by climate change as was quoted: “We hear about planting of trees through the radio”.

A community key informant believed that, some of the activities by the corporations were a form of green washing exercises. Another is of the opinion that some of the species of plants chosen for planting were not suitable for the environments of the communities affected by climate change. Some of the key informant faulted the methods and time of planting of the trees, careless against domestic animals and lack of pest control which made the plants never grow. The challenge and lack of watering during drought and dry season for the plants’ survival was also argued by an informant:

The solutions are that there is the need to inspect trees regularly to spot serious problems earlier. Properly watering the trees during dry spells and drought is essential. By properly feeding the trees correctly, and doing all you can to improve the health of their soil, you will also be familiar with the trees, to spot any problem. Professional arborist can be contacted for advice. Trees must be protected from birds, insects and be watched for diseases (Community key informant 16).

This finding concurs with Sheikh and Petare (2017), Dey, Nikolaos, Konstantinos, Chrisovalantis, Jonathan and Kumar, (2018) and Rela, Awang, Ramli, Taufik, Sum and Muhammad, (2020) who observed that a lack of CSR initiatives which addressed conservation of environment and natural resources, are detrimental to the operations of corporations and the livelihood of communities. Given the prevailing impact of corporations’ footprint on the environment and biosphere, corporations’ are advised to implement CSR initiatives to mitigate the impact of climate change on the livelihood of the community. This was affirmed by Kolk and vanTulder (2010), Ephraim *et al.* (2015), Biro and Csete (2021), Svitacova (2021) and Mamudu *et al* (2021).

Conclusion

Based on the premises of the data collected, analysed and interpret, it can be conclusively stated that, only a few corporations implemented environmental-related CSR activities that contribute adequately to the sustainable livelihood of the selected communities in Gombe state. There are still challenges of human influx, excessive grazing and movement of animal, cutting down of trees and erosion, uncontrolled charcoal production, and induced fire for agricultural purposes. These possess threats to sustainable environment in the study area.

Recommendations

Based on the findings, the study recommends that:

- i. Corporations should pool their resources together to construct borehole in the communities.
- ii. Corporations should put more efforts in implementing programmes and policies that encourage eco-friendly activities such as planting of trees, adoption of solar and other sources of renewable energy and the promotion of conservation of natural resources in the communities.
- iii. Corporations should research, develop, and implement more programmes on new techniques on circular economy to achieve optimally in the communities.
- iv. All bureaucratic bottlenecks in drilling of bore halls should be deferred so as to encourage corporations to drill more bore halls in communities with dire need of safe drinking water.

References

- Baldo, D.M. & D'Anghela, M. (2020). Circular Economy and Corporate Social Responsibility: A Literature Review. *Symphonya. Emerging Issues in Management*, (1), 70 - 87. <http://dx.doi.org/10.4468/2020.1.06delbaldo.danghela>.
- Biró, K. & Csete, M.S. (2020). Corporate social responsibility in agribusiness: climate-related empirical findings from Hungary. *Environment, Development and Sustainability*, 23: Pp. 5674–5694.
- Cavallo, G.A. (2013). The Human Right to Water and Sanitation: Going Beyond Corporate Social Responsibility. *Utrecht Journal of International and European Law*, 29(76):39-64.
- Creswell, J.W. (2013) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 4th Edition, SAGE Publications, Inc., London.
- Dey, P.K., Nikolaos, P. Konstantinos, P., Chrisovalantis, M., Jonathan, D.N. & Kumar, D. (2018). Environmental management and corporate social responsibility practices of small and medium-sized enterprises. *J. Clean. Prod.* 195 (2018) 687–702.
- Dingyadi, F. (2012). Desert Encroachment Poor Response on Managing Disasters. Retrieved May 11, 2018 from <http://www.gamji.com>.
- Ephraim, E.N., Kelvin, U.O., Sunny, A.T. & Douglas, A.N.U. (2015). The Impact of Corporate Social Responsibility (CSR) in Community Development: The Gains of Social Work Practice. *International Journal of Innovative Social Sciences & Humanities Research*, 3(3):13-17.
- European Commission (2011). Promoting a European Framework for Corporate Social Responsibility: Green Paper. Luxembourg: Office for Official Publication of the European Communities.
- Everest, A. (2021). Gombe, Sokoto top ease of doing business. Punch Newspapers (punchng.com) accessed 31st January 2023.
- Gombe State Ministry of Environment and Forest Resources (2020). Communities affected by climate change impacts in Gombe state. Gombe State Ministry of Environment & Forest Resources Achieve.
- Hailsham, L.F.S., Dokubo, C. & Deekor, H.L. (2021). Influence of corporate social responsibility of Exxon Mobil Nigeria unlimited on community development in Rivers State. *International Journal of Innovative Development and Policy Studies*, 9(1), 38-49.
- Heemskert, L. (2012). How Responsible is Responsible Business? An Analysis of the Drivers and Effect of Responsible Business Practices at Dutch Enterprises Operational in Kenyan Agribusiness: Master's Thesis University Utrecht. Retrieved October 25, from <http://www.kilimo.goke/kilimodoc/pdf/nationalagribusinessCS.pdf>.
- Ismail, M. (2009). Corporate social responsibility and its role in community development: An international perspective. *Uluslararası Sosyal Aratırmalar Dergisi. The Journal of International Social Research*. 2(9), 200-209.
- Kolk, A. & van Tulder, R. (2010). International Business, Corporate Social Responsibility and Sustainable Development. *International Business Review*, 19(1):119-125.
- Kolk, A., Kourula, A. & Pisani, N. (2017). Multinational enterprises and the Sustainable Development Goals: What do we know and how to proceed? *Transnational Corporations*, 24(3):9–32.
- Mamudu, A., Elehinafe, F. & Akinneye, D. (2021). Recent trends in corporate social responsibilities in Nigeria. A case study of major oil firms in the Niger delta region. *Scientific African* 13. Pp. 1–16. <https://doi.org/10.1016/j.sciaf.2021.e00928> 2468-2276/

- Ndu A.E.O. & Agbonifoh, B.A. (2014). Corporate social responsibility in Nigeria: A study of the petroleum industry and the Niger Delta Area. *International Review of Social Sciences and Humanities* 6(2),214-238.
- Nwokeoma, B.N. & Chinedu, A.K. (2017). Climate Variability and Consequences for Crime, Insurgency in North East Nigeria. *Mediterranean Journal of Social Sciences*, 8(3):171-182. 10.5901/mjss.2017.v8n3p171
- Okanga, B. & Groenewald, D. (2017). Leveraging Effects of Triple Bottom Lines Business Model on the Building and Construction Small and Medium-sized Enterprises Market Performance. *Acta Commercii* 17(1), a457.
- Rela, I.Z., Awang, A.H., Ramli, Z., Taufik, Y., Md. Sum, S. & Muhammad, M. (2020). Effect of corporate social responsibility on community resilience: empirical evidence in the nickel mining industry in Southeast Sulawesi, Indonesia. *Sustainability (Switzerland)*, 12(4). <https://doi.org/10.3390/su12041395>.
- Sachs, J. D., Schmidt-Traub, G., Mazzucato, M., Messner, D., Nakicenovic, N. & Rockstrom, J. (2019). Six Transformations to achieve the Sustainable Development Goals. *Nature Sustainability*, 2(9): 805–814.
- Salvia, A.L., Leal, F.W., Brandli, L.L. & Griebeler, J.S. (2019). Assessing research trends related to Sustainable Development Goals: Local and global issues. *Journal of Cleaner Production*, 208: 841–849.
- Sheikh, H.A. & Petare, J.K. (2017). Corporate Social Responsibility towards Environmental Protection. <http://blogs.economictimes.indiatimes.com/ResponsibleFuture/gearing-up-for-responsible-growth-indias-top-companies-for-sustainability-and-csr-2016/> (last accessed on 25/8/2017)
- Svitacova, E.P. (2021). Environmental responsibility in sustainable agriculture. *Bulg. J. Agric. Sci.*, 27 (5), 880–886
- United Nations World Water Assessment Programme (UNWWAP)/UN-Water (2018). The United Nations World Water Development Report 2018: Nature-Based Solutions for Water. Paris, UNESCO.
- World Economic Forum (WEF) (2016).3 Reasons Why Multinationals Should Invest in LGBT Leaders. <https://www.weforum.org/agenda/2016/03/why-multinationals-should-invest-in-LGBT-leaders/>. Retrieved 18 November, 2019.